Supply-side Economics: Income tax rates & Labor supply

Does ↑ tax rate ↑ National savings? Depends on how L^S reacts.

$Y = 50 L_s^{.7}$

$T = t \times Y$ t = tax rate (10% = .1)

$MPS = .3$

1. Suppose tax rate = 10% & $L^S = 90$:

→ $Y = 50(90)^{.7} = 1167$

→ $T = .10 \times 1167 \approx$ (117) Revenue collected by government.

& Disposable income = $1167 - 117 =$ (1050)
$Y(1-.2)$

2. Now suppose tax rate ↑ to 20%

a) L_s ↑ to 80	vs.	b) L_s ↑ to 60
a) $L_s = 80$		$L_s = 60$
→ $Y = 1074$		→ $Y = 878$
→ $T =$ (215) New Tax Revenue		→ $T =$ (176) New Tax Revenue collected by G
→ Disposable income = (859)		→ Disp. income = (702)

CHANGE IN NATIONAL SAVINGS

- ΔS^{PU} = change in tax Revenue

$= 215 - 117$	$= 176 - 117$
$= +98$	$= +59$

- ΔS^{PR} = MPS × Change in Disposable income

$= .3(859 - 1050)$	$= .3(702 - 1050)$
$= .3(-191)$	$= .3(-348)$
$= -57$	$= -104$

⇒ $\Delta S^{National}$ $+98 - 57 = 41$ | $+59 - 104 = -45$ ↓ Because L^S ↓↓↓