a6 Tax capitalization

PRODUCT OF

Remington Rand

MADE IN U.S.A.

LIBRARY BUREAU DEPARTMENT
BRANCHES EVERYWHERE

ANGLE TAB
VISIBLE-NAME
GUIDES AND FOLDERS

CATALOG NO. 50939

One more item: this formula. While it is purely a matter of keeping nominal values straight it is important in any reasong based on the proportionality of tax receipts and land values. It probably is relevant to other kinds of taxation also, if you want to use it that way.

Definitions: R :: total economic rent
r :: privately collected economic rent
t :: publicly collected " " , i.e. your tax receipts

g :: tax rate
i :: "interest rate"
s :: selling price

Note first that R equals r plus t; that i is difficult to determine or, if it is easy, I can't tell you how to do it; that in my scrawl on that file I left with you I used "a" to denote tax receipts and later changed it to t when I realized that the whole point of this business is the fact that the tax receipts are equal to --rather identical with--- the publicly collected rent which affects the selling price or tax base.

semicolon -- indicates end of equation on left, new equation on right.

$$t = gs \;;\; s = \frac{r}{i} \;;\; r = R - t \;;\; \therefore s = \frac{R-t}{i}$$

$$\therefore t = g\left(\frac{R-t}{i}\right) = \frac{g}{i}R - \frac{g}{i}t$$

$$t + \frac{g}{i}t = \frac{g}{i}R$$

$$t = \frac{\frac{g}{i}R}{1+\frac{g}{i}} = \frac{gR}{i+g}\left(= \frac{R}{\frac{i}{g}+1}\right) = R\left(\frac{g}{i+g}\right)$$

(Despite the fact that R & g may both be expressed in terms of t, both R & g are known constants independent of t, so this expression of t is satisfactory)

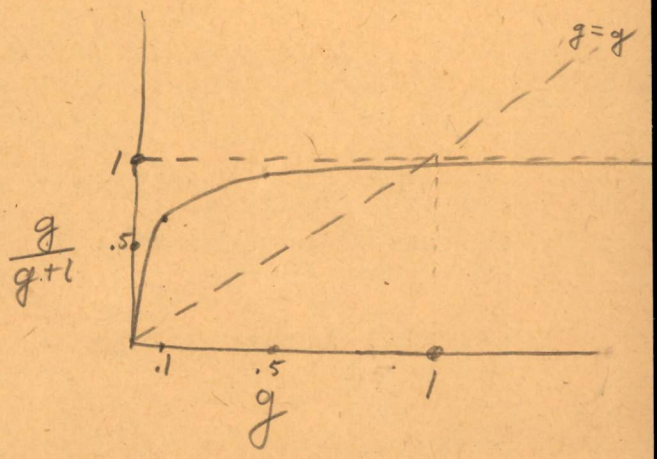
$t = R\left(\frac{g}{i+g}\right)$ is the useful form of this equation. You can find R by adding r + t at present. The ratio of r/t will change, as g changes, but their sum will remain constant, as g changes.

Now some figures will be instructive; the tax base varies directly with economic rent as determined by the ratio $\frac{g}{i+g}$. This means that as you increase the tax rate, g, the effects become cumulatively smaller; & a small tax rate takes a ~~large~~ % of ec. rent later than the rate.

If ~~g~~ $i = .05$:

g	$\frac{g}{g+i}$
.01	1/6
.02	2/7
.03	3/8
.04	4/9
.05	$5/10 = \frac{1}{2}$
.06	6/11
.07	7/12
.08	8/13
.09	9/14
.10	$10/15 = 2/3$
.20	$\frac{20}{25} = \frac{4}{5}$
.50	$\frac{50}{55} = \frac{10}{11}$
.75	$\frac{75}{80} = \frac{15}{16}$
1.00	$\frac{100}{105} = \frac{20}{21}$
.95	$\frac{95}{100} = \frac{19}{20} = .95$

$\frac{.01}{.01+.05} = \frac{1}{6}$



Note how erroneous it is to assume that the official tax rate, g, is identical with $\frac{g}{i+g}$. The graph contrasts their behavior. ~~The~~ The tax rate, g, tells us only what % of the selling price we are getting in taxes, not what % of the econ. rent. A little math can tell us that, too.

$t = R\left(\frac{g}{i+g}\right)$; $\frac{t}{R} = \frac{g}{i+g}$; $\frac{t}{R}$ is the ratio of publicly collected economic rent to total economic rent, & is equal to $\frac{g}{i+g}$, the function graphed & tabulated above.

Note that $g = 1$, or 100%, is not a critical value for $\frac{g}{g+1}$. The latter approaches unity asymptotically. A tax rate = ∞ would collect all economic rent. A 100% tax rate would collect $\frac{20}{21}$ of all economic rent, assuming 5% interest. 100% in this connection merely means that one's tax is numerically equal to the selling price, which is the capitalization of the $\frac{1}{21}$ R remaining in private ownership.

Socialists would do well to consider the effect of the tax on the tax base in this & other ways.

Davenport. A.E.R.
1918 or '19, p. 1.
"Single Tax". Discusses
cap-n in long finite.
Rolph recommends.
In Rolph's new UC book
2 chaps. Refs. there.
Stockfisch diss.

Rolph thinks qn. is, will
tax affect cap-n rate.
all taxes are cap. into
prop.

Vickrey, lead's MC
price pic's. JPE, last 10
yrs. Last yr's AER supl.

tax = Rent

tax rate = there can not be one, for it is based on sp, which it comes right back & alters. The 2nd year there would be no revenue at all.

If ir is 5%, & tr on sp is 5% we should get net rent for tax in year 1, but then, sp would go to 0, & so would tax

∴ Therefore we don't take quite the whole rental value, leaving a small sp on which to apply tr.

1. net rent = ir × sp
2. $sp = \frac{\text{net rent}}{ir}$

} if tr = ir
tr × sp = net rent, but then sp would fall

3. net rent = R − tax
4. net rent = R − (sp × tr)

5 (184) ir × sp = R − (sp × tr)

ir × sp + sp × tr = R

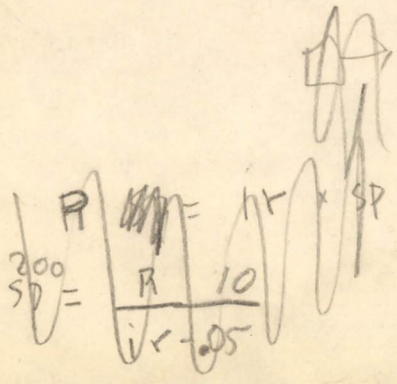
sp(ir + tr) = R

∴ At this point, determine selling price, charge tax. R is constant, as ir or tr rises, sp falls.

$sp = \frac{R}{ir+tr}$

.100 (.05 + .05)

(.05 + .05) = 100



Tell Dent to take it easy

TABLE SHOWING THE EFFECTS OF REMOVING TAXES FROM PRODUCTS OF LABOR AND THE APPLICATION OF ECONOMIC RENT FOR GOVERNMENTAL PURPOSES WHEN PREDICATED UPON SMALL HOMES

Year	1944	1945	1946	1947	1948	1949
Interest Rate	5%	5%	5%	5%	5%	5%
Gov't. Takes Economic Rent	0%	5%	10%	30%	100%	100%
Owner's Name, Mr.	A	B	C	D	E	F
Buys a Vacant Lot for	$2100.00	$1050.00	$700.00	$300.00	$100.00	$100.00
His Lot Carrying Costs per Year are — Interest	$105.00	$52.50	$35.00	$15.00	$5.00	$5.00
His Lot Carrying Costs per Year are — Government Costs	$0.00	$52.50	$70.00	$90.00	$100.00	$100.00
His Lot Carrying Costs per Year are — Total	$105.00	$105.00	$105.00	$105.00	$105.00	$105.00
He Builds a House Costing	$6000.00	$6000.00	$6000.00	$6000.00	$6000.00	$6000.00
The Tax Rate is	2%	1.125%	0.834%	0.5%	0.3333%	0%
His Home Carrying Costs Per Year are — Interest	$300.00	$300.00	$300.00	$300.00	$300.00	$300.00
His Home Carrying Costs Per Year are — Taxes	$120.00	$67.50	$50.00	$30.00	$20.00	$0.00
His Home Carrying Costs Per Year are — Total	$420.00	$367.50	$350.00	$330.00	$320.00	$300.00
Home Owner's Grand Total Carrying Costs Per Year	$525.00	$472.50	$455.00	$435.00	$425.00	$405.00
Total Invested by Home Owner	$8100.00	$7050.00	$6700.00	$6300.00	$6100.00	$6100.00
Annual Return to Government	$120.00	$120.00	$120.00	$120.00	$120.00	$100.00

Increases in land prices add nothing to wealth.

The value of land is economic rent capitalized.
Economic rent is the result of organized society or government and represents its value.

J.H.S.

Dorfman who denies that ~~the~~ diff. i among individuals has any effect on inventories vs. durables, or that it distorts allocation of durables more, probly wd. concede that gnrl Δi wd. discourage longer term investments.

Approach:

Δi changes durability of investments undertaken. Also discourages buying land, but that has no bad effect!!!

~~8 Thurs.~~

Jnl article: tax cap-n recommended in light of i.n. diffs.

Effect of land tax, cont.
= mgnl princ.

Another: The deceptive allure of simul. =ns: tax cap-n & mult.

1. Effect of land tax.

MP of land, added to fixed men & eq. (or, alt-ly, take land/man & equip) add until MP = MC.

What is MC, annual? $P \times i$



Effect of tax. $MC = P \times i + T_{(= \text{*} P \times t)} = P(i+t)$

~~Does~~ t is same for all, i not. So as t becomes higher, % diff. of MC's lessens.

Does ~~tax~~ MC rise? For some. Falls for others.

Bcs $-\Delta P$. If $|\Delta P|(i) > \Delta T$, MC falls, & v.v.

$\Delta T = (\Delta t)(P_0 - \Delta P)$. Start w. 0 tax, just use T & t, no (Δ).

If $(P_0 - P_t)\, i > t P_t$, MC falls.

If $\frac{i}{t} > \frac{P_t}{|\Delta P|}$, MC falls

~~Reverse it~~ If $i > t\left(\frac{P_t}{|\Delta P|}\right)$, MC falls

$T = Pt$

$P = \frac{A - T}{i} = \frac{A - Pt}{i}$, $P + \frac{Pt}{i} = \frac{A}{i}$; $P = \frac{A}{i\left(1 + \frac{t}{i}\right)} = \frac{A}{i+t}$

~~$T = \left(\frac{A-T}{i}\right)t$~~ $\frac{T + T}{i} = \frac{A}{i}$; ~~$T = \frac{A}{1 + \frac{t}{i}}$~~ $T = Pt = \frac{At}{i+t}$

$MC = P(i+t) = \frac{A}{i+t} \times \text{*}(i+t) = A$ That's no help.

T - tax levy

t - " rate

P - land price.

A - annual land inc. before tax.

a - " " " after "

$$T = Pt$$

$$P = \frac{a}{i} = \frac{A-T}{i} = \frac{A-Pt}{i} = \frac{A}{i} - P\frac{t}{i}$$

$$P + P\frac{t}{i} = \frac{A}{i}$$

$$P\left(1+\frac{t}{i}\right) = \frac{A}{i}$$

$$P = \frac{A}{i\left(1+\frac{t}{i}\right)} = \frac{A}{i+t}$$

$$T = Pt = \frac{At}{i+t}$$

$$MC = T + Pi = \frac{At}{i+t} + \frac{A}{i+t} \times i = A$$

$$MC = T + Pi = A$$

$$Pt + Pi = A$$

$$P(t+i) = A$$

$$t+i = \frac{A}{P}$$

If $t=0$, then all add land until it yields them their i. If $t=>0$, add land until it yields them their $i+t$. As t rises, MC come closer for all.

$MC = P(i+t)$.

What happens to MC as Δt? Depends on what happens to P. Is no simple answer, bcs as hi bidder drops out, new ones come in, & A rises. Trad-l tax cap. has it, as Δt, get ~~fall~~ $-\Delta P$. $\left(P = \frac{A}{i+t}\right)$

But as Δt, is possible to ΔA .... altho only by those w higher i, & on balance P must certainly fall.

✓ But the formula $P = \frac{A}{i+t}$ is based on idea that all bidders will get same A, & so ~~M~~ will P will fall to 0 if $T = A$. <u>But that is untrue.</u> Someone else will still bid for the land, bcs his $A > T$. P remains > 0 until $T =$ highest possible A.

(Suppose we proceed by jumps, Δt enuff so owner bids 0, then is a new owner

Suppose impose t, let things shake out. $T = P_{\times t}$

P is max. that 2d highest bidder wd. pay — probly. That wd. set mkt. What we assume depends on what we're tryg to do. a, Work out ideal system? b, explain g.p.t. as is?

as to "a"; ideal wd. be Δ annual tax until ρ of land fell to 0, &/or ~~no one wanted land~~ a further rise wd mean no takers.

As to "b," depends on assessors' practices, must be vague.

After impose t, will be a new high bidder, w higher A & ~~lower~~ higher i, also.

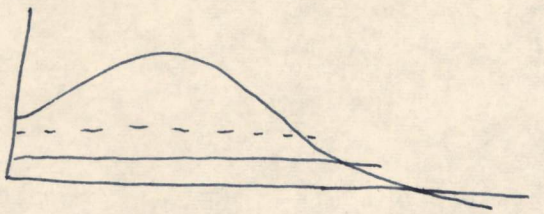
$$\text{Bid} = \frac{MP - T}{i}$$

After impose t, all add land until just yields i + t.

So lo mn must disgorge. This lowers P. But not by so much as it wd. if were no alternative buyers — that wd be by $P = \frac{A}{i+t}$ as t Δs, i becomes less imptnt & A ~~more~~ $^{\text{or MP}}$ more so, as bid = $\frac{MP - T}{i}$. Can't predict what happens to P, but certainly can limit idea that tax destroy its base. (a moderate tax will Δ its base: by ~~bringing in~~ develop'g area as whole, as land moves to higher MP; by build'g comm. facilities.)

So can say P little lowered by small Δ tax. Is lowered some, to be sure. Can say those for whom $|\Delta P|/i > \Delta T$ will expand, others contract. $\Delta T = t_2 P_2 - t_1 P_1$

~~2 taxes~~. Tax Cap-n.



Tax = V × t (assuming the assessor capitalizes taxes, or follows mkt prices. Actually he may keep const. v despite tax)

$$V = \frac{a}{i} = \frac{R - T}{i} = \frac{R - Vt}{i} = \frac{R}{i} - \frac{Vt}{i}$$

$$V\left(1 + \frac{t}{i}\right) = \frac{R}{i}; \quad V = \frac{R}{i\left(1 + \frac{t}{i}\right)} = \frac{R}{i + t}; \quad V = \frac{R}{i + t}$$

Conventional theory R is indep. of tax. Actually, tax → ΔR (Note, Δt needn't ΔR by am = % to keep V const)

Begin w t=0. as Δt, will Δ bids of some, lower bids of others? No, will lower all bids, some more than others.

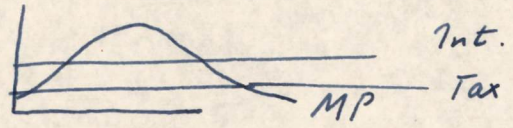
But have 2 different V, can't go combining them. Say "B" is what individ will bid, is primary unknown. "S" is assessed value. This is presumed to be what highest bidder will pay.

$$B = \frac{a}{i} = \frac{R - T}{i} = \frac{R - St}{i} = \frac{R - \frac{R_h t}{i_h + t}}{i}$$

$$S = \frac{a_h}{i_h} = \frac{R_h - T_h}{i_h} = \frac{R_h - St}{i_h}$$

$$S\left(1 + \frac{t}{i_h}\right) = \frac{R_h}{i_h}; \quad S = \frac{R_h}{i_h + t}$$

Tax Cap-n.



annual cost to holder: $T + I = tV + iV = (t+i)V$

Effect of Δt:

a. Changes i.r. — 1. big holders i.r. rises
2. If Δ inv. opp., as will, starts cum. Δ i.r.

b. Begins to lower V, by trad-l formula ... $V = \frac{A - E}{i}$

$V = \frac{A - tV}{i}$; $V(i+t) = A$; $V = \frac{A}{i+t} = \frac{MP}{i+t}$

But as V falls, ~~tax~~ lo i holders let go some, thus Δ their MP — so they're not going to lower V on all their lands by $\frac{\Delta t}{i_0 + t_0}$.

By taking particular i & t, can figure out what happens.

~~Suppo~~ Ea. hldr expands until $MP = V(i+t)$

$\frac{MP}{V} = i + t$

Say $i = 5\%$; $t = 2\%$. Z is making 7%. Now $\Delta t = 1$

He must make 8%. In some part occurs as $-\Delta V$.

But — if his V falls by $\frac{1}{7}$, someone elses, whose $i_0 = 10\%$, his V falls by only $\frac{1}{12}$. Is new highest bidder.

Exposition: begin w. 2 firms, side by side.
Show tax offset effects on resource alloc. of imp. cap. mkts.

Stockfisch, J.A. "The Capitalization, allocation, & investment effects of asset taxation." S.E.J. 22(3): 317-29.

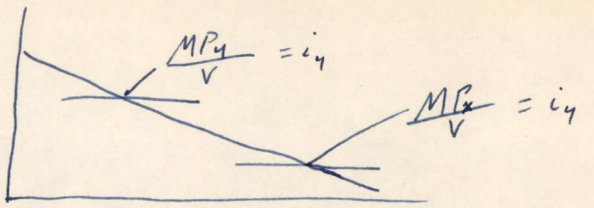
On p. 327. "Property taxes ... impose relatively light obligations on mfg assets & heavy obligations on small hold'g." & may therefore drive assets out of small hld'g into mfg.

Hang him for it.

Other fallacies, subtle, pretty Rolphian. Cite in article on tax cap-n.

Tax cap-n.

$$V = \frac{a - T}{i} = \frac{a - tV}{i}$$



$$iV + tV = a$$

$$V = \frac{a}{i + t}$$

Take 2 buyers, x & y

$$V_x = \frac{MP_x - T}{i_x}$$

Simultaneous solution involves ass. that tax is based on value to the individual. Can't be used when figuring V_x, value to x, bcs tax valuation based on highest bidder.

(Individ adds until $\frac{MP_x - T}{V} = i_x$)

(" " " $V_x = V$)

($V = \frac{MP_h - T}{i_h}$, where h denotes highest bidder)

(Take $\frac{MP_x}{MP_y}$, show how ΔT brings it to = 1. That shd be easy.)

To prove: that Δt are not capitalized fully by formula $V = \frac{a}{i+t}$

Is that worthy aim? Note $\frac{MP}{V} = i + t$ holds for individ, in given situation. The lower is i, the greater the effect of t. If t = 50%, differences in i matter little. Add to govt formula $\frac{MP}{V} + \frac{\Delta V}{V} = i + t$

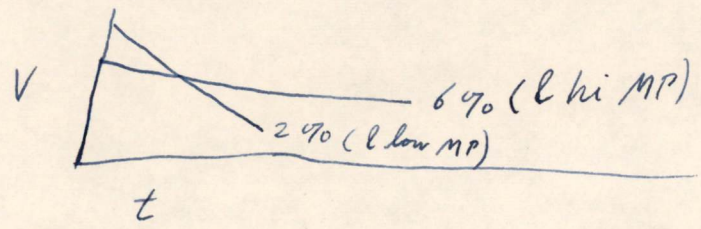
Tate adds $\frac{\Delta V}{V}$ to left side, worsening allocn. Society can add t to right side, bettering it.

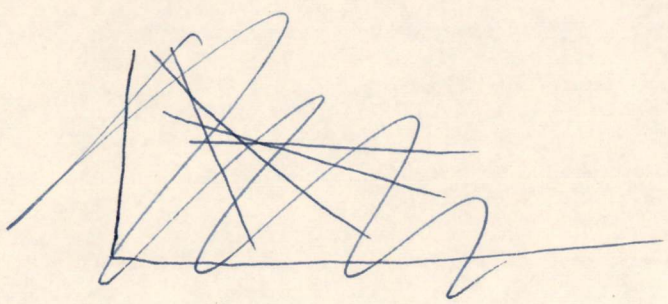
As Δt, V falls, so $\frac{MP}{V}$ rises & swamps $\frac{\Delta V}{V}$ which remains constant, or falls, due to future prospects of ΔV worsening. (might rise if present V falls & sanguine specs expect reaction)

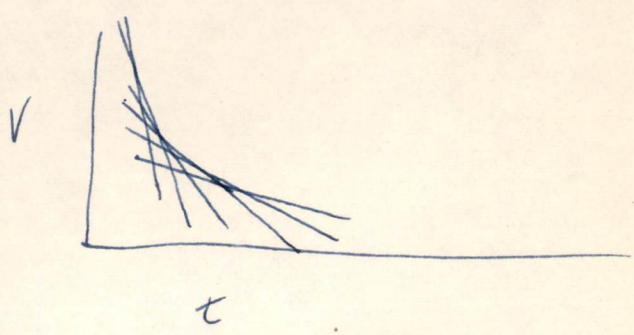
Which brings to: how much will V fall?

$$V = \frac{MP_h}{i_h + t}$$

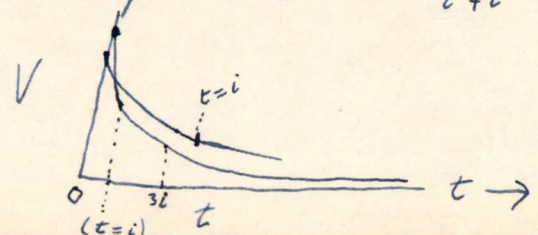
Can't say mechanically. As t rises, value to present holder falls until next bidder can move in. $\frac{dV}{dt}$ depends on i, the lower is i, the greater $\frac{dV}{dt}$







The simple curve $V = \frac{a}{i+t}$ is not strt. line.

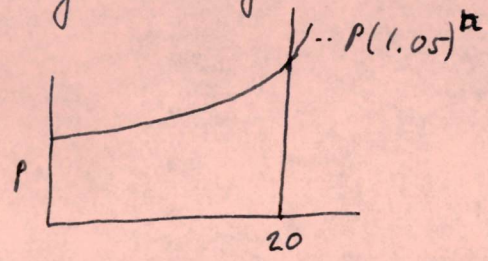


Maybe my weakness in ~~ago~~ article, & ltr to Dorfman, was using $\frac{a}{i}$, and failing to show how $\frac{a}{i}$ is derived from $\Sigma \frac{a_n}{(1+i)^n}$.

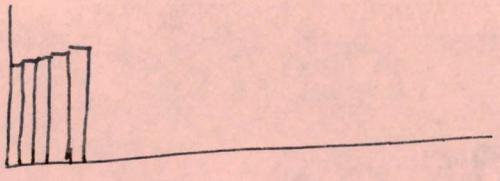
Dorfman falls back on inventory argument. He says faults in cap. mkts distort allocation of inventories as much as future values. Cause hi i to carry smaller inventories. Wd. say same of taxes no doubt.

Assume you must get 5%. Have 2 choices, equally desirable – at 5%

a.



b.



With quick turnover, you do get your money back every year. So if money is now earning 6% instead of 5%, you get opp. annually to reinvest it at 6%. This can be accomplished w. little adjustment in imputation to other factors bcs of hi gross return, i. is small element. By contrast on long inv. int. is major element, adjustments by others not so likely. E.g. on timber, must cut cost of planting in half or more. So has large impact on timber, little on mfrs inventories, e.g. log decks.

Thus this argument is not indep of the aggregate argument. as I had hoped it was. Except in given locality, but there the aggreg. argument is good too.

What good then is this argument? To introduce differential impact of Δi on invmts of different durability.

Also is doubtful if $-\Delta i$ does absorb all taxes. ~~Other~~ And if it does, implies other inputs are elastic, & their alloc n is distorted. Only by assuming all behavior inelastic can one avoid impact of taxes.

Argument is very useful, ~~tho~~ tho. Bes few say $-\Delta i$ does not reduce inv.; Keynesians only argue it doesn't $-\Delta$ prop. to save.

More likely is argument it is all passed on to other factors, & thus has no effect. But counter argument now is that this shortens structure of production.

Also, if gpt does not $-\Delta i$, then Tillebrown argument is valid, Δ but has no burden.

3. Ratio of invmt to gross, ~~income~~ input & output over 20 yrs.

4. Relative timing of incomes & costs

5. Effect on yield ($\underline{i}$) of Δt, invmts of given C_o & T, different durability. This should be most conclusive. (to? Maybe if let yield (i) fall, it offsets Δt w/o any change in opt. time of inv.)

When we discuss impact of tax or Δi as having an effect there is always a residual doubt re elasticity of response to changes in factor returns. All we can prove beyond a doubt is different impact on returns.

Put inventory argument in strongest form: 1) annual turnover, or 20 yrs, pay same taxes over 20 yrs.

2) Δt reduces $\underline{i}$ by same amt, either case.

2) This is saying that tax is completely absorbed by savers, hence has no effect on relative desirability of different length investments. The increased urgency created by tax is completely offset by savers' opposite reaction.

So the difference here is not of analysis, but of substance, or assumption. One must determine incidence of tax to determine its effect.

In any locality, will not lower mkt $\underline{i}$ much or for long. Will lower rents, either as C_o lower, T higher, or annual charges (not explicitly treated in this analysis hitherto) will be lower.

$\$PT$ in qual tho is another qu. ?$\underline{i}$ supply of inv. funds is perfectly inelastic, & other resources perf. elastic, no effect on structure of cap.

Answer to inventory argument cd. go many ways.

1. Higher int. rates in gnrl will shorten inv. plans. It follows that unequal $\underline{i}$ will have greater allocative effects on durables.

2. Unequal impact of $g\rho^t$, etc.

3. Etc.

Cfg annual turnover vs. 20 yr. $C_o(1+i)^n = 7$.

Inventory case, 1% drop in C_o raises i from 5% to 6%.

20 yr case, 1% " " " negligible effect on i.

Why the diff.? Bcs in annual turnover case, over 20 yrs, the 1% - ΔC_o will be repeated 20 times. C_o is the major input; saving has a much shorter time dimension for each C_o.

Dorf's argument is to ~~take~~ treat an inv. of a given amt as cfble to another of same amt, regardless of time dimension. If we are going to cf. 2 things they must be commensurable chronologically as well as volumetrically. Fair cfsons are:

1. Effect on present value of Δi, investments of varying durability
2. " " yield, changes in C_o. " " " (is really same as (1))

With capital I can see a force at work forcing lower $\underline{i}$ from gpt. Namely, elasticity of supply of resources for durable production. ~~At this~~ after Δt they wd have to accept big cuts to maintain given $\underline{i}$. So they move into alternatives in producing inventories, or services, where their work does not require the complement of so much, long term financing.

A considerable move like this is possible, & necessary before Co falls to where can earn same old $\underline{i}$ after new $\underline{t}$ in durables. But this move makes labor in aggreg. less compl. to invmt. reduces need for fnce, & simul makes fnce more compl. to labor, quicker turnover. Most of society's fnce is inherited from past, so regardless of effect on current saving, a small shift away from durables to quicke turnovers absorbs the labor supply. So labor need not take brunt of this so much as lower return on invmts, after tax.

Land, other hand, is durable invmt, but the Co is land comg on mkt to buy, & that is inelastic. Is just as much to buy, but at lower price.

Distinguish buying current services of land vs. buying title. Former is inc.-creat'g expenditure, part of Co; latter is entirely different.

Pursuing further effects of gpt. suppose Δt offset by quot Δi.

Cap. values do not remain const., but rise, b/c of allocation effect!! Esp. on land, but also on other durables. This might be way to introduce addl. effect, (but probly do that some other way, return to this)

With land, e.g. $V_1 = \frac{a_1}{i_1 + t} = \frac{100}{.05 + 0} = 2000$

$V_2 = \frac{120}{.10 + 0} = 1200$

Now a tax of 5%, lowering all i by 5%

$V_1 = \frac{100}{0 + .05} = 2000$

$V_2 = \frac{120}{.05 + .05} = 1200$

If whole structure falls together, then there is no allocation effect.

$\frac{a}{i+t}$ remains constant if $\Delta t = -\Delta i$. Even tho t seems to be replacing i, but absolute differences of is become relatively more important, offset completely.

This lowering of i probly happens some w. gpt, offsets its good alloc. effects.

Gpt lowers inv. returns on cap. ... does it on land? No, but why not?

$$V = \frac{a - tV}{i} \qquad a \equiv \text{inc. } \underline{\text{before}} \text{ tax.}$$

$$Vi + Vt = a$$

$$V = \frac{a}{i + t}$$

If $i = 0$, $T = tV = a$, whole $= n$ blows up. This we can solve by outlawing $i = 0$. But suppose $i \to 0$? Tough -- I have no answer now.

Tax rate	10 / .04+t	15 / .08+t	Difference	Diff. as % of former
~~18~~ %			$	%
0	250	187.50	63	34
1	200	167.	33	20
2	167	150	17	11
3	143	136	7	5
4	125	125	0	0
5	111	115	- 4	3.6
6	100	107	- 7	7.0
7				
8				
9				
10				
—				
20	42	54	- 12	29
—				
30	29	39	- 10	34

$P + Pi + Pt = P(1+i+t)$

Begin w. P. Then figure interest on it is a cost. Tax on it is also a cost. These costs are investments & add to value of pp inv. That way t & i are parallel

to ppt lowers present values as $f(t)$, of durability

Give numerical e.g.

(Note, $\frac{7}{(1+i+t)^m}$ automatically accounts for lower tax due to lower valuation due to tax capn)

Now suppose 2 equally desirable alternatives before taxes

a. Inc, annual turnover

b. 10 yr wait

c. Try effect on valued annuity. Maybe the indivisibility in time of the annuity is crux.

Differential impact of gpt shown by % decline of value of assets As w. age.

But one must show ~~if~~ ~~rate~~ rate of return falls. more.

Take land as extreme & assume continuous variation between

Use $(1+i+\pi)^{-n}$ to discount?

If Δi shortens pd. of invmt, then Δ gpt shd too, discriminatorily.

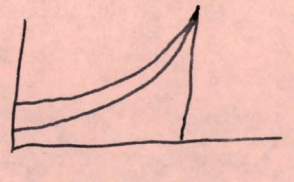
Suppose 2 equally desirable ways for $100 to grow into $200 in 10 yrs

a. Annual turnover

b. One turnover.

Now Δi (w Δt, same). are they still =ly desirable? No, bes w. annual turnover income is current to pay tax, & w. one turnover income waits, but tax doesn't. And cost of waiting is Δd.

Present value of annual turnover declines a little; of slow turnover a lot. (thus slow turnover escapes more of taxes, too)



(Best, most direct illustration: length of annuity, show how longer annuities are harder hit, optimal choice is shortened?

(Throw in case of one vs two buildings

Before struggling again thru all this consider formula I developed for depreciation. For appreciation just change sign to +

$$a + a(1+g) + a(1+g)^2 + \cdots + a(1+g)^n$$

~~$a + (a + ag) +$~~

$$L = \frac{a(1-r^n)}{1-r} = \frac{a(1-(1+g)^n)}{1-1-g} = a\frac{1-(1+g)^n}{-g} = a\frac{(1+g)^n - 1}{g}$$

$$a + a\frac{1+g}{1+i}$$

$$\sum_0^\infty = a\frac{1}{1-\frac{1+g}{1+i}} = a\frac{1+i}{1+i-1-g} = a\frac{1+i}{i-g}$$

$$\frac{1+i}{i-g} - 1 = \frac{1+i-i+g}{i-g} = \frac{1+g}{i-g}$$

$$\frac{1+i}{i} - 1 = \frac{1+i-i}{i} = \frac{1}{i}$$

$$V = \frac{1(+i)}{i-g}$$

$$\Sigma = a_1 + \frac{a_2}{1+i} + \frac{a_3}{(1+i)^2} + \cdots + \frac{a_n}{(1+i)^{n-1}} = \frac{1-t^n}{1-r} = \frac{1-(1+i)^{-n}}{\frac{1+i-1}{1+i}} = \frac{1+i-(1+i)^{-n+1}}{i}$$

$$V = \frac{a-T}{i} = \frac{a-tV}{i}, \qquad V(i+t) = a$$

$$V = \frac{a}{i+t}$$

$$V = \Sigma = a_1 - T_1 + \frac{a_2 - T_2}{1+i} + \cdots + \frac{a_n - T_n}{(1+i)^{n-1}}$$

$$= a\,\frac{1(+i)-(1+i)^{1-n}}{i} - T_1 - \frac{T_2}{1+i} - \frac{T_3}{(1+i)^2} - \cdots - \frac{T_n}{(1+i)^{n-1}}$$

$$T_1 = t V_1 = t\, F(T_1, T_2, T_3, \cdots T_n)$$

$$T_n = t V_n = t\,\frac{a_n - t a_n}{} = t a_n (1-t)$$

$$T_{n-1} = t V_{n-1} = t\left[\frac{a_n - t a_n}{1+i} + \frac{a_{n-1} - t a_{n-1}}{}\right] = t\left[a_n \frac{1-t}{1+i} + a_{n-1}(1-t)\right]$$

$$= ta(1-t)\left[(1+i)^{-1} + 1\right]$$

$$T_{n-2} = t V_{n-2} = t\left[\frac{a_n(1-t)}{(1+i)^2} + \frac{a_{n-1}(1-t)}{1+i} + a_{n-2}(1-t)\right]$$

$$= ta(1-t)\left[(1+i)^{-2} + (1+i)^{-1} + 1\right] = ta(1-t)\,\frac{1-(1+i)^{-3}}{1-\frac{1}{1+i}}$$

$$T_n = ta(1-t)$$

$$T_{n-1} = ta(1-t)\left[(1+i)^{-1}+1\right] = ta(1-t)\,\frac{1+i-(1+i)^{1-2}}{i}$$

$$T_{n-2} = ta(1-t)\left[(1+i)^{-2}+(1+i)^{-1}+1\right] = ta(1-t)\,\frac{1+i-(1+i)^{1-3}}{i}$$

$$\frac{\frac{1-r^{-2}}{i}}{\frac{1-r^{-1}}{i}} = \frac{1-r^{-2}}{1-r^{-1}} = \frac{1-\frac{1}{r^2}}{1-\frac{1}{r}} = \frac{r-\frac{1}{r}}{r-1}$$

$$= \frac{1+i-\frac{1}{1+i}}{i} = \frac{i+\frac{i}{1+i}}{i} = \frac{1+(1+i)^{-1}}{1} = \boxed{1+(1+i)^{-1}}$$

So we have a geometric series, $r = 1+(1+i)^{-1}$

First term $= ta(1-t)$

Sum of that series is present value of all taxes? No, we must discount each one.

So 1st term is $ta(1-t)(1+i)^{-n+1} = \frac{ta(1-t)}{(1+i)^{n-1}}$

$$r = \left[1+(1+i)^{-1}\right](1+i)^{+1} = 1+i+(1+i)^{1-1} = 1+i+1 = 2+i$$

So summation becomes simple again.

$$V = \Sigma = a\frac{1+i-(1+i)^{1-n}}{i} - \left[T_1 + T_2(1+i)^{-1} + \dots + T_n(1+i)^{1-n}\right]$$

$$\Sigma T_n(1+i)^{1-n} = ta(1-t)(1+i)^{1-n}\frac{1-(2+i)^n}{1-2-i} = ta(1-t)(1+i)^{-n}\left[(2+i)^n - 1\right]$$

$$V = \Sigma = a\frac{1+i-(1+i)^{1-n}}{i} - ta(1-t)(1+i)^{-n}\left[(2+i)^n - 1\right]$$

If $n = \infty$

$$V = ? \quad \frac{a}{i+t}$$

$$\frac{(2+i)^n}{(1+i)^n} \quad \text{as } n \to \infty$$

$$\frac{d}{dn}(2+i)^n = (2+i)^n \ln(2+i) \quad \text{So where can I ??}$$

Timber is easiest to see. Pay tax on value for 60 yrs. Is ~~much~~ incentive to grow for 30 yrs, tie up less cap. in tree to tax.

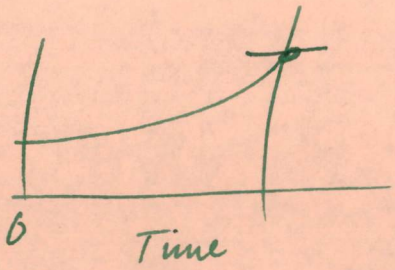
Gurley accepted. My pt. is to generalize. Creates systematic bias toward fast payout, high turnover

Why? 2 or 3 ways of looking at it.

1. Inventories yield high gross income ~~for~~ per year, per $ of tax & int.

2. Slow turnover, cp. cap. is tied up longer, gets taxed more times per turnover.

3. nth term of annuity, you pay tax on for n or n-1 yrs before realize.



End of yr.

0 P

1 $P + Pi - Pt = P(1+i-t)$

2 $P(1+i-t) + (1+i-t) = P(1+i-t)^2$

Suppose a durable is taxed on its value. Suppose it yields just one return, after 20 yrs, R_{20}, a just R.

P is the value on which you can charge int. & taxes annually for 20 yrs.

$$P(1+i+t)^{20} = R$$

Think of a 30-yr house as 30 houses in one. Each yr. like a snake sheds old skin, peel off one house.

1st house, value little affected by int. or tax

30th " " much " "

E.g. from book of tables. Present Values:

n \ i	.01	.02	.06
1	.99	.98	.94
10	.91	.82	.56
50	.61	.37	.05

"Now you're changing the frame of ref. When you do that, force me to reconstruct the whole argument."

When you Δ i from 2% to 6% you reduce present value of

$100, from 98 to 94, or 4%

But reduce present value of 100_{10}$ from $82 to $56, or 32%

.. .. .. 100_{50} .. 37 5 or 86%

i.e. costs of production must fall 86% to let you earn 6% on the 50th house, but only 4% to let you earn 6% on the 1st house.

So int. is enemy of durability.

Now keep ~~i~~ constant and impose a tax. Now P must fall to sum small enough so future value returns not just interest but tax.

i.e. you cd. borrow P & pay annually int. to banker & tax to collector

✓ Look at it as how much do you have in it. Each yr. you put in int. & taxes. They are barriers between you & your goal. Taxes are compounded like int. bcs. every yr. you put in taxes, this raises value & you pay tax next yr. on higher value. Even if int. were 0, taxes wd. compound this way.

Let $i = 0$, $P_0 \neq 7$ bcs pay taxes on P each yr. So P falls until $P_0(1+t)^n = 7_n$. If P were any higher, you'd put more in it than 7_n by the year n; & if any lower, less. Your total tax bill is exactly the difference of P & 7. If $i > 0$ & $t = 0$, total int. bill is diff. of P & 7, in sense of int. on current value. E.g. suppose you borrowed on collateral of present value each yr & paid int. on it, total int. bill = exact diff. of P & 7. If $i > 0$ & $t > 0$, int. + tax bill is 7-P.

So can treat $t \parallel i$. Good!

Bldg. tax causes cap. move into hi turnover captl.

But there it hits sales taxes -- do they discriminate vs. hi turnover?

Timber stumpage gpt. ad val. accelerates harvest. Bldg. tax otherwise. Discourages bldg. initially, but once built, doesn't accelerate demolition & renewal; no tax gain there.

On balance, sales taxes discrim. vs. liquid cap. more than gpt. does vs. fixed. So probly distortion is the other way.

But is another route for cap. to escape, by destruction.

As among bldgs & other cap. inputs not embodied in product, sales taxes don't hit them, so there is bias.

But emphasize effect on aggr. supply more than bias.

So, Eureka, here is wedge for my turnover & land observations. Is already forestry literature & wide acceptance for differential impact of tax. Just follow this thru to land, price effect is greatest there. But no discourage cap. fmtn, or supply.

Income tax, change reasoning. Hits net income, discourages all forms of income equally.

Value of annuity: at time t: $A_t = a \frac{(1+i)^t - 1}{i}$

Present value of annuity, a: $\frac{A_\tau}{(1+i)^\tau} = a \frac{(1+i)^t - 1}{i(1+i)^\tau} = \frac{a}{i}\left[1 - \frac{1}{(1+i)^\tau}\right] = \frac{a\Phi}{i}$

Regard a building as a 30 year annuity.

The 30th term you have to carry for 29 years before realize. Pay interest and taxes. In discounting, treat taxes parallel to i.

Thus prospect of annual <u>prop'ty tax</u> on value of capital reduces present value of building appreciably, thus reduces appreciably what one wd. pay for it new, or pay to build it.

This 30th term is taxed 30 times before is realized. This joins with i, shortens life span it is ec. to construct.

Inventories of hi turnover, other hand, tax hits them once, likewise interest (or any fixed annual charge of value).

Thus tax does not lower the present value much – nor does Δi. Thus gpt. taxing both kinds, discourages durable capital, pushes society's cap. fund into hi turnover forms.

To underline point, cf. the 30th term vs. inventories.

To begin, take allegation of forest owners, they suffer discrim. under gpt. bec low turnover. ~~(they do not~~ It looks as though they are right, although I never thought so before. But the annual tax on the trees (forget the land for now) will lower the present value very much. -- add the tax to the <u>i</u>; if ~~a~~ tree value or deduct value of the annuity. if is a const. annual charge. Just as higher <u>i</u> drives cap. into shorter forms, so does gpt. (Only higher <u>i</u> reps. real social cost, tax doesn't)

Use in article on tax expn. Esp. idea that prop. tax distorts bcs is contingent on holdg property.

The Quarterly Journal of Economics

Wald, Haskell P. Philips, "The Classical Indictment of Indirect Taxation," August, 1945, pps. 577-596.

Classical indictment of indirect taxation because of price distorting effects fails to perceive that such an indictment is just as applicable to many direct methods of taxation - p. 577

In addition, there has never been any satisfactory formulation of the theoretical conditions necessary for particular direct or indirect taxes to attain the status of ideal taxes, i.e., taxes without price distorting effects pps. 577 - 578

Marshall's analysis of the excess burden doctrine - p. 578

Indirect tax bad to Marshall - "'For on that part of the consump of the commodity which is maintained, the consumer loses what the State receives; and on that part of the consump which is destroyed by the rise in price, the consumer's surplus is destroyed....'"

Net loss of consumer's surp (the excess burden) is smallest for those gds with the most inelastic demands

But Marshall assumed cardinal utility and constant marg util of money - p. 579

Hicks' reformulation demonstrated the same thing by defining consumer's surp as the compensating variation in income, whose loss would just offset the fall in price and leave the consumer no better off than before

Compens vas is at a min when tax reduction does not ↑ consump of the taxed gd

W. F. W. Joseph's approach - a reformulation of Marshall using indiff. tools, but a more exact statement + more gen'l conditions for min. excess burden

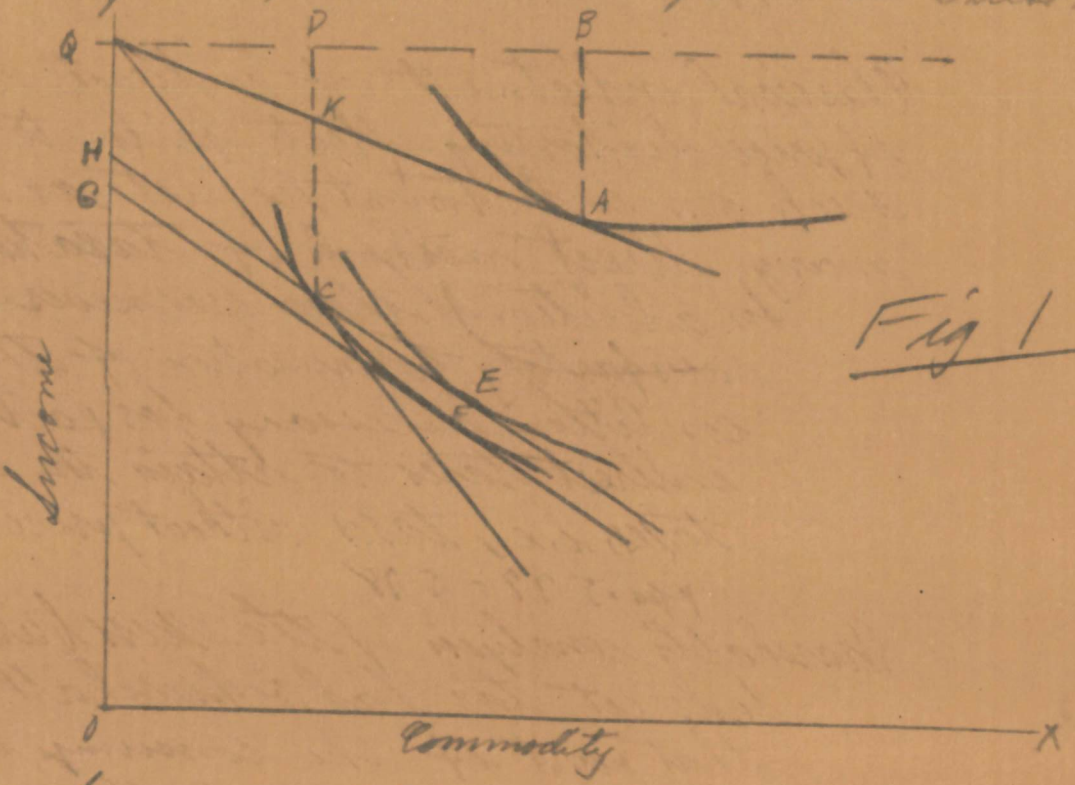


Fig 1

Income = OQ

p. 581

Pre-tax selling price = slope of QA
Max satisf. pt = A
Amt bought = QB
Max selling price = slope of QC
Max satisfact pt = C
Amt bought = QD
CK = tax revenue
This is with indirect tax

With direct tax
Draw HCE parallel to QA
Income is reduced by QH = KC, i.e., the yield of the indirect tax
Pt E is superior to pt C given upward concavity of the indiff. curves
Thus loss of satisfact. with indirect tax > with direct tax

Wald
QJE, Aug., '45 (3)

Measuring inefficiency of the indirect tax
Draw CF parallel to QA + tangent to same indiff curve as QC
Indirect tax yielding CK is equivalent in terms of its burden to a direct tax yielding QG
Hence CH is the additional yield in revenue of the direct tax without imposing any extra burden on the consumer

General condition for min of excess burden is that elasticity of substitution, not elasticity of demand, shall be zero
Hence would have to have L shaped indiff curve with right angle at C
Then HC will be tangent to same indiff curve as QC + no diff in burden of indirect + direct tax - p. 582
Both yield CK

" " Except in the extreme case of zero elasticity of substitution, all indirect taxation is more burdensome in proportion to its yield than direct taxation." "

Excess burden not peculiar to indirect taxes
Certain direct taxes have similar price distorting effects
Income tax distorts choice between labor and leisure - p. 583
But, in this choice, the lender is both buyer + seller
Hence changes in price cause income + substitution effects which pull in opposite directions
But with indirect tax, the

Webb (5)
QJE, Aug., '45

unit of income, i.e.) There is no substitution effect on the indiv's pattern of behavior

Conditions which direct + indirect taxes must satisfy in order to avoid price-distorting effects p. 594

Commodity tax: elasticity of substitution between the taxed gd and income must be zero

Income-elasticity of demand for the taxed gd must be zero

Interrelationship between price-elasticity, income elasticity and elasticity of substit

"Price elasticity of demand for gd X = the proportion of income spent on X multiplied by income-elasticity of demand for X (+1 — the proportion of income spent on X) multiplied by elasticity of substitution between X and income." ''

Thus when elast of substit = 0, price elast of demand for X = income-elast of demand multiplied by the proportion of income spent on X — p 595

And, when income-elasticity = 0, price-elast = 0

* Thus indirect ~~tax~~ is "ideal" only when all three elasticities = 0

Same hold true for direct tax

Present Value of 1 per annum, $a_{\overline{n}|i} = \frac{1-(1+i)^{-n}}{i}$

	8%		5%	
n	$a_{\overline{n}|i}$	% of simple sum. (2)÷(1)	$a_{\overline{n}|i}$	% (4)÷(1)
(1)	(2)		(4)	
3	2.58	.86	2.72	.91
5	3.99	.80	4.33	.87
7	5.21	.74	5.79	.83
10	6.7	.67	7.7	.77
15	8.6	.57	10.4	.69
20	9.8	.49	12.5	.62
25	10.7	.43	14.1	.56
30	11.3	.38	15.4	.51
40	11.9	.30	17.2	.43
50	12.2	.24	18.3	.37

Easy to remember: at 5%, present value of 30 yr stream is half the total.

If taxes are $500 a year for 30 yrs, simple sum is $15,000; present value is $7,500.

50%

Gross Rent	Tax	net rent	Selling Value	Tax rate	Value to Community
1050	0	1050	21000	0	0
1050	300	750	15000	2%	6000
1050	750	300	6000	12½	15000
1050	1000	50	1000	100%	20000

allocate parts

England

T	2	300	6000
I	5	750	15000
	7	1050	21000

Coal Co.

T	100	1000	20000
I	5	50	1000
	105	1050	21000

from H T Tideman

Land improvements.

$$V = \frac{a}{i+t}$$

$$\frac{dV}{dt} = \frac{d}{dt}\left(\frac{a}{i+t}\right) = \frac{(i+t)\times 0 - a\frac{d}{dt}(i+t)}{(i+t)^2} = \frac{-a}{(i+t)^2}$$

$$= a\left[\frac{d}{dt}(i+t)^{-1}\right] = a\left[-1(i+t)^{-2}\right] = \frac{-a}{(i+t)^2}$$

Summary:

$$V = \frac{a}{i+t}$$

$$\frac{dV}{dt} = \frac{-a}{(i+t)^2}$$

Telling us the smaller is i, the greater is $\frac{dV}{dt}$.

1916, est. 3/5 prairie provinces held by speculators, 1/3 by settlers.
A generally recognized problem. Alb & Sask. enacted "wild land taxes"
(generalize - where you get land settlement you get land taxes except when pol. unit is controlled by those wanting to slow settlement)
(I judge the CP tax from land was not tax there or began. So of course CP outbid)

p. 317 Got around to leasing land considerably. This helped sales & brought income.
p. 319 30s, land being now taxed, they wanted to get rid of manuf. lands. Some officials thought taxation put an entirely different light on matter. So they gave away much - some to E.I.D., some to a land co. By 1917 kept only 2m acres unsold
p. 356 1924 they became liable to taxation - a good place to observe effects of land tax. One might, indeed, get great gobs of data on this point.

Ch. 5
" Even such a traditional Am. inst. as bonding land in a taxing district, like a school dist. or irrig. dist, ~~may~~ will enormously influence the factors we have been dealing w, & ~~vastly~~ reduce int. burden of hldg title

Ch. 4
p. 387: An example of discounting future yields, (under ass. of perf. comp. & perf. knowledge) He says paranthetically: "(To simplify our problem we will disregard annual outlays for taxes, since these can be 'compounded forward' quite simply.)" This would be ok, but later, when considering different i.r.s, he does not also consider taxes, which would then be compounded forward at different rates. Later, i.e., on p. 573. 5/24

J
R.r. lands not subject to taxation (until sold, I guess)
C
p. 250 In letters between executives of CP they calculated interest loss on land by holding idle, et-ed it with possible annual appreciation, decided to sell. - 1910. These high prices were also partly due to
D4
CP's anger at its rivals, an attempt to give them a hard time. Edmonton was very bitter at CP for this.
p. 252 Shaughnessy wanted to wait to sell. He was not conscious of
B1, O, F
the interest loss, but would have been of a tax loss - he said so.
Here is an outfit supremely unaware of losses - a big r.r. Low internal i.r. - maybe, but they needed cap. too. Just stupidity?
One official suggested they sell some, hang onto outskirts of towns they create, for Δs. p. 253
(CP experience good e.g. of how land may be aired by a few at first but, if many small cap-ists exist, it will be widely distrib. soon - unlike Span. Am)

Davenport The Theoretical Issues in the Single Tax' AER Mar '17

Policy conclusions —
use if demanded

The writer ~~believes~~ has reason to think, from the analysis of this study, that it is indeed possible to modify ~~the~~ institutions underlying the land market to make it ~~work much better~~ allocate land to better advantage. In the main he proposes to leave detailed evaluations of land policy to a sequel. ~~But he does not wish to~~ But having roundly condemned the market's performance he does not wish to leave the subject hanging. For his motive, as given in the introduction, is not to destroy the market, but prepare the way for improving it. Hence he will venture a few summary ~~con~~ policy conclusions from his analysis.

The analysis of this study ~~leads squarely to the conclusion~~ suggests that ad valorem property taxes, in particular the ~~is~~ component that falls on land, tend to improve the market's performance. If, in the earlier part of this conclusion, we have seemed to prove worse things of the market than there are to be proven, it is because for simplicity we omitted property taxes from the calculations. But consider now their effect. Due to the fixed supply of land these taxes are not passed on, but fall on the landholder. Thus they reduce land prices. ~~As land prices fall, of course the interest burden of holding title falls proportionately. If the tax becomes as high as the marginal product of the land~~ At lower land prices, ~~of course, interest burdens of holding title are proportionately less also. That means that interest burdens are absolutely less~~ As land prices fall, of course the interest burden of holding title falls proportionately. ~~Interest burdens of holding title fall absolutely more~~ In absolute dollars and cents, the interest burden of holding title falls more for the high interest than the low interest bidder. At the same time the increased tax burden

is the same for all bidders --- assuming a fair assessment. ~~In the~~ Thus, with increasing taxes, the ~~cost~~ annual cost of holding land for high interest bidders will fall, and for low interest bidders will rise, until in ~~the~~ a theoretical extreme, when the tax had brought the land price down to zero, the only annual cost of holding land would be the tax, the same for all ~~buyers~~ comers.

In terms of Fig. 9 (~~page~~, supra), the two horizontal marginal cost lines would, with increasing taxes, converge closer together until they become congruent, representing then only taxes, and no interest. At this point all landholders would pay the same annual price for the use of land, hence apply it down to the same margin. Land would then, for once, be allocated according to the traditional ideal, the equimarginal principle.

Certain taxing bodies, for example the ~~districts~~ irrigation districts in California, have made it their policy to collect revenue from taxes on bare land. That the results have been as the above analysis suggests they would is evident from ~~these citations:~~ ~~statements by~~ first hand observation:

Under district laws all lands susceptible of irrigation from the works of any district may be included in the district and taxed for district purposes. This tends to force development, since landowners cannot long afford to pay district taxes on unimproved land. (Teele, Ray P., "Irrigation in the United States", New York: Appleton, 1915, p.78)

Denmark, New Zealand, Australia and other countries have also made use of this tax device. According to Colin Clark:

> It is a commonplace of economic theory that this form of taxation (and indeed this alone) is no deterrent to production, and indeed encourages farmers and landowners to make fuller use of their land, to subdivide it where possible and employ more labor. (Financial Times, Sept. 10 1953)

To these statements one should add that the policy will be most effective only if firmly expected to continue, for it is in future expectations that land buyers deal. In practise that expectation is most convincingly maintained by a large bonded debt hanging over the taxing body, and poor prospects of revenue from other sources.

Local bonds are a future tax.
Lo i.r. landholders will oppose
bondj more than hi; bes
they are puttj higher value on
futures.

105 | Computed interest on & original investment in & case of properties not burdened by debt has been mildly effective in convincing owners that their investment is not as good as they expected it to be, but after all the optimism of the average owner has encouraged him to continue the ownership; on & other hand, in the case of properties burdened by debt, interest actually payable has proven a tremendous burden, & has quite frequently caused properties to change hands. - - -

& tax burden, as affecting the owner's attitude, has been even more important than the matter of interest; . . . ' 548 David Mason

Taxes have Id. last 40 yrs, but declined last few (i.e. before 137)

diff mns, seen as implicit v explicit interest.

LVT works

Conclusion

It is earnestly to be hoped that ~~this matter~~ the scholars of today will unearth this material, & reduce it to comprehensible form, before all has disappeared & the last knowing tax assessor of that era is below the sod. Otherwise the ~~Am. nation~~ people may continue to stumble blindly from bright ways to dark; over & over the worst tragedy will be, they will not know where they have been, nor why.

The 'taxpayer' -- billboard, etc, to let owner hold on until sells.

Present vs future

Walras, Leon. Elements of Pure Econ. Transl. Wm Jaffe. London, George Allen & Unwin Ltd, 1954. pp 451-4 land tax not shiftable. Approves Ricardo ch. X, same thing.

Also makes cap-n error — i.e., tax "on rent" reduces l.v. by exact %.

Justify subsidies to small businesses on grounds they are Δ ↓ returns, large are decreasing.

Adams, T.S., Tax Capitalization and Tax Exemption, AER, 1916, June

Taxes are capitalized, many argue -- e.g. T.N. Carver, and Seligman -- and so the new purchaser in effect pays no tax. This for securities and land. Hence no burden from some taxes. (unless they lower yields in general, lower i.r. Which taxes on production do, land taxes don't)

Fillebrown, & other single taxers, argued that landowners pay no taxes, due to tax capitalization; whereas other property owners do. So the only way to equalize burden borne by landowners with burden borne by others is to increase the tax on land gradually. (but this anticipated increase would also be capitalized. Cannot get away from the fact that present owners would bear a burden, if tax rates on land increased disporoportionately to other taxes, or while other taxes being reduced. Except that fact that other taxes were reduced would increase land values, but that is another matter. All taxes, not just land taxes, are capitalized, and any change in taxes hits someone with burden he didn't count on. Competition equates all anticipated returns with one system, returns from investments, and then when tax system changed, he whose yields fall is hurt, whose yields rise is helped)

(My next article for Am. Jnl. should be to finish off what I started two summers ago, showing how ~~tax~~ shift to lvt would raise prop. values in locality, but for monopolistic motives. This is crucial to my amendments to lvt philosophy, & I am well prepared now to write it)

(The general conclusion is interesting, tho, that taxes on capital have no burden, being capitalized. Only increases in taxes are a burden. And general taxes are a burden in that they lower yields, and/or reduce the am't of investment)

(for my paper, the general conclusion that lvt can only be enforced by nat. & ultimately by world govt. That our failure is not due to human stupidity so much as there is a real pro lem, a governmental problem, in doing what we wish)

Adams objects to Fillebrown because the argument should be applied to all cap.&land, not just land. --that everyone is scot-free from taxation in capitalization sense, so no one should be siggled out -- this is fair enough. Also that the plan can be worked only by surprise, deception, for if increases of taxes were antic. they would be capitalized now.

(shouldn't be surprised if Rolph argued that land & cap. taxes just the same, because investors in real cap. are getting a rent, too, since supply of real cap. is pretty fixed, and taxes on it simply cut into that rent. Might say the same of labor incomes, since labor supply is fixed. But even his analysis shows that taxes that lower marginal returns, as opposed to taxes that take m w/o lowering marg. returns, reduce supply of factors.)

Adams

But TS~~Brown~~ extends his argument to an error. He says taxes on bonds would discourage capital, thus raise prices, burden borne by consumer. & implies same true of land, but of course it isn't, and there is where he misses boat.

TS says buyers of assets pay tax in lower i.r.

His general theory of tax burden is that burdens are "dissipated", silently paid "by all". And known privileges, like lv increments, are "diffused". He lists manners of diffusion:

1. Due to spec. value, taxes higher in early years of low yields.
2. Frontier farmers give their labor cheaply, thus lowering food price, because of antic. increments to l.v.
3. R.r.s, with their land grants, charge rates cheaper than otherwise, and extend lines where otherwise would not.
4. Manufacturers charge lower prices than otherwise, making up loss thru lv increment, and since others can do this too, competition forces all to lower prices. In accting, this shows up by not allowing any depreciation, balancing it vs. appreciation of land. So benefit "diffused" to public. (i.e. to neighboring land)
5. Tenants in city bldgs get lower rents than otherwise, because landowners charge less today because of antic. increments.

The only people to get unearned increments were original settlers. They probly deserved them, for hardships, and later buyers capitalize expected increments, hence get nothing unearned. (this reasoning on basis of individuals, not things, is poison) (the single tax arguments were based on the wrong things. That is why they failed? Or is it that if other arguments were brought up, philosophies would be altered to make them seem wrong too? I don't know, but will try)

He ignores subsequent increments due to subsequent public works.

Only inheritance yields an "unearned increment", he thinks.

He attacks "unearned increment" idea thruout, and that is certainly a weak reed of lvt theory.

He admires those single taxers who admit they want to confiscate land values; he thinks Fillebrown is dangerous, because he tries to disguise confiscation with his argument that landowners bear no real burden at present. And it is perhaps only just that Fillebrown's devious ruse should have failed. Stick to the truth.

Seligman's Reply.

Anxious to show that he is not a single taxer, Adams having seemingly identified him with them. Says that Adams says st use an incorrect theory correctly; S. thinks they use a correct theory incorrectly. Says lvt would be burdenless if only new purchasers were taxed, i.e. if tax not imposed until land changed hands (but then it never would change hands), and due notice given of just what future taxes would be.

(In Italy, when a new general income tax was imposed, land was specifically exempted -- on grounds it was already subject to a special land tax)

p.796 "I do not, of course, mean to say that it may not be desirable to tax land at a higher rate than other property;..."

Says that theory of tax capitalization implies that new taxes should not be designed to redress wrongs in or inequalities in old taxes, but should be perfectly general -- on income. He spits at Adams over some petty sophistry they both engage in over whether character of old or new tax is vital thing, but general idea clear, & probly both agree. But S. says new taxesneed not be general, they can be imposed on somethig like monop. you want to single out for taxation, and subsequently it is ok. But he implies that after a taxed securities have been mostly sold, is an undue special burden to tax people, even if the income is wrong. But he only brings this up as adjunct to his main point, that character of old taxes do have something to do with legitimacy of particular new taxes. If the new tax is on something that is already taxed disproportionately, then it is ok if the assets with the illegit. income are still in hands of original owners who got

unearned increment to begin, but if have been sold, not ok. Because if asset has been sold, then theory of capitalization applies to old tax; but if it has not been sold, theory of capitalization does not apply. This is major c.s. poi-t he makes vs. Adams.

Even more important to S. is his vs. Adams argument that capitalization does not buy you free of tax. Adams said you paid it for 2 reasons:
1, lower i.r.
2, Higher prices to consumers due to less production. (excess burden)

S. says it is new doctrine that taxes on yields of securities cause i.r. to fall.(seems pretty obvious to me, probly is old stuff) Seligman rightly observes that Adams is wrong in applying it to land. But wrongly says effect on i.r. is negligible, this being based on analysis of just one industry.

He objects to Adams on diffusion of unearned increment, saying labor is misdirected that is lured to frontier too early by hope of increments, that r.r. lines are misdirected when increments help lead them (wrong).

p. 806, again, Seligman says moderate increases in rate onland desirable.

Rolph Review, 7

T.S. Brown correct in saying is no tax exemption thru tax capitalization -- or, rather, that everyone is equally exempt. That burden is in lower i.r. in general.-- he should have mentioned reduced inv., and all its effects. But he missed the distinction between land & cap. taxes that is truly relevant, namely that land taxes do not lower i.r. (excuse me, he did mention, besides lower i.r., the reduced inv.)

This would be a good line of reasoning to run over on exam -- get Rolph's reaction, too. I can cuss out the Fillebrown argument at length, to keep him happy.

Seligman says Adams wrong that taxes on cap. make you get lower yields. But we got 'em one way or the other. For if they don't cause lower yields, it is only because supply of inv. has declined. & if they do cause lower yields, there is the burden.

Rolph tends to idea that supply of everything is inelastic, so might as well tax anything. Everything, rather. He would say no ec. reason for taxing land more than yields, as yields are rents too. This would ignore that lacking inv. opp. is major problem in modern depressions, i.e. that supply of inv. is in fact extremel elastic to yields. Besides, the higher are incomes that come from rendering services to society cf. to those from other sources, the more services will be rendered. Less privately collected rent means a higher m.u. of further units of income, & untaxing yields means higher price of leisure, etc. Rolph would try to make it look like purely a question of redistribution, while the effect on production incentives is paramount.

Seligman stresses that character of old taxes has a bearing on what kinds of new taxes ~~xr~~ should be levied -- while implication of capitalization argument is that it doesn't matter, since old ones all capitalized beforehand.