

Lecture 4: Optimal Labor Income Taxation

Stefanie Stantcheva

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TAXATION AND REDISTRIBUTION

Key question: Should government reduce inequality using taxes and transfers?

1) Governments use **taxes** to raise revenue

2) This revenue funds **transfer** programs:

a) Universal Transfers: Public Education, Health Care Benefits (only 65+ in the US), Retirement and Disability Benefits, Unemployment benefits

b) Means-tested Transfers: In-kind (Medicaid, public housing, foodstamps in the US) and cash benefits

Modern governments raise large fraction of GDP in taxes (30-45%) and spend significant fraction of GDP on transfers

FACTS ON US TAXES AND TRANSFERS

References: Comprehensive description in:

<http://www.taxpolicycenter.org/taxfacts/>

A) Taxes: (1) individual income tax (fed+state), (2) payroll taxes on earnings (fed, funds Social Security+Medicare), (3) corporate income tax (fed+state), (4) sales taxes (state)+excise taxes (state+fed), (5) property taxes (state)

B) Means-tested Transfers: (1) refundable tax credits (fed), (2) in-kind transfers (fed+state): Medicaid, public housing, nutrition (SNAP), education, (3) cash welfare: TANF for single parents (fed+state), SSI for old/disabled (fed)

FEDERAL US INCOME TAX

US income tax assessed on **annual family** income (not individual) [most other OECD countries have shifted to individual assessment]

Sum all cash income sources from family members (both from labor and capital income sources) = called **Adjusted Gross Income (AGI)**
(adjustments = some deduction e.g., for business expenses, certain retirement contributions, etc.).

Main exclusions: fringe benefits (health insurance, pension contributions), imputed rent of homeowners, unrealized capital gains

FEDERAL US INCOME TAX

Taxable income = AGI - personal exemptions - deduction

personal exemptions = \$4K * # family members (in 2016)

deduction is max of standard deduction or itemized deductions

Standard deduction is a fixed amount depending on family structure (\$12.6K for couple, \$6.3K for single in 2016)

Itemized deductions: (a) state and local taxes paid, (b) mortgage interest payments, (c) charitable giving, various small other items

[Itemized deductions, called tax expenditures \approx 10% of AGI]

FEDERAL US INCOME TAX: TAX BRACKETS

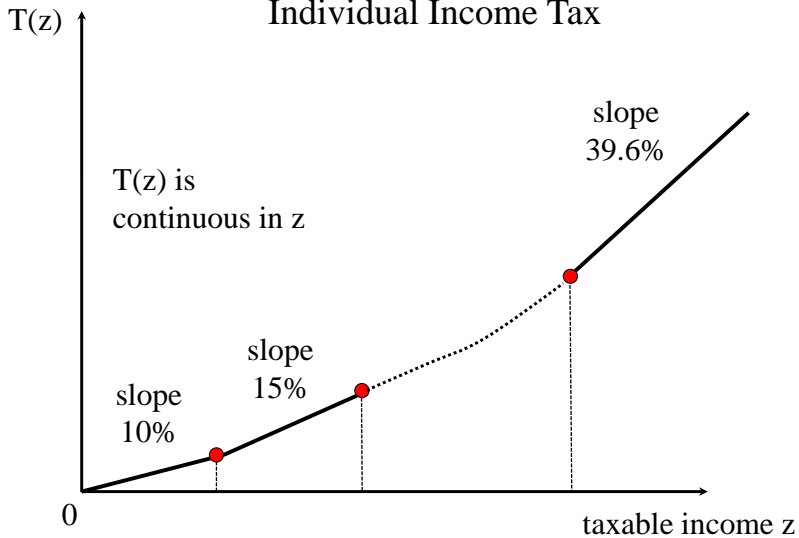
Tax $T(z)$ is piecewise linear and continuous function of taxable income z with constant marginal tax rates (MTR) $T'(z)$ by brackets

In 2013–2016, 6 brackets with MTR 10%, 15%, 25%, 28%, 33%, 35%, 39.6% (top bracket for z above \$470K), indexed on price inflation

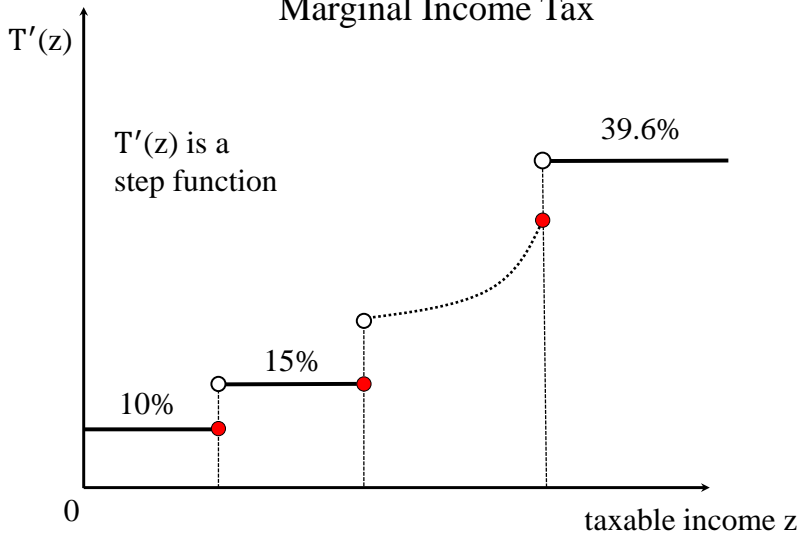
Lower preferential rates (up to a max of 20%) apply to dividends (since 2003) and realized capital gains [in part to offset double taxation of corporate profits]

Tax rates change frequently over time. Top MTRs have declined drastically since 1960s (as in many OECD countries)

Individual Income Tax



Marginal Income Tax



US Top Marginal Tax Rate (Federal Individual Income Tax)



FEDERAL US INCOME TAX: TAX CREDITS

Tax credits: Additional reduction in taxes

(1) **Non refundable** (cannot reduce taxes below zero): foreign tax credit, child care expenses, education credits, energy credits, and many others

(2) **Refundable** (can reduce taxes below zero, i.e., be net transfers): EITC (earned income tax credit, up to \$3.3K, \$5.5K, \$6.1K for working families with 1, 2, 3+ kids), Child Tax Credit (\$1000 per kid, partly refundable)

Refundable tax credits are now the largest means-tested cash transfer for low income families

EITC Amount as a Function of Earnings

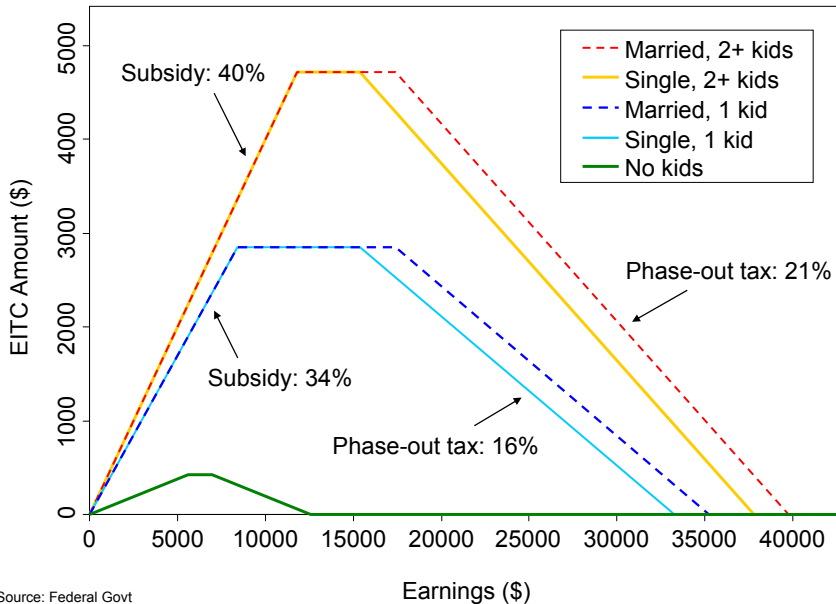
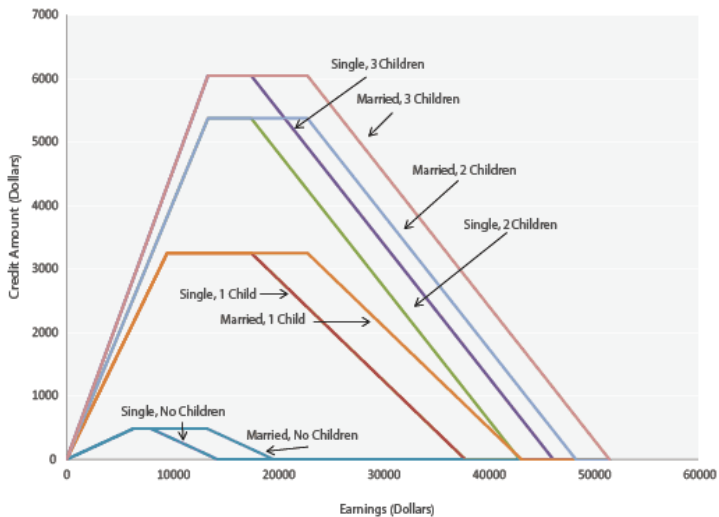


Figure 1: Earned Income Tax Credit by Number of Children and Filing Status, 2013



Source: 2013 EITC parameters taken from <http://www.taxpolicycenter.org/taxfacts/displayafact.cfm?Docid=36>

FEDERAL US INCOME TAX: TAX FILING

Taxes on year t earnings are withheld on paychecks during year t (pay-as-you-earn)

Income tax return filed in Feb–April 15, year $t + 1$ [filers use either software or tax preparers, huge private industry, most OECD countries provide pre-populated returns]

Most tax filers get a tax refund as withholdings larger than taxes owed in general

Payers (employers, banks, etc.) send income information to govt (3rd party reporting)

3rd party reporting + withholding at source is key for successful enforcement

MAIN MEANS-TESTED TRANSFER PROGRAMS

1) **Traditional transfers:** managed by welfare agencies, paid on monthly basis, high stigma and take-up costs \Rightarrow low take-up rates (often only around 50%)

Main programs: Medicaid (health insurance for low incomes), SNAP (former food stamps), public housing, TANF (welfare), SSI (aged+disabled)

2) **Refundable income tax credits:** managed by tax administration, paid as an annual lumpsum in year $t + 1$, low stigma and take-up cost \Rightarrow high take-up rates

Main programs: EITC and Child Tax Credit [large expansion since the 1990s] for low income working families with children

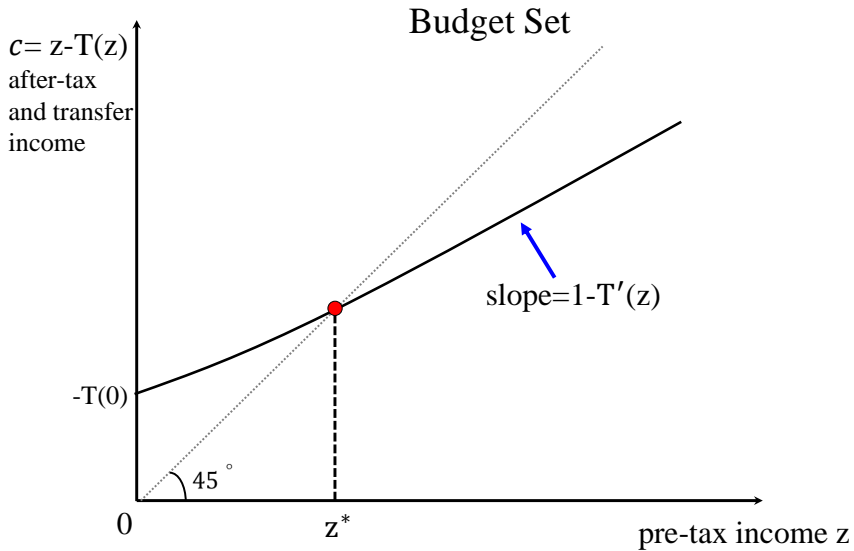
KEY CONCEPTS FOR TAXES/TRANSFERS

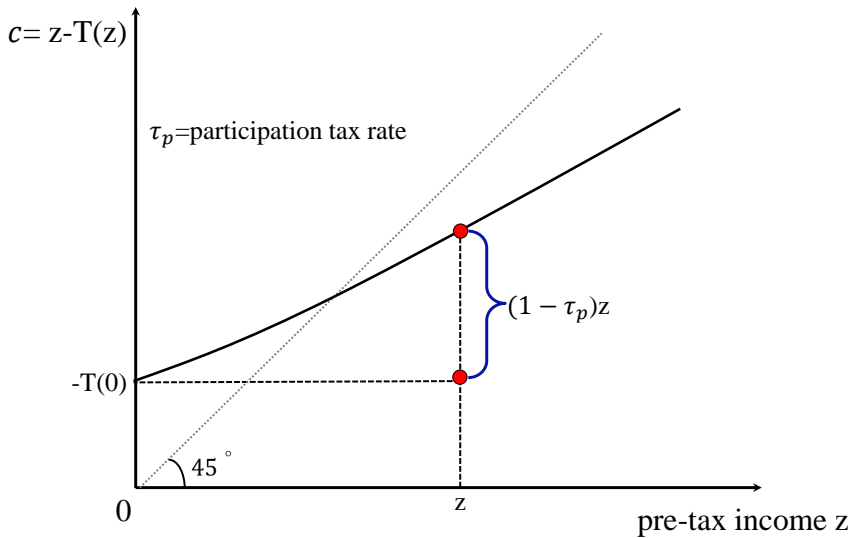
[Next slide:] budget $(z, z - T(z))$ which integrates taxes and transfers

- 1) Transfer benefit with zero earnings $-T(0)$ [sometimes called demogrant or lumpsum grant]
- 2) Marginal tax rate (or phasing-out rate) $T'(z)$: individual keeps $1 - T'(z)$ for an additional \$1 of earnings (intensive labor supply response)
- 3) Participation tax rate $\tau_p = [T(z) - T(0)]/z$: individual keeps fraction $1 - \tau_p$ of earnings when moving from zero earnings to earnings z (extensive labor supply response):

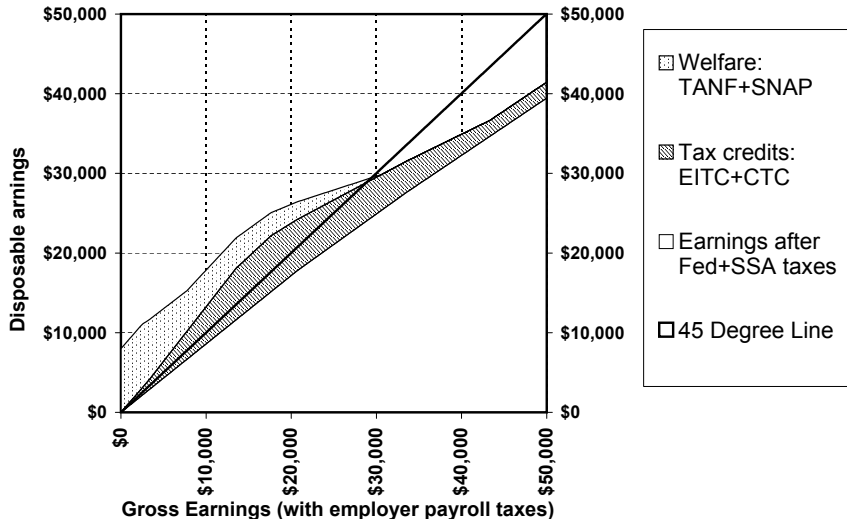
$$z - T(z) = -T(0) + z \cdot (1 - \tau_p)$$

- 4) Break-even earnings point z^* : point at which $T(z^*) = 0$

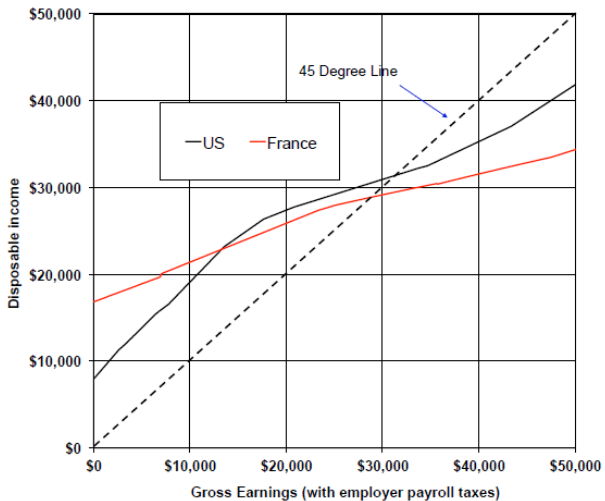




US Tax/Transfer System, single parent with 2 children, 2009



Source: Computations made by Emmanuel Saez using tax and transfer system parameters



Source: Piketty, Thomas, and Emmanuel Saez (2012)

Profile of Current Means-tested Transfers

Traditional means-tested programs reduce incentives to work for low income workers

Refundable tax credits have significantly increased incentive to work for low income workers

However, refundable tax credits cannot benefit those with zero earnings

Trade-off: US chooses to reward work more than most European countries (such as France) but therefore provides smaller benefits to those with no earnings

Optimal Taxation: Case with No Behavioral Responses

Utility $u(c)$ strictly increasing and concave

Same for everybody where c is after tax income.

Income z is fixed for each individual, $c = z - T(z)$ where $T(z)$ is tax/transfer on z (tax if $T(z) > 0$, transfer if $T(z) < 0$)

N individuals with fixed incomes $z_1 < \dots < z_N$

Government maximizes **Utilitarian** objective:

$$SWF = \sum_{i=1}^N u(z_i - T(z_i))$$

subject to **budget constraint** $\sum_{i=1}^N T(z_i) = 0$ (taxes need to fund transfers)

Simpler Derivation with just 2 individuals

$$\max SWF = u(z_1 - T(z_1)) + u(z_2 - T(z_2)) \text{ s.t. } T(z_1) + T(z_2) = 0$$

Replace $T(z_1) = -T(z_2)$ in SWF using budget constraint:

$$SWF = u(z_1 + T(z_2)) + u(z_2 - T(z_2))$$

First order condition (FOC) in $T(z_2)$:

$$0 = \frac{dSWF}{dT(z_2)} = u'(z_1 + T(z_2)) - u'(z_2 - T(z_2)) = 0 \Rightarrow$$

$$u'(z_1 + T(z_2)) = u'(z_2 - T(z_2)) \Rightarrow u'(z_1 - T(z_1)) = u'(z_2 - T(z_2))$$

$\Rightarrow z_1 - T(z_1) = z_2 - T(z_2)$ constant across the 2 individuals

Perfect equalization of after-tax income = 100% tax rate and redistribution.

Utilitarianism with decreasing marginal utility leads to perfect egalitarianism
[Edgeworth, 1897]

Derivation with N individuals

Replace $T(z_1) = -\sum_{i=2}^N T(z_i)$ from budget constraint:

$$SWF = u \left(z_1 + \sum_{i=2}^N T(z_i) \right) + \sum_{i=2}^N u(z_i - T(z_i))$$

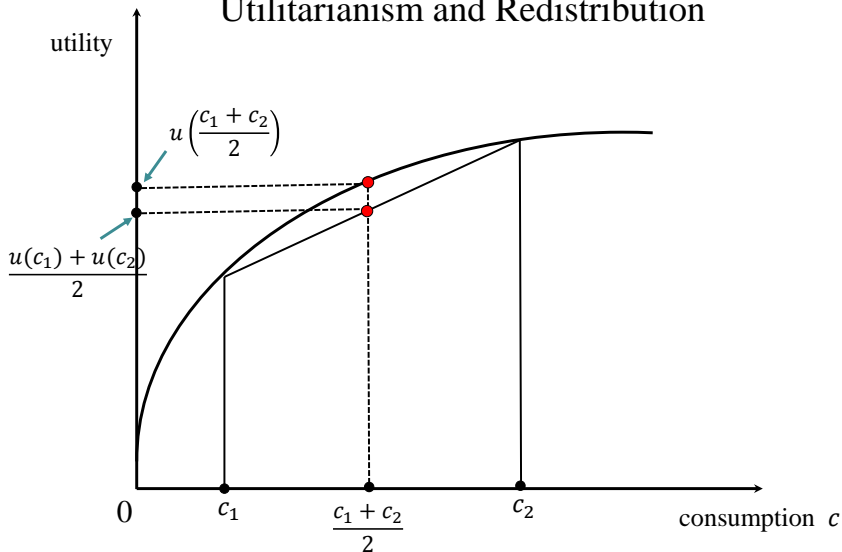
First order condition (FOC) in $T(z_j)$ for a given $j = 2, \dots, N$:

$$0 = \frac{\partial SWF}{\partial T(z_j)} = u' \left(z_1 + \sum_{i=2}^N T(z_i) \right) - u'(z_j - T(z_j)) = 0 \Rightarrow$$

$$u'(z_j - T(z_j)) = u'(z_1 - T(z_1)) \Rightarrow z_j - T(z_j) = \text{constant across } j = 1, \dots, N$$

Perfect equalization of after-tax income = 100% tax rate and redistribution.

Utilitarianism and Redistribution



ISSUES WITH SIMPLE MODEL

1) **No behavioral responses:** Obvious missing piece: 100% redistribution would destroy incentives to work and thus the assumption that z is exogenous is unrealistic

⇒ Optimal income tax theory incorporates behavioral responses

2) **Issue with Utilitarianism:** Even absent behavioral responses, many people would object to 100% redistribution [perceived as confiscatory]

⇒ Citizens' views on fairness impose **bounds** on redistribution govt can do [political economy / public choice theory]

EQUITY-EFFICIENCY TRADE-OFF

Taxes can be used to raise revenue for transfer programs which can reduce inequality in disposable income \Rightarrow Desirable if society feels that inequality is too large

Taxes (and transfers) reduce incentives to work \Rightarrow High tax rates create economic inefficiency if individual respond to taxes

Size of behavioral response limits the ability of government to redistribute with taxes/transfers

\Rightarrow Generates an equity-efficiency trade-off

Empirical tax literature estimates the size of behavioral responses to taxation

Labor Supply Theory

Individual has utility over labor supply l and consumption c : $u(c, l)$
increasing in c and **decreasing** in l [= increasing in leisure]

$$\max_{c, l} u(c, l) \quad \text{subject to} \quad c = w \cdot l + R$$

with $w = \bar{w} \cdot (1 - \tau)$ the net-of-tax wage (\bar{w} is before tax wage rate and τ is tax rate), and R non-labor income

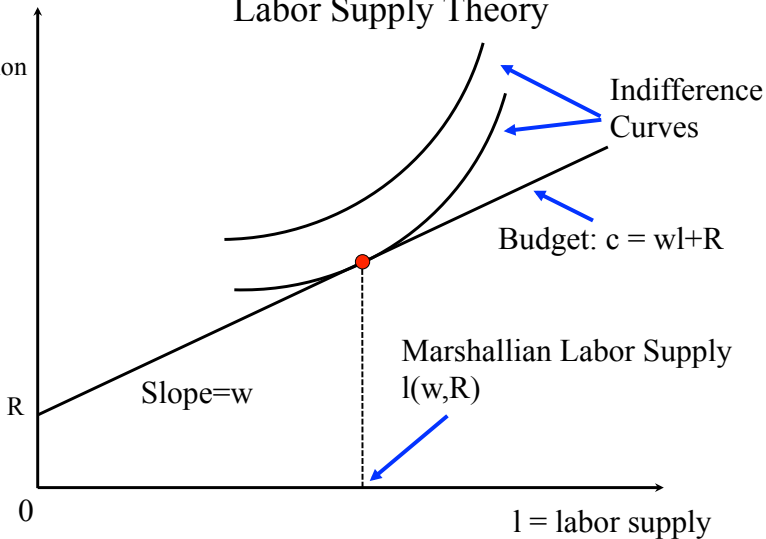
FOC $w \frac{\partial u}{\partial c} + \frac{\partial u}{\partial l} = 0$ defines Marshallian labor supply $l = l(w, R)$

$$\text{Uncompensated labor supply elasticity: } \epsilon^u = \frac{w}{l} \cdot \frac{\partial l}{\partial w}$$

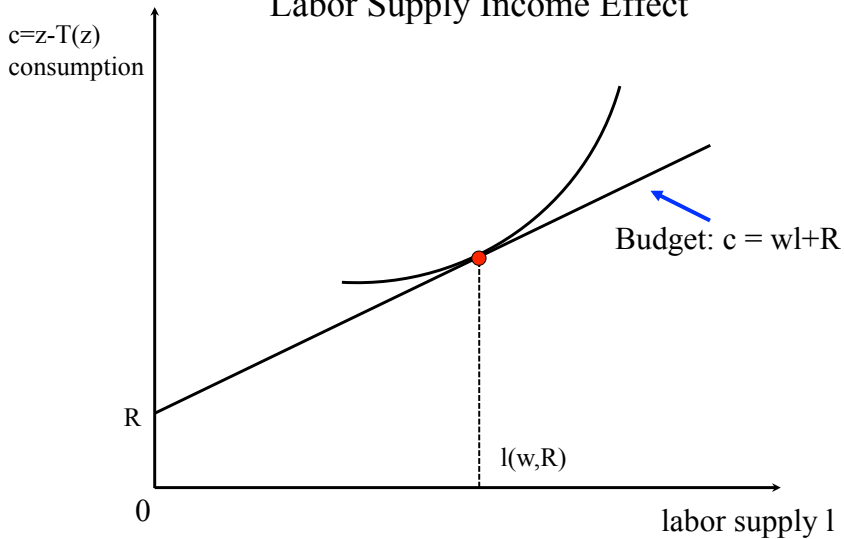
$$\text{Income effects: } \eta = w \frac{\partial l}{\partial R} \leq 0$$

Labor Supply Theory

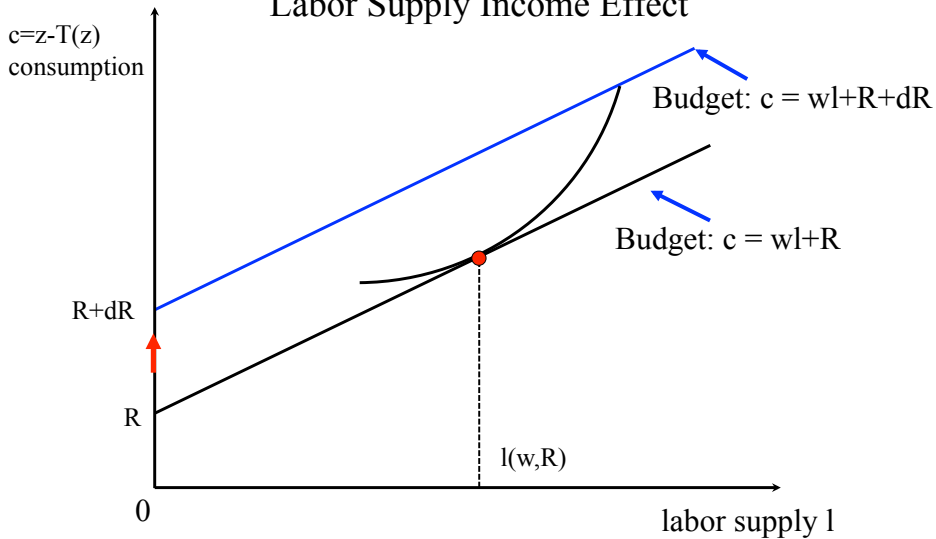
$c = z - T(z)$
consumption



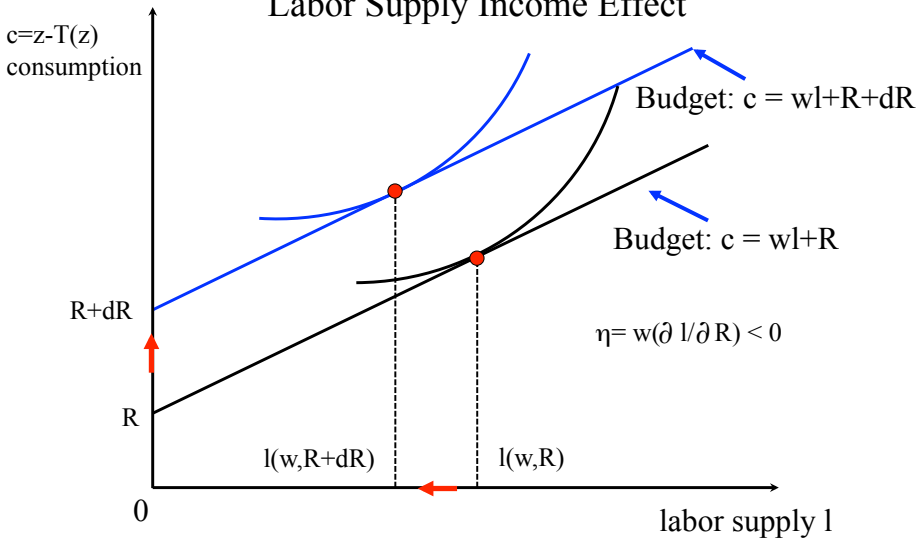
Labor Supply Income Effect



Labor Supply Income Effect



Labor Supply Income Effect



Labor Supply Theory

Substitution effects: Hicksian labor supply: $I^c(w, u)$ minimizes cost needed to reach u given slope $w \Rightarrow$

$$\text{Compensated elasticity } \varepsilon^c = \frac{w}{I} \cdot \frac{\partial I^c}{\partial w} > 0$$

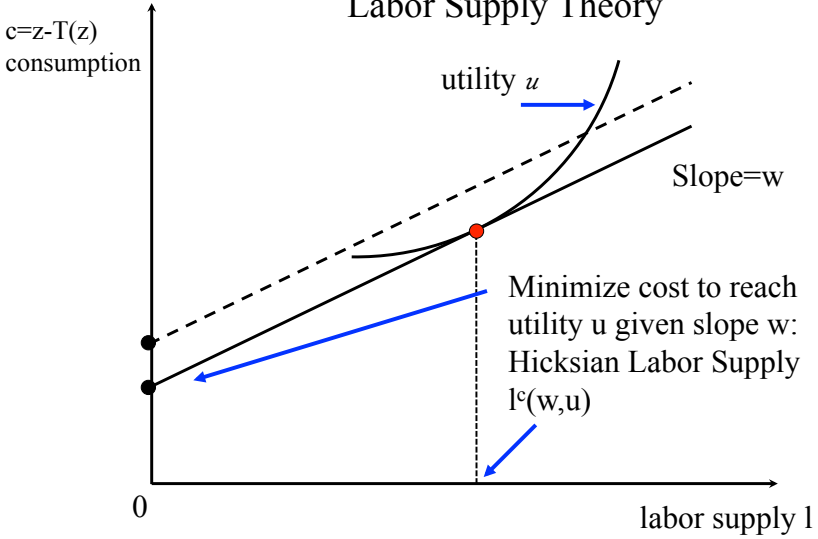
$$\text{Slutsky equation } \frac{\partial I}{\partial w} = \frac{\partial I^c}{\partial w} + I \frac{\partial I}{\partial R} \Rightarrow \varepsilon^u = \varepsilon^c + \eta$$

Tax rate τ discourages work through substitution effects (work pays less at the margin)

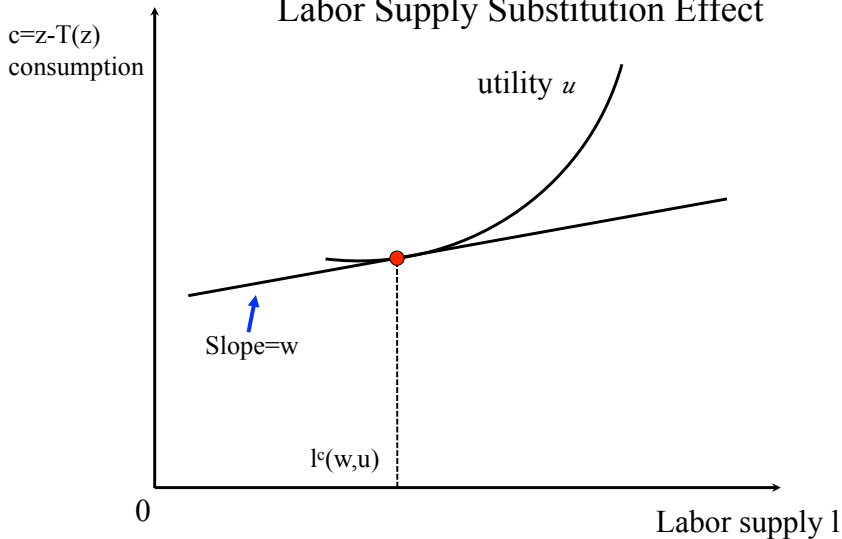
Tax rate τ encourages work through income effects (taxes make you poorer and hence in more need of income)

Net effect ambiguous (captured by sign of ε^u)

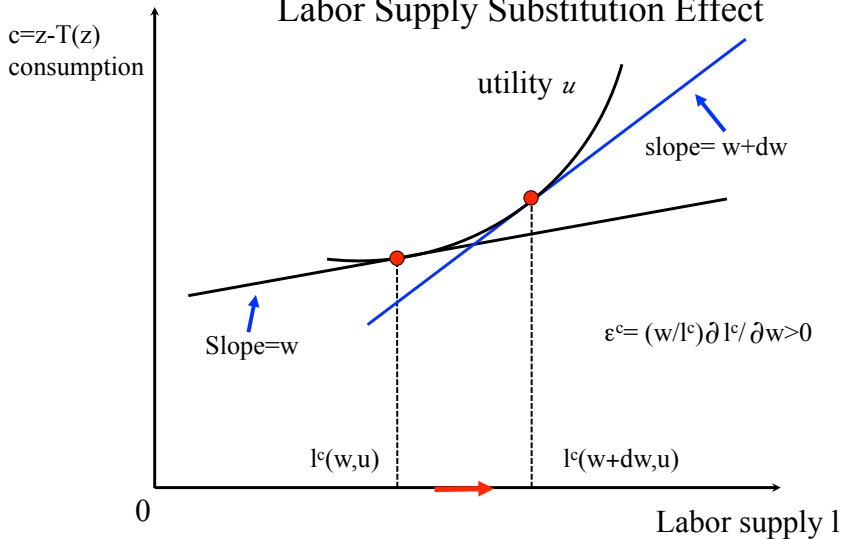
Labor Supply Theory



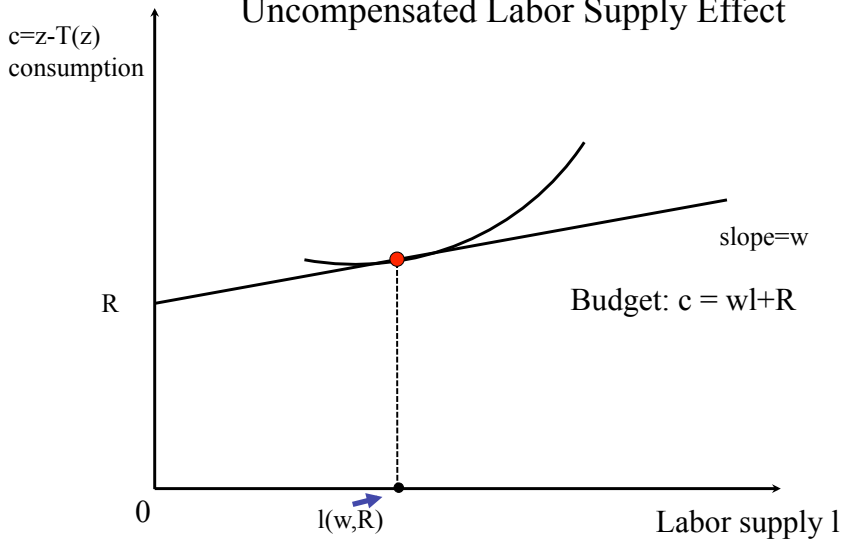
Labor Supply Substitution Effect



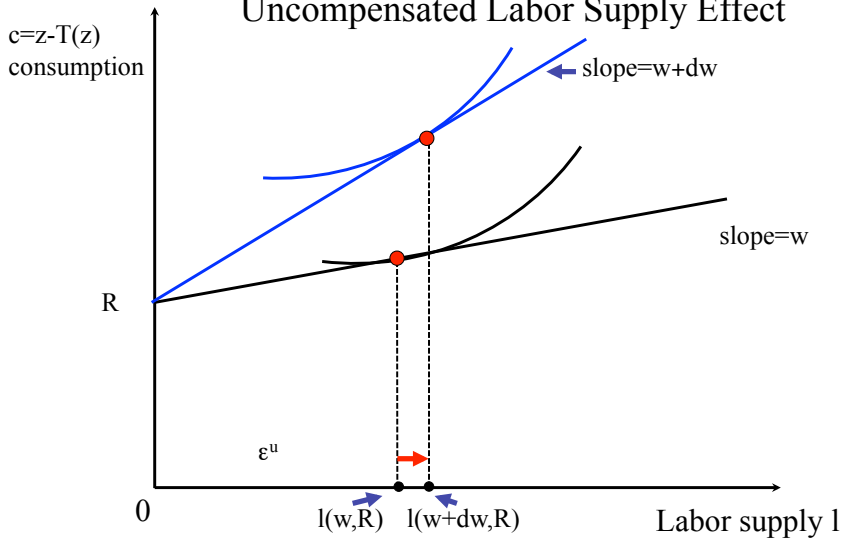
Labor Supply Substitution Effect



Uncompensated Labor Supply Effect

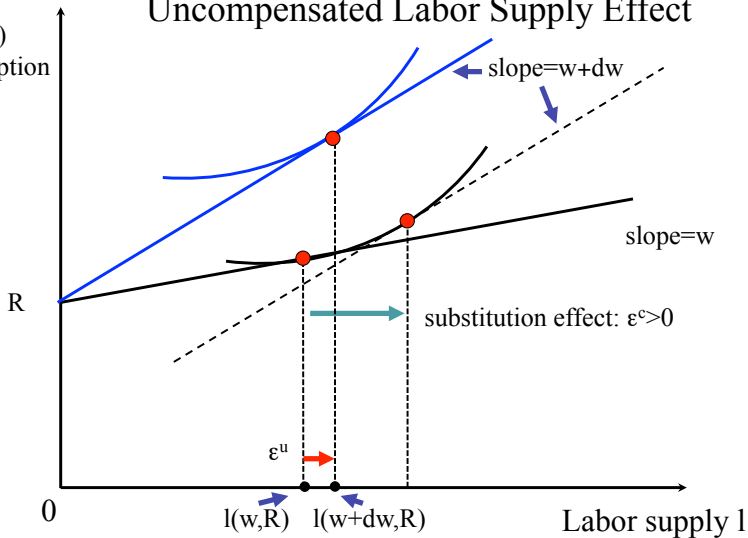


Uncompensated Labor Supply Effect



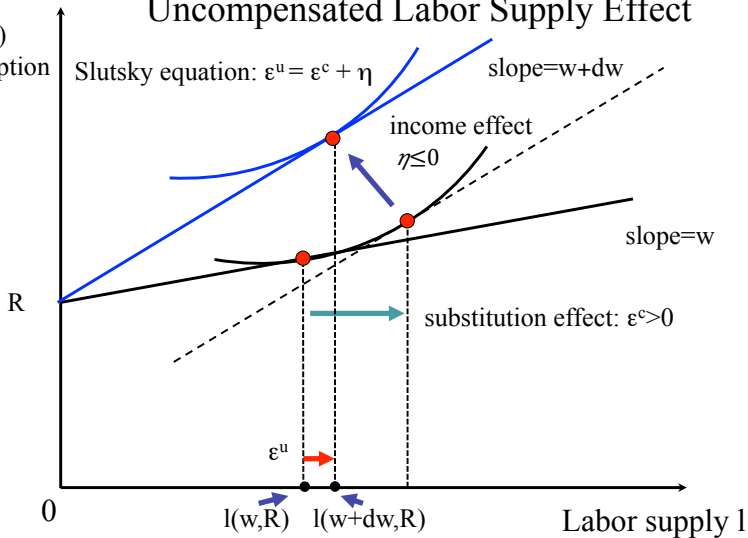
Uncompensated Labor Supply Effect

$c = z - T(z)$
consumption



Uncompensated Labor Supply Effect

$c = z - T(z)$
consumption



General nonlinear income tax

With no taxes: $c = z$ (consumption = earnings)

With taxes $c = z - T(z)$ (consumption = earnings - net taxes)

$T(z) \geq 0$ if individual pays taxes on net, $T(z) \leq 0$ if individual receives transfers on net

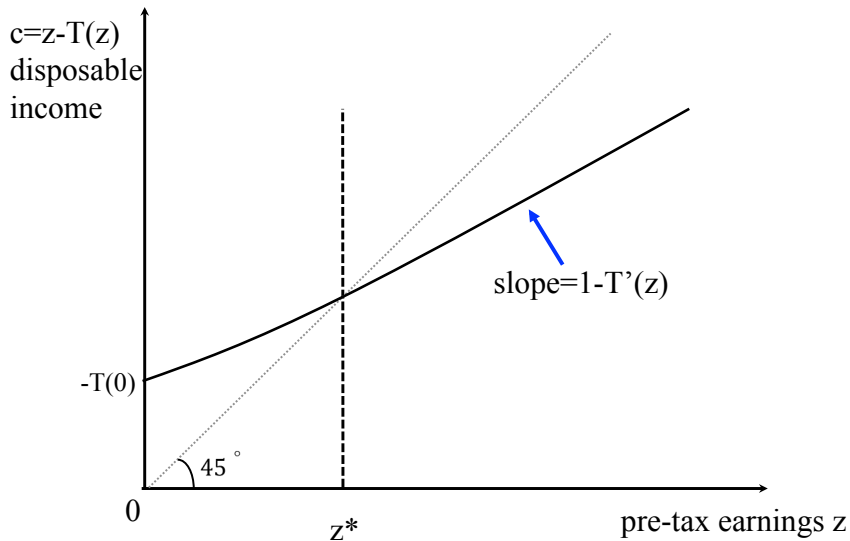
$T'(z) > 0$ reduces net wage rate and reduces labor supply through substitution effects

$T(z) > 0$ reduces disposable income and increases labor supply through income effects

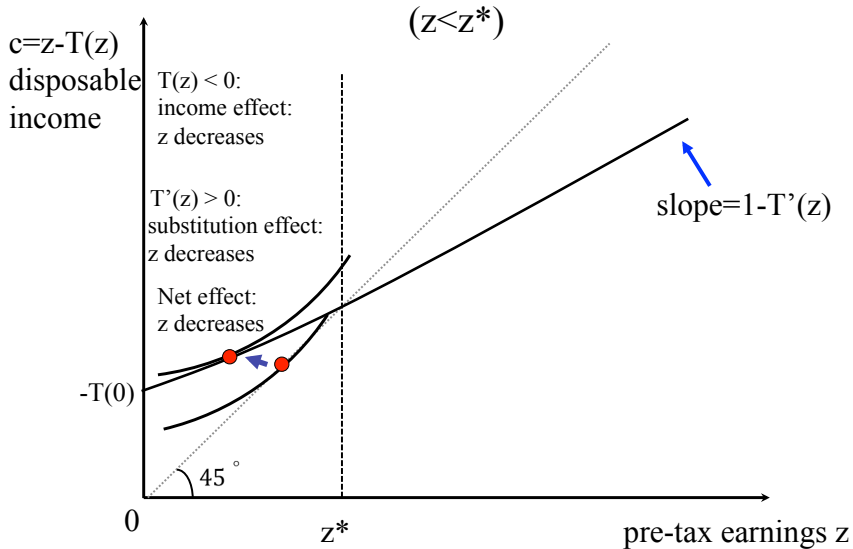
$T(z) < 0$ increases disposable income and decreases labor supply through income effects

Transfer program such that $T(z) < 0$ and $T'(z) > 0$ always discourages labor supply

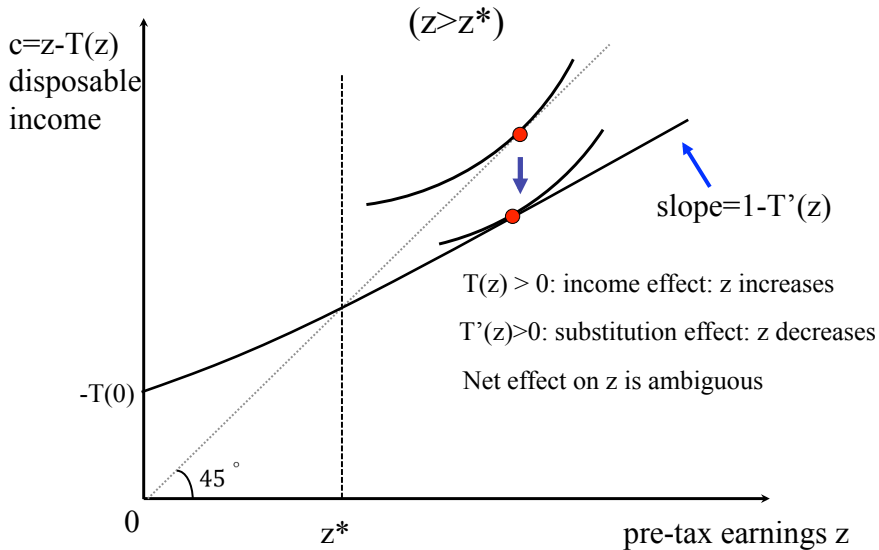
Effect of Taxes/Transfers on Labor Supply



Effect of Taxes/Transfers on Labor Supply



Effect of Taxes/Transfers on Labor Supply



OPTIMAL LINEAR TAX RATE: LAFFER CURVE

$c = (1 - \tau) \cdot z + R$ with τ linear tax rate and R fixed universal transfer funded by taxes $R = \tau \cdot Z$ with Z average earnings

Individual $i = 1, \dots, N$ chooses l_i to max $u^i((1 - \tau) \cdot w_i l_i + R, l_i)$

Labor supply choices l_i determine individual earnings $z_i = w_i l_i \Rightarrow$ Average earnings $Z = \sum_i z_i / N$ depends (positively) on net-of-tax rate $1 - \tau$.

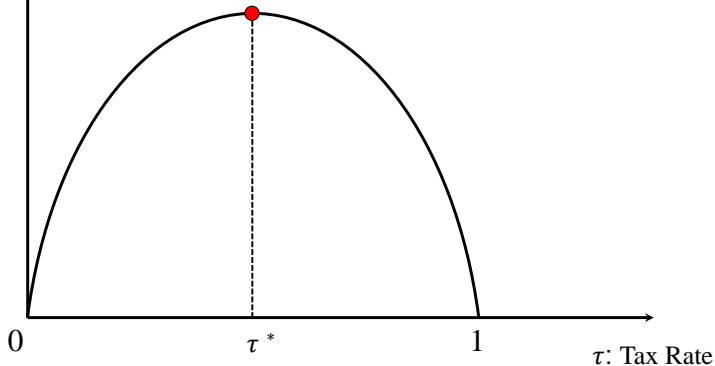
Tax Revenue per person $R(\tau) = \tau \cdot Z(1 - \tau)$ is inversely U-shaped with τ : $R(\tau = 0) = 0$ (no taxes) and $R(\tau = 1) = 0$ (nobody works): called the Laffer Curve

Laffer Curve

Tax
Revenue
R

$$R = \tau \cdot Z(1 - \tau)$$

$$\tau^* = \frac{1}{1 + e} \text{ with } e = \frac{1 - \tau}{Z} \cdot \frac{dZ}{d(1 - \tau)}$$



OPTIMAL LINEAR TAX RATE: LAFFER CURVE

Top of the Laffer Curve is at τ^* maximizing tax revenue:

$$0 = R'(\tau^*) = Z - \tau^* \frac{dZ}{d(1-\tau)} \Rightarrow \frac{\tau^*}{1-\tau^*} \cdot \frac{1-\tau^*}{Z} \frac{dZ}{d(1-\tau)} = 1$$

$$\text{Revenue maximizing tax rate: } \tau^* = \frac{1}{1+e} \text{ with } e = \frac{1-\tau}{Z} \frac{dZ}{d(1-\tau)}$$

e is the elasticity of average income Z with respect to the net-of-tax rate $1-\tau$ [empirically estimable]

Inefficient to have $\tau > \tau^*$ because decreasing τ would make taxpayers better off (they pay less taxes) and would increase tax revenue for the government [and hence univ. transfer R]

If government is **Rawlsian** (maximizes welfare of the worst-off person with no earnings) then $\tau^* = 1/(1+e)$ is optimal to make transfer $R(\tau)$ as large as possible

OPTIMAL LINEAR TAX RATE: FORMULA

Government chooses τ to maximize **utilitarian** social welfare

$$SWF = \sum_i u^i((1 - \tau)w_i l_i + \tau \cdot Z(1 - \tau), l_i)$$

taking into account that labor supply l_i responds to taxation and hence that this affects the tax revenue per person $\tau \cdot Z(1 - \tau)$ that is redistributed back as transfer to everybody

Government first order condition: (using the envelope theorem as l_i maximizes u^i):

$$0 = \frac{dSWF}{d\tau} = \sum_i \frac{\partial u^i}{\partial c} \cdot \left[-z_i + Z - \tau \frac{dZ}{d(1 - \tau)} \right],$$

OPTIMAL LINEAR TAX RATE: FORMULA

Hence, we have the following optimal linear income tax formula

$$\tau = \frac{1 - \bar{g}}{1 - \bar{g} + e} \quad \text{with} \quad \bar{g} = \frac{\sum_i z_i \cdot \frac{\partial u^i}{\partial c}}{Z \cdot \sum_i \frac{\partial u^i}{\partial c}}$$

$0 \leq \bar{g} < 1$ as $\frac{\partial u^i}{\partial c}$ is decreasing with z_i (marginal utility falls with consumption)

τ decreases with elasticity e [efficiency] and with parameter \bar{g} [equity]

Formula captures the **equity-efficiency trade-off**

\bar{g} is low and τ close to Laffer rate $\tau^* = 1/(1 + e)$ when

(a) inequality is high

(b) marginal utility decreases fast with income

OPTIMAL TOP INCOME TAX RATE (Diamond and Saez JEP'11)

In practice, individual income tax is progressive with brackets with increasing marginal tax rates. What is the optimal top tax rate?

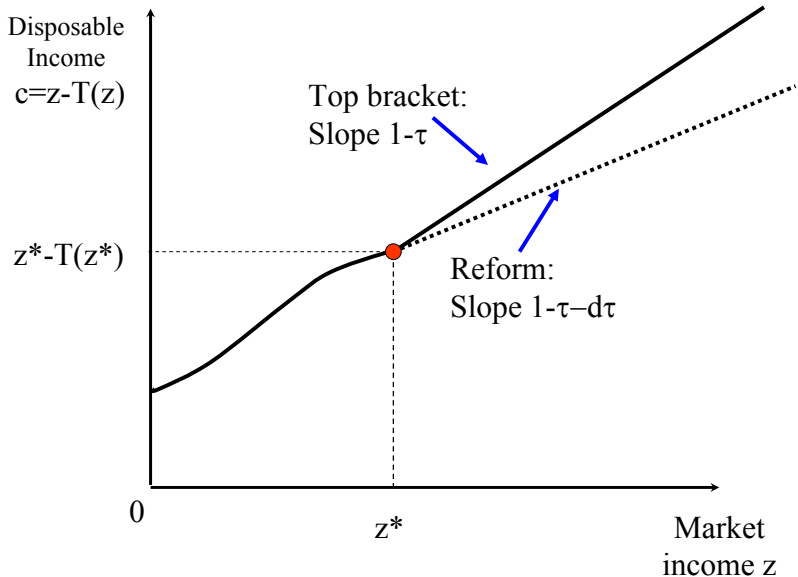
Consider constant MTR τ above fixed z^* . Goal is to derive optimal τ

In the US in 2016, $\tau = 39.6\%$ and $z^* \simeq \$500,000$ (\simeq top 1%).

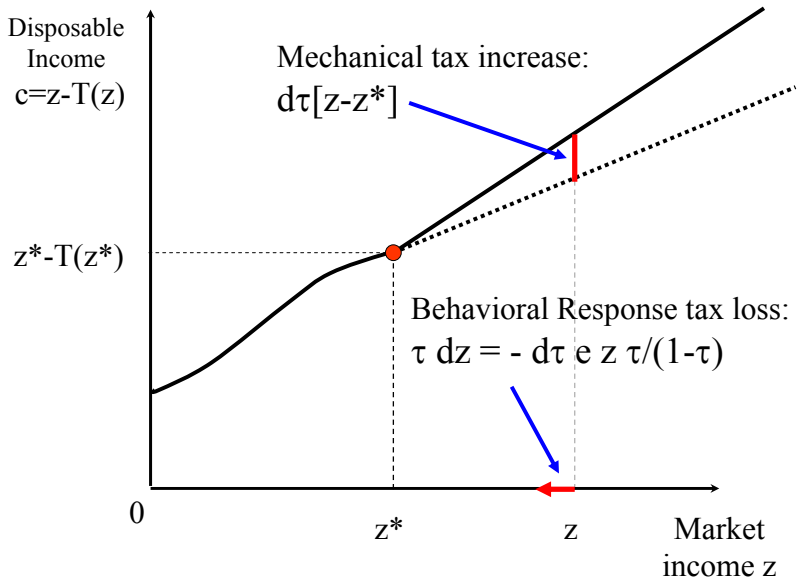
Denote by z average income of top bracket earners [depends on net-of-tax rate $1 - \tau$], with elasticity $e = [(1 - \tau)/z] \cdot dz/d(1 - \tau)$

Suppose the government wants to maximize tax revenue collected from top bracket taxpayers (marginal utility of consumption of top 1% earners is small)

Optimal Top Income Tax Rate (Mirrlees '71 model)



Optimal Top Income Tax Rate (Mirrlees '71 model)



OPTIMAL TOP INCOME TAX RATE

Consider small $d\tau > 0$ reform above z^* .

1) **Mechanical increase** in tax revenue:

$$dM = [z - z^*]d\tau$$

2) **Behavioral response** reduces tax revenue:

$$dB = \tau dz = -\tau \frac{dz}{d(1-\tau)} d\tau = -\frac{\tau}{1-\tau} \cdot e \cdot z \cdot d\tau$$

$$dM + dB = d\tau \left\{ [z - z^*] - e \frac{\tau}{1-\tau} z \right\}$$

Optimal τ such that $dM + dB = 0$

$$\Rightarrow \frac{\tau}{1-\tau} = \frac{1}{e} \cdot \frac{z - z^*}{z} \Rightarrow \tau = \frac{1}{1 + a \cdot e} \quad \text{with} \quad a = \frac{z}{z - z^*}$$

OPTIMAL TOP INCOME TAX RATE

Optimal top tax rate: $\tau = \frac{1}{1 + a \cdot e}$ with $a = \frac{z}{z - z^*}$

Optimal τ decreases with e [efficiency]

Optimal τ decrease with a [thinness of top tail]

Empirically $a \simeq 1.5$, easy to estimate using distributional data

Empirically e is harder to estimate [controversial]

Example: If $e = .25$ then $\tau = 1/(1 + 1.5 \cdot 0.25) = 1/1.75 = 73\%$

REAL VS. TAX AVOIDANCE RESPONSES

Behavioral response to income tax comes not only from reduced labor supply but from tax avoidance or tax evasion

Tax avoidance: legal means to reduce tax liability (exploiting tax loopholes)

Tax evasion: illegal under-reporting of income

Labor supply vs. tax avoidance/evasion distinction matters because:

- 1) If people work less when tax rates increase, there is not much the government can do about it
- 2) If people avoid/evade more when tax rates increase, then the govt can reduce tax avoidance/evasion opportunities [closing tax loopholes, broadening the tax base, increasing tax enforcement, etc.]

REAL VS. AVOIDANCE RESPONSES

Key policy question: Is it possible to eliminate avoidance responses using base broadening, etc.? or would new avoidance schemes keep popping up?

- a) Some forms of tax avoidance are due to **poorly designed tax codes** (preferential treatment for some income forms or some deductions)
- b) Some forms of tax avoidance/evasion can only be addressed with **international cooperation** (off-shore tax evasion in tax havens)
- c) Some forms of tax avoidance/evasion are due to technological limitations of tax collection (impossible to tax informal cash businesses)

OPTIMAL PROFILE OF TRANSFERS

If individuals respond to taxes only through **intensive** margin (how much they work rather than whether they work), optimal transfer at bottom takes the form of a “Negative Income Tax”:

1) Lumpsum grant $-T(0) > 0$ for those with no earnings

2) High marginal tax rates (MTRs) $T'(z)$ at the bottom to phase-out the lumpsum grant quickly

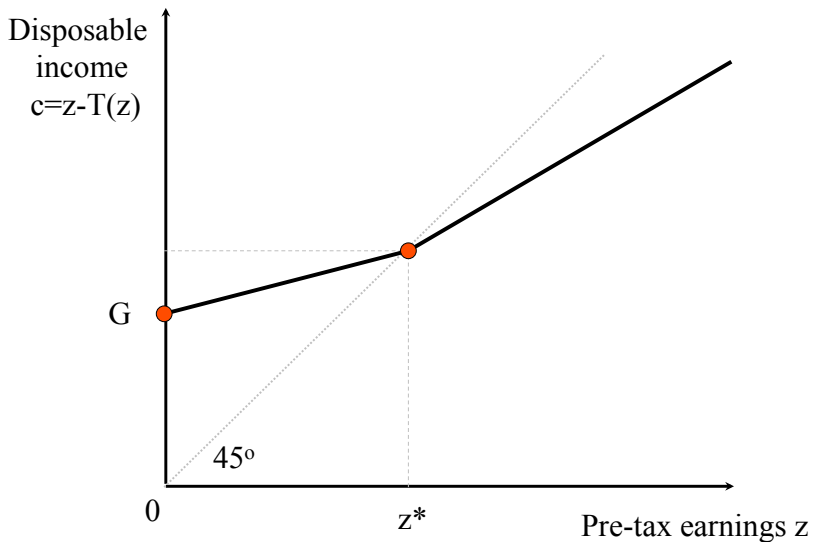
Intuition: high MTRs at bottom are efficient because:

(a) they target transfers to the most needy

(b) earnings at the bottom are low to start with \Rightarrow intensive labor supply response does not generate large output losses

But US system with zero MTR at bottom justified if society sees people with zero income as **less deserving** than average

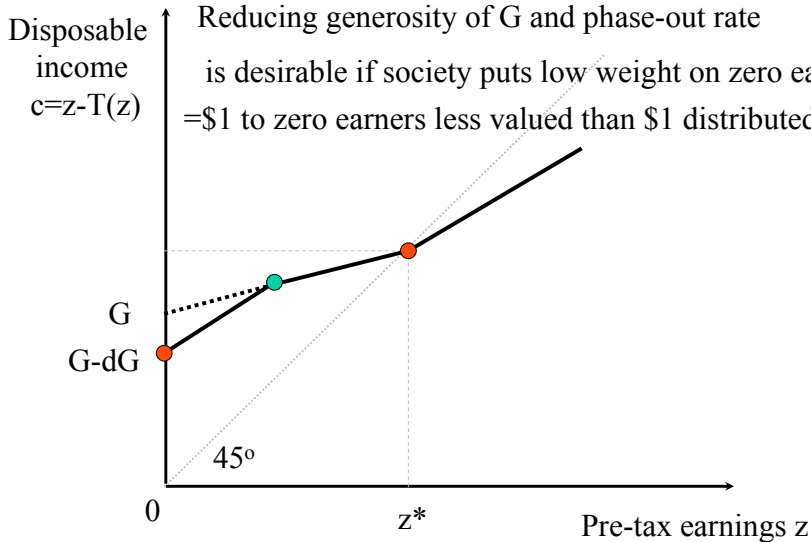
Starting from a means-tested program



Starting from a means-tested program

Reducing generosity of G and phase-out rate

is desirable if society puts low weight on zero earners
= $\$1$ to zero earners less valued than $\$1$ distributed to all



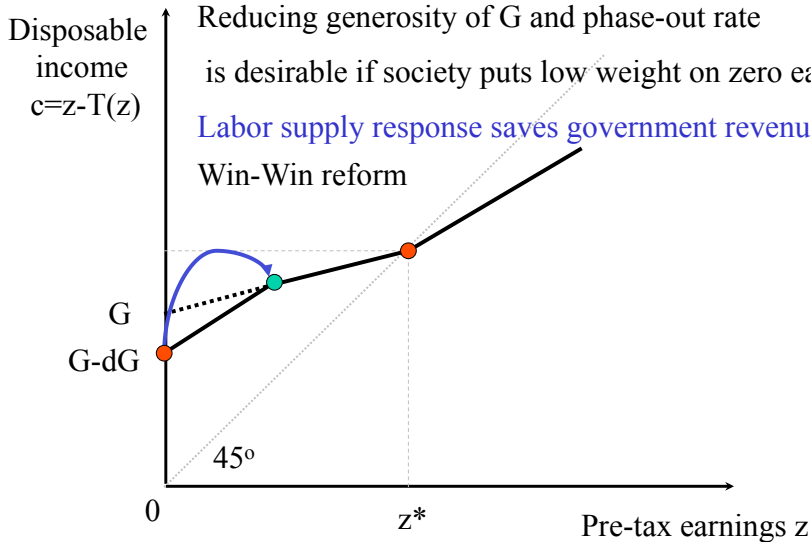
Starting from a means-tested program

Reducing generosity of G and phase-out rate

is desirable if society puts low weight on zero earners

Labor supply response saves government revenue

Win-Win reform



Optimal Transfers: Participation Responses

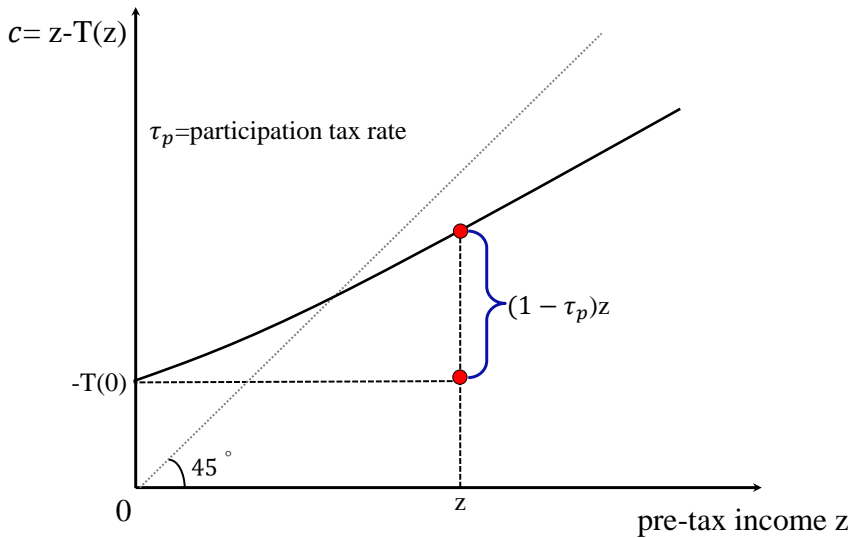
Empirical literature shows that participation labor supply responses [whether to work or not] are large at the bottom [much larger and clearer than intensive responses]

Participation depends on participation tax rate:

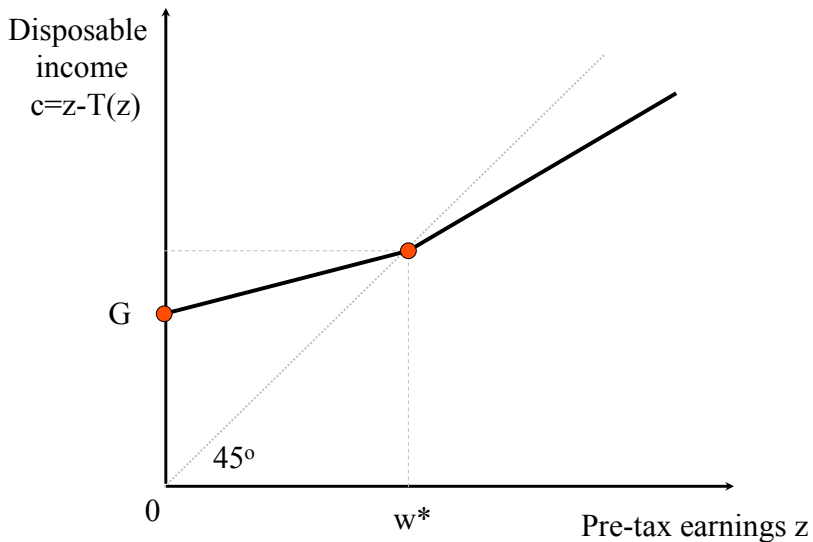
$$\tau_p = [T(z) - T(0)]/z$$

Individual keeps fraction $1 - \tau_p$ of earnings when moving from zero earnings to earnings z : $z - T(z) = -T(0) + z \cdot (1 - \tau_p)$

Key result: in-work subsidies with $T'(z) < 0$ are optimal when labor supply responses are concentrated along extensive margin and govt cares about low income workers.

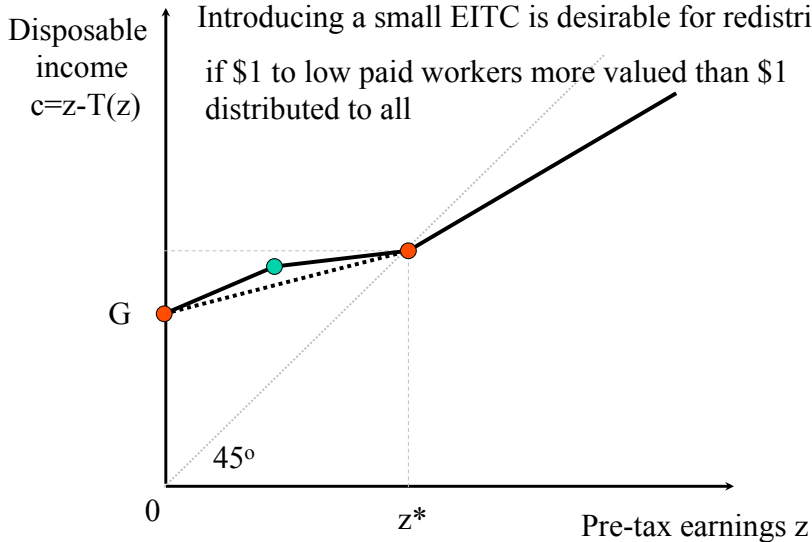


Starting from a Means-Tested Program



Starting from a Means-Tested Program

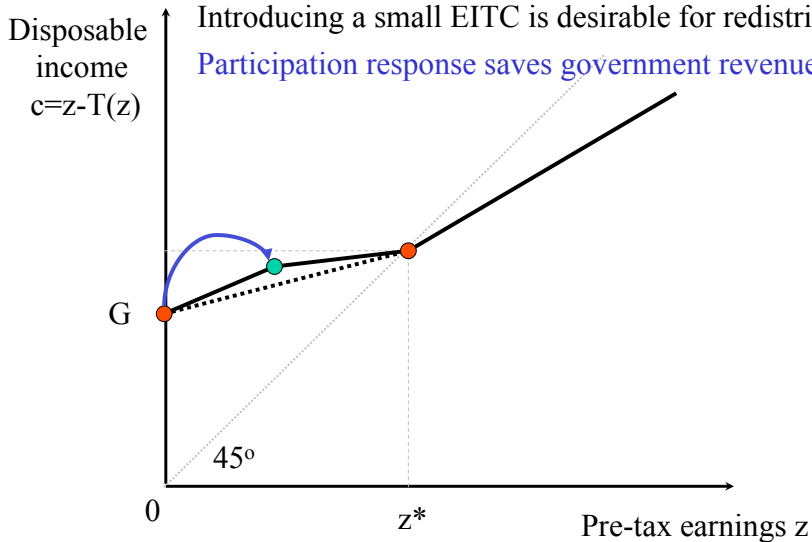
Introducing a small EITC is desirable for redistribution
if \$1 to low paid workers more valued than \$1
distributed to all



Starting from a Means-Tested Program

Introducing a small EITC is desirable for redistribution

Participation response saves government revenue

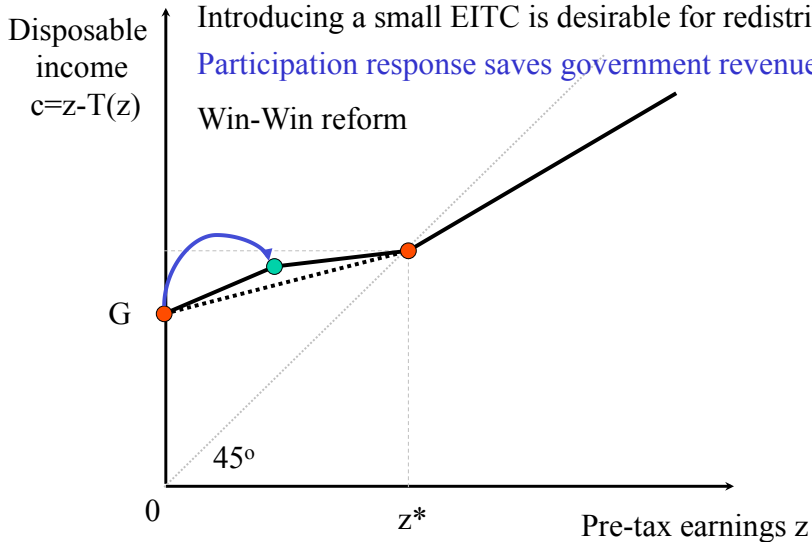


Starting from a Means-Tested Program

Introducing a small EITC is desirable for redistribution

Participation response saves government revenue

Win-Win reform

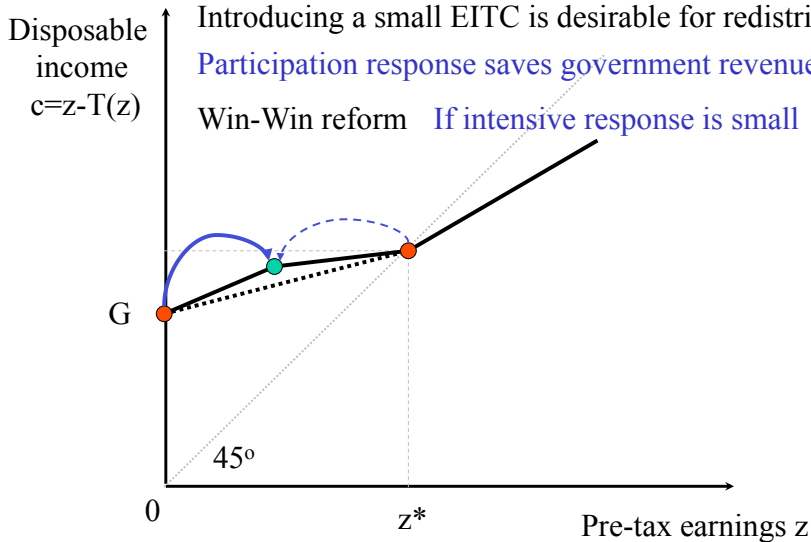


Starting from a Means-Tested Program

Introducing a small EITC is desirable for redistribution

Participation response saves government revenue

Win-Win reform If intensive response is small



OPTIMAL PROFILE OF TRANSFERS: SUMMARY

- 1) If society views zero earners as less deserving than average [conservative view that substantial fraction of zero earners are “free loaders”] then low lumpsum grant combined with low phasing out rate at bottom is optimal
- 2) If society views low income workers as more deserving than average [typically bipartisan view] and labor supply responses concentrated along extensive margin (work vs. not) then low phasing out rate at bottom is optimal
- 3) Generous lumpsum grant with high MTR at bottom justified only if society views non workers as deserving and no strong response along the extensive margin (work vs. not)

ACTUAL TAX/TRANSFER SYSTEMS

1) Means-tested transfer programs used to be of the traditional form with high phasing-out rates (sometimes above 100%) ⇒ No incentives to work (even with modest elasticities)

Initially designed for groups not expected to work [widows in the US] but later attracting groups who could potentially work [single mothers]

2) In-work benefits have been introduced and expanded in OECD countries since 1980s (US EITC, UK Family Credit, etc.) and have been politically successful ⇒ (a) Redistribute to low income workers, (b) improve incentives to work

Debate on Basic Income vs. Means-tested transfer

Basic income definition: all people receive an unconditional sum of money (every year) regardless of how much they earn

This is the R of the linear tax system $c = (1 - \tau) \cdot z + R$

Or the $-T(0) > 0$ of the nonlinear tax system $c = z - T(z)$

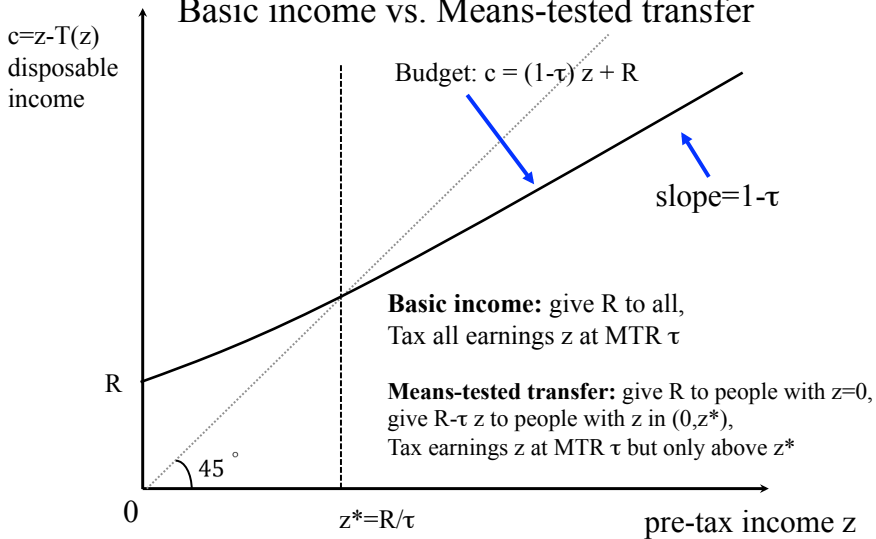
Basic income for everybody + higher taxes to fund it is **economically equivalent** to means-tested transfer phased out with earnings

Pro basic income: less stigmatizing than means-tested transfer

Cons: basic income requires higher “nominal” taxes (that are then rebated back)

Countries provide “in-kind” basic income in the form of universal health care (not the US) and public education

Basic income vs. Means-tested transfer



IN-KIND REDISTRIBUTION

Most means-tested transfers are in-kind and often rationed (health care, child care, public education, public housing, nutrition subsidies) [care not cash San Francisco reform]

1) **Rational Individual perspective:**

(a) If in-kind transfer is **tradeable** at market price \Rightarrow in-kind equivalent to cash

(b) If in-kind transfer **non-tradeable** \Rightarrow in-kind inferior to cash

Cash transfer preferable to in-kind transfer from individual perspective

IN-KIND REDISTRIBUTION

2) **Social perspective:** 4 justifications:

a) Commodity Egalitarianism: some goods (education, health, shelter, food) seen as **rights** and ought to be provided to all

b) Paternalism: society imposes its preferences on recipients [recipients prefer cash]

c) Behavioral: Recipients do not make choices in their best interests (self-control, myopia) [recipients understand that in-kind is better for them]

d) Efficiency: It could be efficient to give in-kind benefits if it can prevent those who don't really need them from getting them (i.e., force people to queue to get free soup kitchen)

FAMILY TAXATION: MARRIAGE AND CHILDREN

Two important issues in policy debate:

- 1) Marriage: What is the optimal taxation of couples vs. singles?
- 2) Children: What should be the net transfer (transfer or tax reduction) for family with children (as a function of family income and structure)?

TAXATION OF COUPLES

Three potentially desirable properties:

- (1) income tax should be based on resources (i.e., family income if families fully share their income)
- (2) income tax should be marriage neutral: no higher/lower tax when two single individuals marry
- (3) income tax should be progressive (i.e., higher incomes pay a larger fraction of their income in taxes)

It is **impossible** to have a tax system that satisfies all 3 conditions simultaneously:

Income tax that is based on family income and marriage neutral has to satisfy: $T(z^h + z^w) = T(z^h) + T(z^w)$ and hence be linear i.e. $T(z) = \tau \cdot z$

TAXATION OF COUPLES

(1) If couples share their incomes, then family taxation is better. If couples don't share their incomes, then individualized tax is better

(2) If marriage responds to tax/transfer differential \Rightarrow better to reduce marriage penalty, i.e., move toward individualized system

Particularly important when cohabitation is close substitute for marriage (as in Scandinavian countries)

(3) If labor supply of secondary earners more elastic than labor supply of primary earner \Rightarrow Secondary earnings should be taxed less (Boskin-Sheshinski JpubE'83)

Labor supply elasticity differential between primary and secondary earners is decreasing over time as earnings gender gap decreases (Blau and Kahn 2007)

TRANSFERS OR TAX CREDITS FOR CHILDREN

1) Children reduce **normalized family income** \Rightarrow Children increase marginal utility of consumption \Rightarrow Transfer for children T_{kid} should be positive

In practice, transfers for children are always positive

2) Should $T_{kid}(z)$ increase with income z ?

Pro: rich spend more on their kids than lower income families

Cons: Lower income families need child transfers most

In practice, $T_{kid}(z)$ is fairly constant with z

Europe has much more generous pre-kindergarten child care benefits, US has more generous cash tax credits for families with children

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