

# Passenger Car Taxation in India: Shifting to an Emissions-Linked Tax Structure

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# Why vehicle tax structures need to be examined?

Taxes can serve as a check placed by the government to curb negative externalities (societal costs) from the production or consumption of a given good.

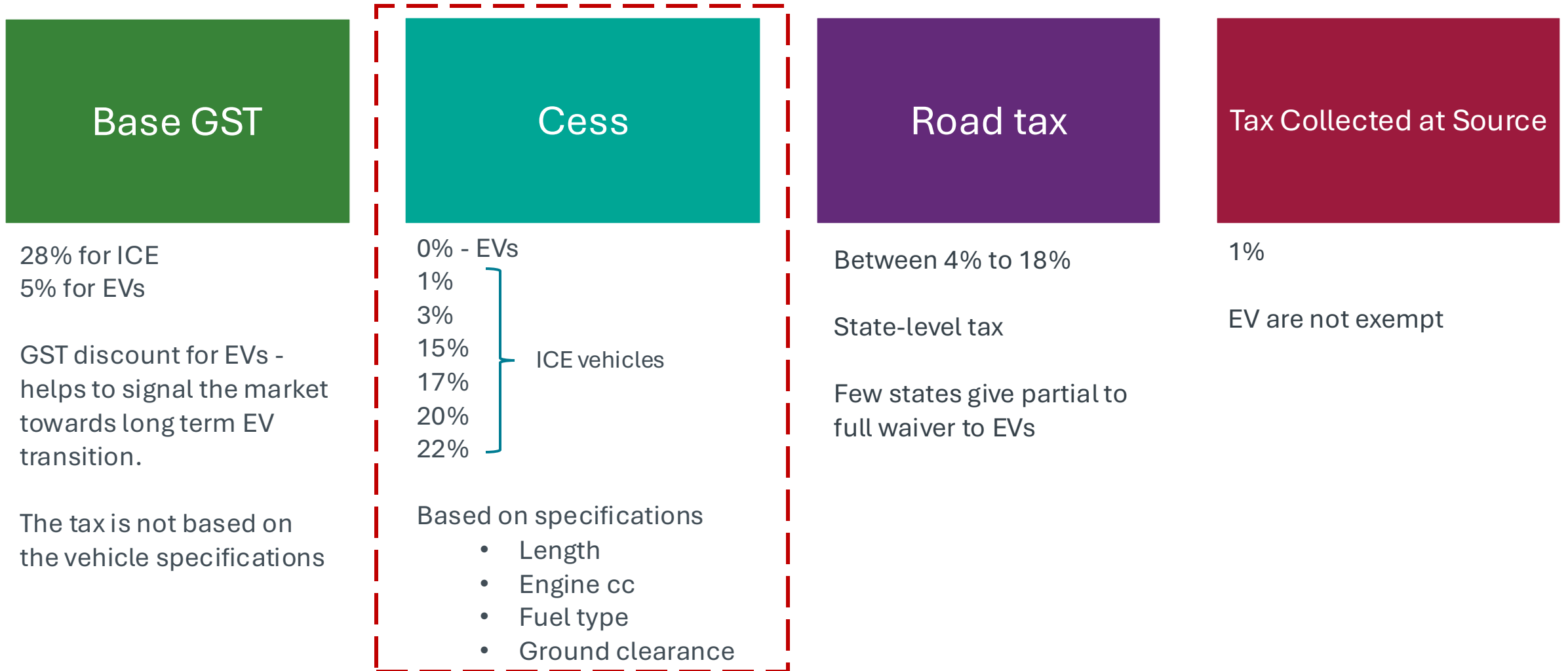
In the case of cars, such externalities include:

- **CO<sub>2</sub> emissions (fuel consumption)**
- **Air pollution**
- **Congestion**

So, the question at hand is:

**Is India's taxation structure for cars commensurate with such objectives?**

# Consumers pay 4 major taxes on the purchase of a car in India, as percentage of vehicle price



# While EVs are already exempt from cess, further analysis on cess structure is needed

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To align with global decarbonization efforts in road transport, **India's car market must transition to 100% EV by 2035-2040.**

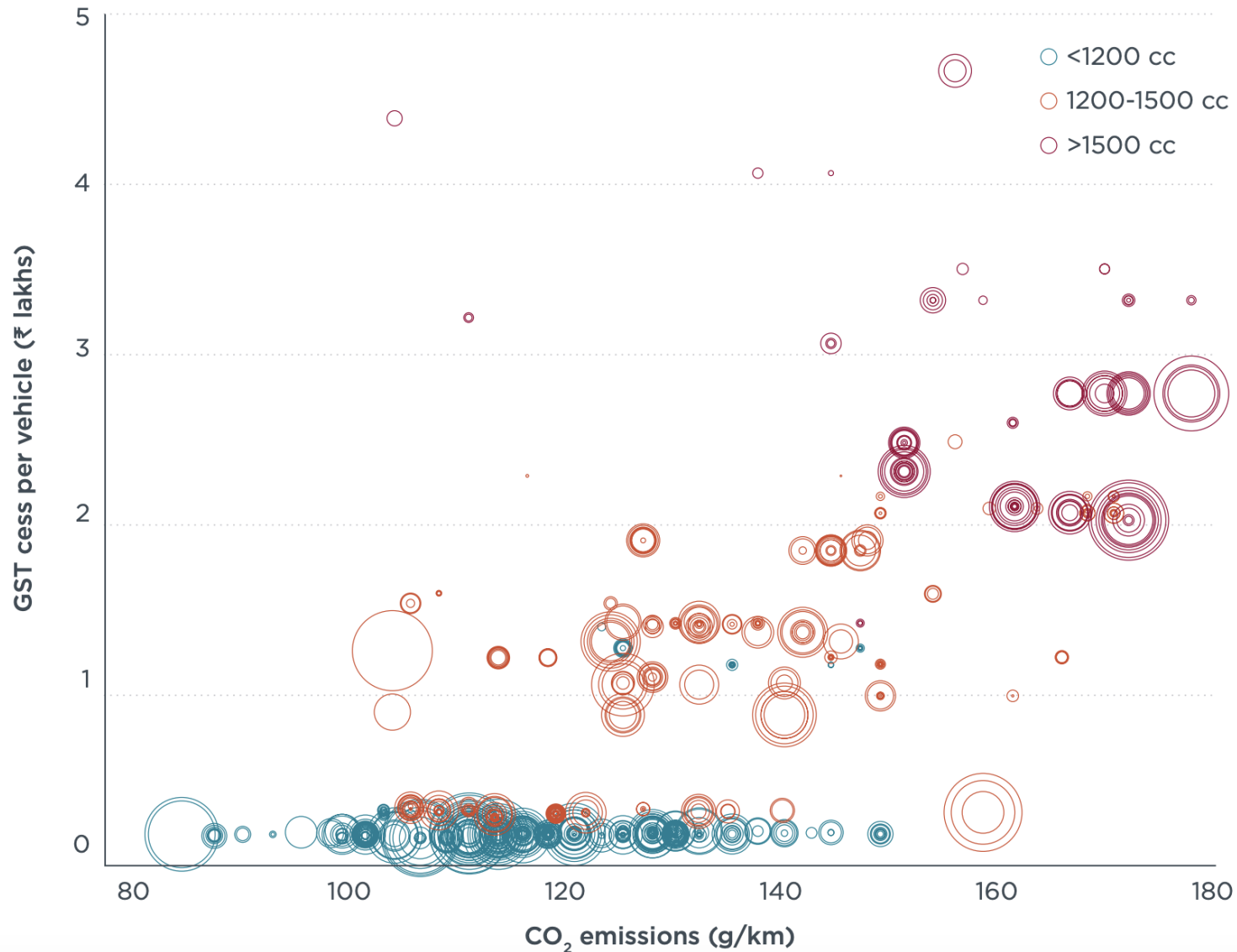
**During this period of transition, new ICE vehicles will continue to be sold, presenting significant untapped potential for efficiency improvements in India's existing ICE fleet.**

Exempting EVs from GST cess supports the long-term shift to electric vehicles, further analysis is needed to determine how fuel-efficiency improvements on ICE vehicles can be optimized during the transition phase.

**Does the existing structure levy cess  
commensurate with CO<sub>2</sub> emissions of the  
vehicles?**



# Wide disparities in CO<sub>2</sub> emissions vs. tax levy observed



Engine displacement does not serve as an effective proxy for CO<sub>2</sub> emissions.

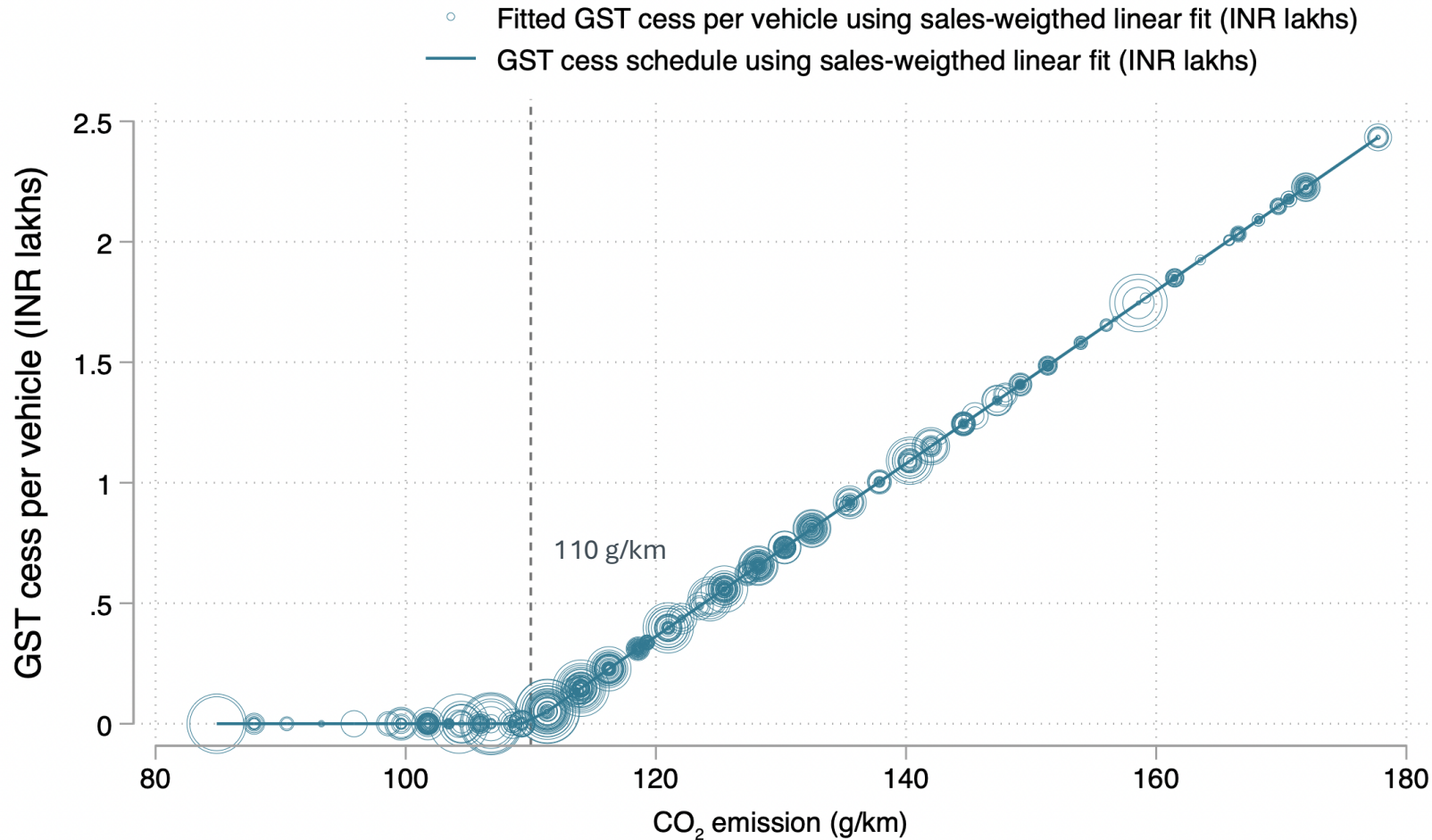
# CO<sub>2</sub> emissions vs. tax disparities are found within both bigger cars and smaller cars



Generally, smaller cars (< 4m) are subject to 1% tax slab. This does not support best-in-class fuel efficiency attainment for small cars as a segment.

Same holds true for bigger cars. Some cars are far more fuel-efficient, some are not, but tax does not vary much.

# ICCT modelled structure: Continuous emissions-linked tax function



**Step 1: Obtain linear best fit line by regressing CO<sub>2</sub> emissions vs baseline cess for PC fleet**

**Step 2: Set cess for low emission vehicles to zero instead of negative cess (rebate)**

**Step 3: Adjust the cess best fit line, while keeping the slope unchanged, to ensure baseline revenue neutrality**

**Hypothetical linear structure levies INR 3,600 (US\$49) for every additional gram of CO<sub>2</sub> above 110 g/km.**



## Complementary policy levers can play a big role in bringing fuel-efficiency improvements to market

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- **On the supply side: Corporate Average Fuel Economy (CAFE) norms that require manufacturers to make more fuel-efficient models.**
- **On the demand side: Taxation structure that incentivizes consumers to choose more fuel-efficient models.**

# Roundtable discussion

