Vehicle Economics

How to Estimate Cost Per Mile Correctly

A per-mile figure is only honest if it includes fixed costs, not just gas and tires.

The number people quote is usually just fuel

Ask someone what their car costs per mile and they'll often do gas price divided by MPG in their head and stop there. That's a real number, but it's the variable cost of driving one more mile, not the cost of owning the car at all. A car sitting in the driveway still depreciates, still needs insurance, and is still being paid off if there's a loan on it, none of which shows up in a fuel-only estimate.

Fixed costs versus variable costs, and why the split matters

Fixed costs, insurance, most of depreciation, loan payments, happen whether you drive 2,000 miles a year or 20,000. Variable costs, fuel, tires, some maintenance, scale with how much you actually drive. A true cost-per-mile figure has to divide the fixed costs across your actual annual mileage, which means the same car has a different real cost per mile for a low-mileage driver than a high-mileage one, even though the car itself hasn't changed. This is also why "cost of driving one more mile" is a genuinely different question from "average cost per mile for the whole car," and needs a different calculation. Cost of Driving More Miles answers the marginal question directly; Vehicle Cost Per Mile answers the full average.

Tires are a real cost that's easy to forget

Tire wear scales almost directly with miles driven, but tire replacement usually happens all at once, a few hundred dollars every 30,000-50,000 miles, rather than as a visible monthly line item. Because it doesn't show up on a regular bill the way insurance or a loan payment does, it's one of the most commonly omitted real costs in a rough mental estimate. Tire Cost Per Mile isolates just this cost so it can be checked and added into a fuller total deliberately, not left out by accident.

Depreciation belongs in a per-mile figure even though no check is written for it

A car losing value is a real economic cost of ownership even though it never appears as a transaction. Skipping it because "nothing was actually paid" understates the true cost of driving, sometimes by more than every other line item combined, since depreciation is often the single largest cost of owning a vehicle. True Cost of Car Ownership includes it alongside every other cost so the full picture, not just the visible cash outflows, feeds into a per-mile number.

What to actually check before trusting a cost-per-mile figure

- Whether it includes fixed costs (depreciation, insurance, financing interest) or only fuel and maintenance.
- Whether it's built from your actual annual mileage, since the fixed-cost share per mile changes a lot between a 6,000-mile driver and an 18,000-mile driver.
- Whether it separates the marginal cost of an extra mile from the average cost of the whole car, they answer different questions.
- Whether tire wear is included at all, it's one of the most commonly skipped real costs.

Related calculators

Vehicle Cost Per Mile

What does each mile I drive actually cost?

Tire Cost Per Mile

What do my tires actually cost per mile and per year?

Cost of Driving More Miles

What does it actually cost me to drive extra miles this year?

True Cost of Car Ownership

What does my car really cost me, beyond the payment?