

Quantitative Market Tools for Health Insurance Policy Evaluation

Valuing consumer choice and tracing provider-market forces into Medicare

How much is additional choice worth to consumers?

How do provider-market forces reach Medicare spending?



Casey B. Mulligan, PhD | HHS Chief Economist and Chief Regulatory Officer | September 22, 2026

Two tools for quantitative policy evaluation

Health-insurance outcomes still reflect demand and supply.

Quantitative policy evaluation needs tools that recognize market responses.

TOOL 1

Choice Value Factor (CVF)

Values consumer choice from observed substitution patterns

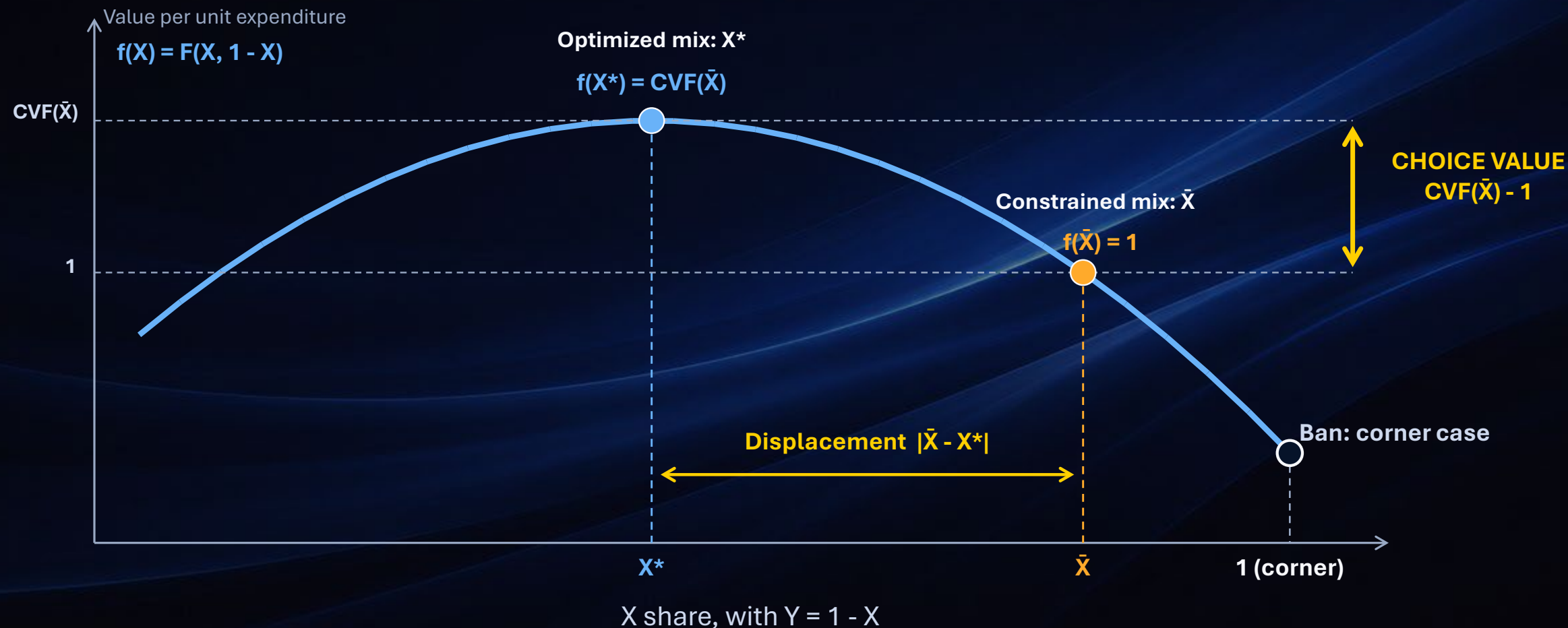
TOOL 2

Provider Supply-chain Framework

Traces provider shocks into insurance prices and Medicare spending

Choice value from a constrained mix

The optimized mix produces more value than the policy-constrained mix



The quantitative recipe

Three inputs translate a constrained product mix into dollars

$$CVF(\bar{X}) - 1 \approx \frac{(\bar{X} - X^*)^2}{2\sigma^* \cdot X^* \cdot (1 - X^*)}$$

1 DISPLACEMENT

$$|\bar{X} - X^*|$$

How far policy moves the market
from the preferred mix

2 SUBSTITUTION DIFFICULTY

$$1 / \sigma^*$$

How difficult it is to substitute
between the alternatives

3 DOLLAR BASE

$$(CVF - 1)C_u$$

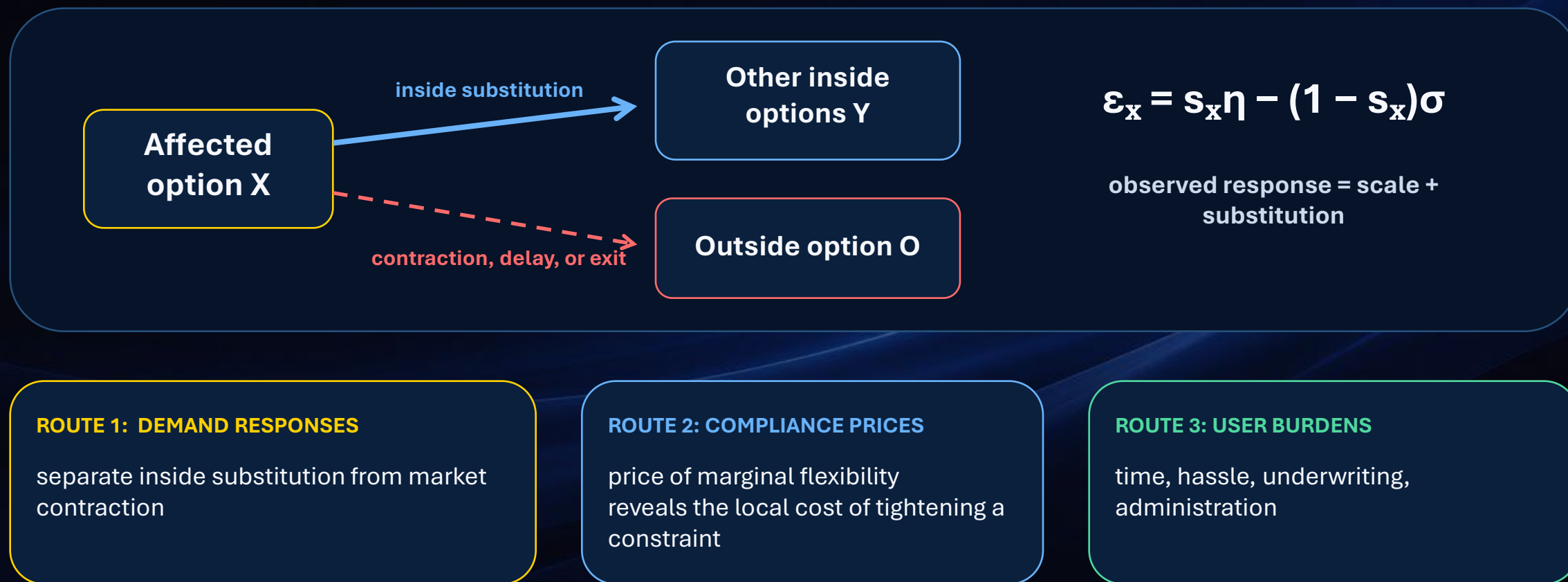
Use the unrestricted base, or the
corresponding constrained-base
formula

Constrained base: $(1 - 1/CVF)C_r$

Distance, difficulty, and dollars

Market behavior separates substitution from scale

A single own-price elasticity mixes switching inside the market with contraction or exit



**Demand elasticities show how much the mix changes when relative prices change.
Compliance prices show the relative-price change required to move the mix.**

National accounts use the same quantity indexes

BEA observes both endpoints. An RIA projects the same four prices and four quantities.

ENDPOINT	PRICE OF X	PRICE OF Y	QUANTITY OF X	QUANTITY OF Y
Baseline or unconstrained, 0	p_x^0	p_y^0	X^0	Y^0
Policy or constrained, 1	p_x^1	p_y^1	X^1	Y^1

LASPEYRES - BASELINE PRICES

$$Q_L$$

quantity change at baseline prices

PAASCHE - POLICY PRICES

$$Q_P$$

quantity change at policy prices

CHOICE VALUE - QUADRATIC f

$$CVF = (1 + Q_L/Q_P) / 2$$

NATIONAL ACCOUNTS (BEA)

Observe prices and quantities at both dates.
Measure the realized change in real output.

REGULATORY ANALYSIS

Project the baseline and policy endpoints.
Estimate the prospective change in choice value.

The abstract model in health insurance terms

X, Y, O

X is the coverage option affected by the rule. Y contains every other option inside the defined insurance market. O is an uninsured spell or coverage outside that market.

$X^*, \bar{X}$

X^* is the share choosing X in the reference counterfactual. $\bar{X}$ is the share under the policy. $\bar{X} - X^*$ is displacement. Total enrollment in X + Y is market scale.

σ

σ measures how readily enrollees substitute between X and Y when their relative full prices change. Full price includes the net premium plus time and administrative burdens.

F(X,Y)

F(X,Y) is the private value generated by matching this population to the available coverage options. The relevant cost base converts choice value per person into an aggregate estimate.

Premium transfers, adverse selection, medical resources, and fiscal effects remain separate welfare ledger entries.

Administered Medicare reimbursement remains exposed to provider markets

Payment formulas operate inside markets for labor, capital, facilities, and technology



MEDICARE-INDEXED INPUTS

Wages, benefits, supplies, utilities, and selected capital costs enter market baskets and geographic adjustments.

OTHER INPUTS AND SCARCITY RETURNS

Land, fixed capacity, permissions, and organizational assets can affect output prices without entering those indexes directly.

Payment formulas can remain unchanged while provider markets change Medicare spending.

Market changes and likely price patterns

Broad supply and demand shocks move input and output prices together. Productivity, scarcity, and taxes create wedges

MARKET CHANGE	MECHANISM	INPUT & OUTPUT PRICES: TOGETHER or APART?
Broad supply expansion	More workforce or facility capacity	Together
Broad demand expansion	More coverage, population demand, or public-program demand	Together
Productivity improvement	Fewer inputs per unit through better combinations	Output prices fall relative to input prices
Non-indexed scarcity	Scarce capacity, land, permissions, or organizational assets	Output prices rise relative to indexed inputs
Provider tax	Wedge between the payer price and the provider's net price	APART
Combined policies	Demand shift plus a tax or another wedge	

Medicare competes with other payers for provider capacity

All payer categories draw on the same workforce, facilities, capital, and technology



When provider supply is not perfectly elastic, greater demand from one payer raises scarcity and leaves less capacity for others.

Administered rates shift competition toward access, volume, coding, site of care, provider participation, and investment.

Provider market shocks reach Traditional Medicare and MA differently

The programs use different prices, lags, and payment rules

TRADITIONAL MEDICARE

Administered rates follow selected input prices

RATE CHANNEL

Market-basket updates and geographic wage adjustments link rates to selected input prices.

SPENDING CHANNEL

Utilization, coding, site of care, access, and provider participation can change total spending.

MEDICARE ADVANTAGE (MA)

Plan costs and bids respond to provider markets

PLAN COST CHANNEL

Provider prices, networks, and utilization affect the cost of furnishing the benefit package and the plan bid.

FEDERAL PAYMENT CHANNEL

Federal payment combines the plan bid with a Traditional Medicare-based benchmark.

Both programs remain tied to the same underlying provider markets.

CONCLUSION

Two market tools for policy evaluation

Choice value and provider markets answer different quantitative questions

TOOL 1: CHOICE VALUE FACTOR

What is the private value of the coverage mix?

EVIDENCE

Displacement and substitution difficulty

OUTPUT

Choice value per person and in aggregate

TOOL 2: PROVIDER SUPPLY-CHAIN FRAMEWORK

How does policy change provider markets and Medicare?

EVIDENCE

Supply and demand shifts, productivity, scarcity, and tax wedges

OUTPUT

Effects on provider prices, plan costs, and federal spending