

Automotive & Assembly Practice

Electric kickscooters have come of age. Regulators have taken notice

How is shared e-kickscooter regulation shaping the market? An overview of the top 100 global cities sheds some light.

by Kersten Heineke, Benedikt Kloss, Darius Scurtu, and Charlotte Wiemuth



Once considered toys, shared electric kick scooters (e-kick scooters) have grown up. Expanding in number from virtually nothing in 2017 to a peak of 350 million trips¹ among global leading players in 2022, shared e-kick scooters have caught the attention of regulators worldwide. To better understand how guidance may evolve, we identified and examined the regulatory archetypes of the top 100 cities worldwide.

Regulatory review of the top 100 global cities

Five years after the introduction of shared e-kick scooters, the successful market entrance of operators, and a rapid scale-up, cities worldwide are increasingly considering appropriate regulation. Germany is an interesting market example, as e-kick scooters have been well received there, with the six largest global operators counting nearly 70 million trips in 2021.

Regulatory approaches range from a clear push toward supporting this CO₂-neutral mode of transportation for citizens' commutes to outright

bans on operations. The latter was demonstrated in Paris in April 2023 via a public vote driven by security concerns and uncontrolled parking.

To shed light on the current regulatory status of shared e-kick scooter operations, we analyzed the regulatory approach of the top 100 global cities (by population). Home to nearly one billion people, the cities were categorized into predefined regulatory archetypes; the study then outlined the potential effects regulation could have on shared e-kick scooter operators in the future.

Four archetypes emerge

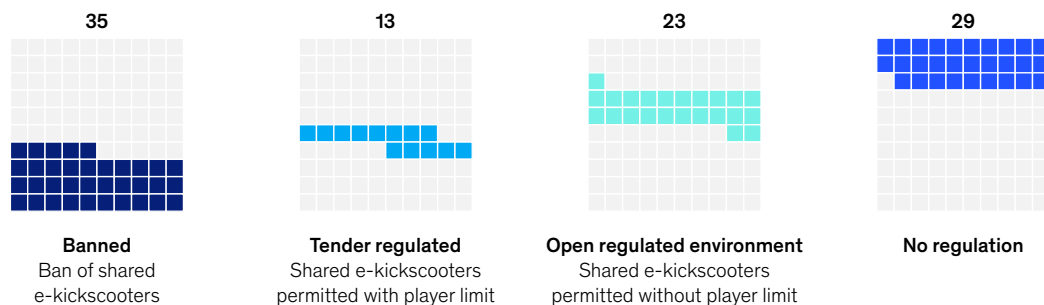
As of May 2023, we have identified four different regulatory archetypes (Exhibit 1):

Ban of shared e-kick scooters. These cities generally forbid the operation of shared e-kick scooter services, while the private use of e-kick scooters is allowed. Today, of the top 100 cities, there are about 35 cities, with a cumulative 290 million people, that ban shared e-kick scooter operations. This is mainly driven by China, which generally forbids shared e-kick scooter services: approximately 75 percent of the inhabitants

Exhibit 1

The top 100 cities have taken different approaches to regulating e-kick scooters.

Regulation archetypes for top 100 cities, by population, number of cities



Note: Analysis focuses on China, Europe (including Russia), Japan/South Korea, North America, South America, and South Asia (including Australia and Singapore).
Source: Local authority websites; press search; McKinsey analysis

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¹ Refers to number of trips in the United States and Europe.

of cities that ban shared e-kickscooters live in China and number about 220 million people.

However, several cities outside China also strictly forbid shared e-kickscooter operations, such as Barcelona, Philadelphia, Sydney, and Toronto. Recently, Paris followed suit, one of the first European cities to do so. Since the introduction of shared e-kickscooters in Paris in 2018, there have been many disputes over accidents involving them, which led more than 90 percent of the city's voters to ban the shared use of them. City authorities promised to adhere to the nonbinding referendum by April 2023 and did not extend the contracts of the three shared e-kickscooter operators. (Only about 7 percent of eligible voters participated in the referendum.) The ban affects almost 15,000 shared e-kickscooters and will come into effect at the end of the operators' contract periods in August 2023.

Tender regulated. This archetype includes cities that permit shared e-kickscooter operation but limit their operating services by imposing specific rules and by limiting the number of operators, vehicles, or both. These cities have created rules for the use of shared e-kickscooters that include a minimum age for the driver, a maximum device speed, and a defined operating area. Approximately 13 of the top 100 global cities² are tender regulated, covering about 100 million people (roughly 10 percent of the people living in the top 100 cities). These are cities where large numbers of people live. In the United States, for example, Washington, DC, and Los Angeles are tender regulated. In Europe,³ Madrid is in this group.

'Open but regulated' environment. This archetype refers to cities that permit shared e-kickscooter operators and do not state a player limit. Operators must register their businesses with local authorities. Additionally, this type has defined rules for the use of shared e-kickscooters—for example, the minimum age of the driver, the maximum device speed, or the permitted operating area. Roughly 23 out of the

top 100 global cities are categorized as open-but-regulated cities, covering about 280 million people (roughly 28 percent of the total) in densely populated areas of Japan (for example, Tokyo), Brazil (São Paulo), Mexico (Monterrey), and European cities (for example, Berlin). In Japan, the government has also issued a new law that will make access to shared e-kickscooters easier: users will no longer be required to have a driver's license or wear a helmet.

No regulation in place. These cities generally do not have any regulations in place for shared e-kickscooter operators. Our analysis shows that 29 of the top 100 cities (covering about 310 million people, or roughly 32 percent of the total) have not yet defined any regulations. Nine of these cities, covering around 40 percent of the respective population (about 120 million people), are in India—for example, Mumbai and New Delhi. Some cities in other countries in South Asia, as well as in the Middle East and Africa, have yet to put any regulation into action (for example, Dhaka and Cairo).

The potential effects of shared e-kickscooter regulations

Today, around 700 million people live in cities that have regulated shared e-kickscooter environments (Exhibit 2). However, stricter regulations or even outright bans are also possible. As consumers and cities adapt their mobility behaviors and viewpoints based on the changing regulations, operators can adapt. In some cases, the stricter regulations or bans may actually open new opportunities for them.

Shared e-kickscooter operators. Stricter regulations might favor current service operators, potentially preventing or slowing the market entrance of new competitors, and might also help support the development of defined physical infrastructure, such as e-kickscooter lanes or parking spaces for e-kickscooters, or even racks for (wireless) charging. In turn, this could enable increased profitability by easing operations—for example, enabling faster battery swapping at

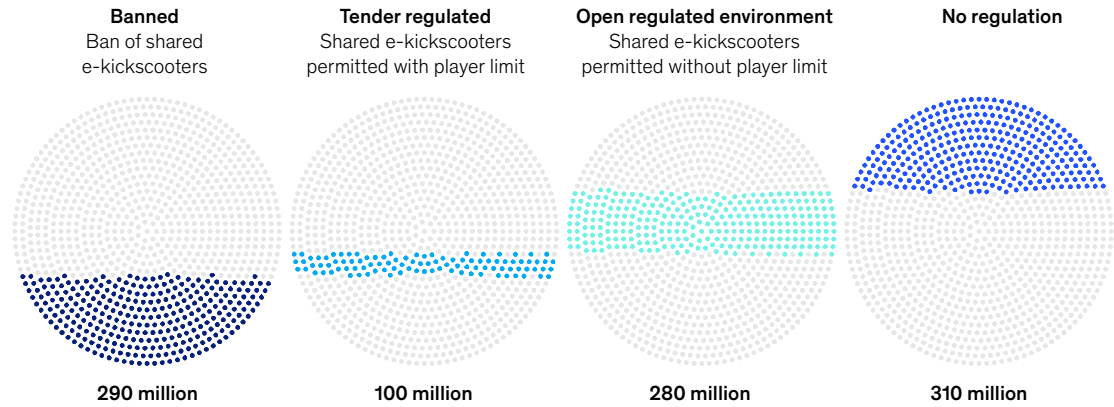
² As of May 2023.

³ Europe includes Russia.

Exhibit 2

Roughly 70 percent of people in the top 100 global cities live in regulated shared e-kickscooter environments.

Regulation archetypes for top 100 cities, by population, for shared e-kickscooters in 2022, share of 980 million people



Examples of cities, regions, and regulations

- | | | | |
|--|---|---|--|
| <p>Banned</p> <ul style="list-style-type: none"> ● China generally forbids shared e-kickscooter services (about 75% of bans in China) ● Paris, France, was first major European city to ban shared e-kickscooters as per referendum ● Other cities: Toronto, Canada; Sydney, Australia | <p>Tender regulated</p> <ul style="list-style-type: none"> ● Rules have been defined on: <ul style="list-style-type: none"> ● Limiting number of operators ● Minimum driver age from 14 to 18 ● Maximum speed from 20 to 25 km/h ● Permitted areas of bike lanes or roads ● EU nations and US | <p>Open regulated environment</p> <ul style="list-style-type: none"> ● Rules have been defined on: <ul style="list-style-type: none"> ● Limiting number of operators ● Minimum driver age from 14 to 18 ● Maximum speed from 20 to 25 km/h ● Permitted areas of bike lanes or roads ● Brazil, EU nations, Japan, and Mexico | <p>No regulation</p> <ul style="list-style-type: none"> ● Many countries have not regulated shared e-kickscooter services yet ● India and countries in Africa and the Middle East |
|--|---|---|--|

Note: Analysis focuses on China, Europe (including Russia), Japan/South Korea, North America, South America, and South Asia (including Australia and Singapore).
 Source: Local authority websites; press search; McKinsey analysis

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defined parking locations instead of leaving users to engage in searches (often time-consuming) for single e-kickscooters. This could have the added benefit of meeting citizen demands for green last-mile transport and also make for more orderly cities and safer driving conditions.

In case potential regulatory changes lead to shared e-kickscooter bans, micromobility operators can respond to newly released mobility demand with adjacent devices such as bicycles or mopeds, which

they usually already offer. Furthermore, operators of shared e-kickscooters can refocus their businesses away from short-term rentals of minutes to a monthly or yearly subscription-based service for private use, which could ensure more stable utilization rates and potentially increase profitability.

Consumers. For consumers, stricter regulations might drive increased acceptance and a greater willingness to use e-kickscooter services, as regulatory requirements such as fixed parking

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areas will help make finding vehicles easier and cities more orderly. Likewise, newly built e-kickscooter lanes will make driving conditions safer for residents.

In the case of bans, consumers might attempt to substitute their use of shared e-kickscooters with, for example, privately owned e-kickscooters. Doing so will enable them to continue to maintain a CO₂-neutral mode of transport for their commutes. This could result in a potential increase in demand for privately owned e-kickscooters.

Cities. Cities could also see the tremendous potential of shared e-kickscooters as an eco-friendly mode to overcome first- and last-mile hurdles and strengthen the public-transit and new-mobility ecosystem. To face known challenges, cities could increasingly regulate via tenders by limiting the number of operators or by using white-label solutions to offer shared e-kickscooters themselves to keep control of the services. In such a situation, regular providers would handle operations in the place of banning shared e-kickscooter services completely.

Additionally, cities could enforce providers to introduce Internet of Things (IoT) safety technologies on vehicles. These might include systems that check

the number of occupants riding an e-kickscooter or adaptive cruise controls that monitor paving conditions and no-driving zones, for example. Cities could also introduce parking areas and defined lanes for micromobility vehicles to help overcome safety and infrastructure hurdles perceived by residents. To ensure that riders park appropriately, the parking areas may use physical indicators, such as signs or defined lanes, or they may use artificial-intelligence tools, combined with cameras and GPS sensors, to monitor the lot and ensure compliance.

Shared e-kickscooters provide some answers to the first- and last-mile challenges many cities face as they try to shift to a more ecologically friendly operating mode. However, our research suggests the regulatory trend in many of the top 100 cities globally is toward more control of these providers, and in China, the outright banning of them. Consequently, shared-service providers can focus on relationship building with city authorities and infrastructure providers to define an environment that meets the city's mobility needs and performs up to the expectations of residents. Also, more regulation could result in opportunities for IoT players to provide micromobility infrastructure.

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