

THE CHALLENGE

Taylor was car shopping and faced a choice: lease a new SUV for \$450/month or buy a 3-year-old certified pre-owned sedan for \$28,000 with 20% down. After analyzing total cost of ownership over 8 years—including payments, depreciation, insurance, and opportunity costs—Taylor chose to buy. After paying off the 5-year loan, Taylor drove the car payment-free for 3 more years while saving that \$423/month. The total 8-year cost was \$19,380 (accounting for resale value), compared to over \$43,000 if leasing twice with nothing to show for it.

How can understanding total cost of ownership help you make smarter vehicle financing decisions beyond just comparing monthly payments?

Learning Objectives

- Analyze the financial differences between buying and leasing a vehicle.
- Calculate the total cost of ownership for different financing scenarios.
- Evaluate how vehicle financing decisions impact overall financial health.
- Compare loan terms, interest rates, and their effects on total vehicle costs.
- Make informed decisions about vehicle acquisition aligned with financial goals.

CORE CONCEPTS

Term	Definition
Depreciation	The decrease in a vehicle's value over time; new cars typically lose 20-30% of their value in the first year and ~60% by year five.
Total Cost of Ownership	Complete financial cost including purchase price, financing, insurance, fuel, maintenance, repairs, and depreciation.
Residual Value	The estimated value of a vehicle at the end of a loan or lease term; affects lease payment calculations.
Equity	The difference between what your vehicle is worth and what you owe; positive equity = you own more than you owe.
Opportunity Cost	The potential financial gain you could have achieved by investing money elsewhere instead of putting it toward a vehicle.

Background: Purchasing or leasing a vehicle is typically the second-largest financial decision after housing. The average new car costs over \$48,000, and the financing method you choose can result in thousands of dollars in difference over time. The advertised monthly payment is only one piece of a puzzle that includes interest rates, depreciation, insurance, maintenance, and opportunity costs.

APPLY IT

PART A: BUY VS. LEASE COMPARISON

Compare these two scenarios for a \$35,000 vehicle over 6 years:

Factor	BUY: 60-month loan at 5%	LEASE: Two 36-month leases at \$400/mo
Down Payment	\$7,000 (20%)	\$2,000 each lease (\$4,000 total)
Monthly Payment	\$528	\$400
Total Monthly Payments (6 yr)	\$31,680 (60 mo × \$528)	\$28,800 (72 mo × \$400)
Total Paid (including down)		
Vehicle Value at Year 6	~\$14,000	\$0 (returned)
Net Cost (paid minus value)		

1. Calculate the total paid and net cost for each option. Which has the lower net cost?

Show your calculations:

Lower net cost option: _____ by \$_____

2. If you kept the purchased car for 3 MORE years (years 7-9) payment-free, how much would you save compared to continuing to lease at \$400/month?

PART B: LOAN TERM IMPACT ANALYSIS

Compare these loan options for a \$26,000 vehicle at different terms:

Loan Term	Interest Rate	Monthly Payment	Total Interest Paid
36 months	5.5%	\$784	\$2,224
60 months	6.0%	\$502	\$4,120
72 months	7.5%	\$449	\$6,328

3. How much MORE in total interest would you pay by choosing the 72-month loan instead of the 36-month loan?

4. If you chose the 60-month loan at \$502/month instead of the 36-month at \$784/month, you'd save \$282/month. If you invested that \$282/month for 3 years at 7% annual return, how much would you have?

Hint: Use the formula: $\text{Monthly payment} \times 36 \text{ months} \times 1.11$ (approximate growth factor) = approximately \$11,250

CHECK YOUR UNDERSTANDING

1. A vehicle that costs \$40,000 new will typically be worth approximately how much after 5 years?

- ☐ A. \$32,000 (80% of original)
- ☐ B. \$24,000 (60% of original)
- ☐ C. \$16,000 (40% of original)
- ☐ D. \$8,000 (20% of original)

2. What is the main financial advantage of buying a vehicle and keeping it after the loan is paid off?

- ☐ A. You always have the newest safety features
- ☐ B. You have years of payment-free driving while the car still has value
- ☐ C. Insurance costs are always lower
- ☐ D. Maintenance is covered by warranty

3. Explain why "total cost of ownership" is a better metric than "monthly payment" when comparing vehicle options.

4. What are TWO situations where leasing might make sense despite higher long-term costs?

5. **Reflection:** Given your anticipated income and financial goals, which approach (buy new, buy used, or lease) would best fit your situation when you need a vehicle? Explain your reasoning considering total cost, cash flow, and opportunity cost.
