



From Pedal to Battery- Rickshaws in Transition

Urban Mobility Study — Snapshot

A Study of INNOVISION Consulting

Battery-powered rickshaws—often called “**Bangla Teslas**”—have rapidly emerged as a dominant mode of short-distance urban transport in Dhaka. Their growth has intensified public debate around **traffic congestion, road safety, employment, and regulation**.

Amid this transition, **Dhaka South and Dhaka North City Corporations** have launched a pilot initiative for **BUET-approved battery-powered rickshaws**, signaling a potential shift toward formal recognition and regulation.

To understand **what is driving this transformation**—and what it means for **drivers, passengers, and garage owners**—INNOVISION Consulting conducted a comprehensive urban mobility study based on primary data from across Dhaka.

Study Sample

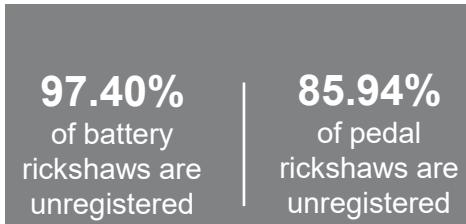
384 Rickshaw Drivers

392 Passengers

63 Garage Owners

Key Findings from the Study (Battery Rickshaws vs Pedal Rickshaws)

Rickshaw Operations Remain Largely Unregulated



Battery Rickshaws Are Attracting Younger, New Drivers



Most Drivers Cannot Afford Battery Rickshaws



Battery Rickshaw Drivers Rely More on Microfinance



Battery Drivers Carry Higher Loan Burdens



Battery Rickshaws Enable Higher Daily Workload

Drivers completing 31–50 trips per day



Higher Gross Income Does Not Mean Higher Net Income

Average daily net income (rented)



Average daily net income (self-owned)



Drivers View Rickshaws as Transitional Livelihoods



Perspectives of the Passengers

Rickshaws serve short-distance trips for middle-income households

63%
of passengers earn
TK 20,001–50,000/month

Battery Rickshaws Are Faster and Cheaper for Passengers

Average daily spending

Battery	Pedal
107.73 BDT	134.87 BDT

82% choose battery rickshaws for faster commute

Battery Rickshaws Are Linked to Higher Accident Severity

Accident reported	Serious to very serious injuries
Battery: 30%	Battery: 44.45%
Pedal: 18%	Pedal: 29.6%

Passengers Associate Congestion Mainly with Battery Rickshaws

Battery rickshaws	Pedal rickshaws	Both
62%	34%	4%

Strong Public Demand for Regulation

56.60% strongly support stricter regulation	22.70% somewhat support stricter regulation	21.90% support a complete ban	33.93% want battery rickshaws limited to secondary roads
--	--	--	---

Garage Owner's Accounts

Garage Owners Are Economically Dependent on Rickshaws

86% rely solely on rickshaw rental	81% started with pedal rickshaws	35% have already converted to battery rickshaws	62% prefer battery rickshaws
---	---	--	---

High Maintenance Is a Key Business Challenge

Frequent repairs: 33.33%	High maintenance costs: 30.16%	want to continue current business 54%	are open to related investments (battery variants, ride-hailing, CNG) 46%
---------------------------------------	---	--	---

Policy Directions Emerging from the Study

Standardize
battery rickshaw
design

Regulate entry
and licensing

Facilitate pedal-
to-battery
transition through
affordable credit

Incentivize
formalization

Provide training
and traffic
awareness

Develop
alternative short-
distance transport
options

About INNOVISION

INNOVISION is an international advisory and management consulting firm. We are working on transforming the world's trade, investment, finance and socio-economic systems. We offer research, technical assistance, and project management services to support governments, private sector actors, multilateral organizations, and civil society in designing, implementing, and evaluating inclusive and systemic solutions. Our work spans across regions, fostering South-South and South-North cooperation to identify and overcome barriers to inclusive market, equitable trade and shared prosperity. For queries, please get in touch with **Md. Rubaiyath Sarwar**, Managing Director, INNOVISION.

Contact: +880 1819499475

Email: rubaiyath.sarwar@innovision-bd.com

Address: The Alliance Building (3rd Floor), 63/Ka, Pragati Sarani, Baridhara, Dhaka-1212