How Good Is The Case For Not Taxing Capital Income?

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Introduction

What are we talking about?: Salient facts:

Table 1. Non-housing Wealth, UK, 2004, age 52-64, £000's

Decile	Wealth	Pension	ISAs etc	Other
1	0.85	0.1	.08	0.67
2	9.2	5.0	1.3	2.9
3	27.8	18.1	3.1	6.6
4	57.5	39.2	6.2	12.1
5	99.1	69.1	7.8	22.2
6	149.8	111.9	10.2	27.7
7	211.3	165.0	13.1	33.2
8	297.8	243.7	13.6	40.5
9	430.8	340.3	24.6	65.9
10	>511.2	349.6	22.0	139.6

Source: Mirrlees Review 2011

- "Other": essentially stocks, bonds and bank accounts
- Assuming on average 5% nominal return, tax rates 20-40%, clearly abolishing capital income tax for all but the top few deciles is pretty small beer (in the UK, first GBP1100 of savings income already tax exempt)
- But what is the net effect when replaced by a higher tax on wage income or consumption?
- So, significant gainers are essentially the top few deciles of the wealth distribution

- Noteworthy proponents of abolishing capital income taxation:
- J S Mill (1871), Irving Fisher (1939)
- UK: Meade Report (1978), Mirrlees Review (2011) - (remarkable continuity): exempt normal (riskless) rate of return
- US: all Republican presidential candidates (incl. Trump); academic economists (Mankiw, Weinzierl and Yagan, (2009)), academic lawyer/economists (Viard (2011), Bankman and Weisbach(2006), Kaplow(2008))

Arguments **for**: 1. "Double taxation" (e.g. Irving Fisher (1939))

- Tax system that taxes capital income is unfair: saver "first taxed on his accumulation of capital and thereafter is taxed again on the income which he derives from the same accumulation"
- From the viewpoint of modern tax theory Fisher's argument must be viewed as expressing an opinion rather than an analytical conclusion.
- Whether is "unfair" depends on a much broader set of considerations than those contained in the simple numerical example upon which Fisher's argument was based.
- Doesn't matter *how many times* income is taxed, what matters is the final tax burden
- Moreover, *fairness* not the only criterion: also care about *efficiency*, in the sense of the distortions of incentives and resulting losses of wellbeing that imposing a tax on some particularlar activity creates.

Example in the Spirit of Fisher

- Each person starts with an income of \$100,000, saves \$20,000, tax rate 20%, interest rate 5%, Charlie's 4%

Table 1: Alternative systems

	System	*Taxable Income*	*Tax at date* 0
Anna	*TEE*	$100,000$	$20,000$
Brad	*EET*	$80,000$	$16,000$
Charlie	*TTE*	$100,000$	$20,000$

Brad's tax payment simply postponed

Table 2: Exponentially Growing Tax Wedge in Values of Savings Accounts

Year	*Anna / Brad*	*Charlie*	*Wedge*
1	21,000	20,800	1%
10	32,578	29,605	9%
20	53,066	43,822	17%
30	86,439	64,868	25%
50	229,348	142,134	38%

"Wedge" = % difference between future value of Charlie's savings and that of the other two

- So what can we conclude?
- Unfair to Charlie? Impose the TTE on all three!
- Tax rate on capital income (= double taxation) should be abolished? Put all on EET (say), but then Anna and Brad may lose and Charlie gain as the tax rate is raised to restore the lost tax revenue.
- Is that a desirable tax reform? How do we decide? Effects on efficiency and equity, but note, it is a problem of tax reform not a "tabula rasa" problem.
- Only real point to take from this example is that of the exponentially increasing wedge - important for long term saving

Arguments **for**: 2.Mirrlees Review:

[I]n an ideal world, we would like to tax people according to their life time earning capacity-broadly equivalent to their potential consumption. It might appear that taxing savings is an effective way to redistribute But someone with savings is not necessarily better off over their life time than someone without savings. The two might earn and spend similar amounts over their lifetimes, but at different times: one earns his money when young and saves it to spend when he is old, while for the other the timings of earning and spending are close together. We can tax people on their total resources by taxing their money income at its source (taxing earnings) or when it is finally used for consumption (taxing expenditure). We can tax better-off people more heavily by making the rate scale applied to earnings or expenditure more progressive. If people's saving decisions tell us nothing about their underlying earning capacity, just about their taste for consuming tomorrow rather than today, then taxing saving cannot help us to target high ability people more accurately than taxing earnings or expenditure.

This a very naive argument:

- Sees saving as just an instrument for achieving optimal consumption time stream given endowed income time stream and capital incomejust arises out of use of that instrument. But what about large wealth holdings?
- pv of consumption = pv of labour income, so ignores inheritances/bequests, wealth and income distributional considerations generally
- Assumes perfect capital market with no uncertainty and liquidity constraints
- Ignores incidence of tax on interest rate - borrowers can end up worse off than lenders
- Ignores "second best distortions" arguments: at zero capital income tax, small tax reduces large distortion on labour supply, so trade off distortions

Arguments **for**: 3.Theory: The Atkinson/Stiglitz (AS) Theorem

- Given certain assumptions, optimal labour income tax is all we need, *distortionary* taxation of consumption goods is unnecessary and just creates welfare loss
- Intuition: Inequality exists along the single wage dimension, therefore can be corrected by wage taxation, differential taxation of consumption goods achieves nothing
- (More precisely: in the corresponding formulation of the Mirrlees optimal tax model, differential consumption taxation does not relax the incentive compatibility constraint)
- But the devil is in the detail

Assumptions for the AS Theorem

1. Main Assumptions for the Mirrlees model: "optimal nonlinear tax system"

- People differ *only* in their innate productivity in market work as reflected in their wage
- Households consist of single individuals with time divided between work and leisure
- Tax planner can observe only individual (reported) incomes
- For each wage type, offers a lump sum payment and a tax per $ of income, designed so that

1. each type chooses that tax which is designed for their specific type (incentive compatibility), or more intuitively, truthfully report their wage type (truth-telling) to receive the corresponding tax
2. the set of type-dependent taxes chosen is the best from the point of social welfare out of all the possible taxes that satisfy incentive compatibility - optimal nonlinear tax
3. it raises the required amount of tax revenue

Assumptions for the AS Theorem contd.

2. Three additional assumptions to extend to proposition on not taxing capital income

- **Weak separability of preferences**: The amount of consumption today an individual would give up to get one unit of additional consumption in one year's time is independent of the amount of labour supplied (equivalently, leisure consumed)
- **Perfect capital market:** Everyone can borrow or lend as much as they want, subject to being able to repay loans out of future income, at an interest rate that is the same for all borrowers and lenders and does not vary with the amounts borrowed or lent.
- **No uncertainty:** Future preferences, incomes and interest rates are known with certainty at the initial point in time at which all decisions are made.

Word of caution

- Standard economic methodology: some degree of unrealism is inevitable in constructing any model, so the charge of "unrealism of assumptions" **is in itself insufficient** to invalidate a model's conclusions.
- The central issue is rather whether these conclusions are robust to variations in its main assumptions in the direction of greater realism, or cease to hold in that case.
- A main message of this paper is that the economic research that has taken place over the last two to three decades shows overwhelmingly that the AS result is not robust to reasonable relaxations of its main assumptions (see also Banks and Diamond (2010))
- How then, logically speaking, can it be used as the basis for the proposed tax reform?
- At this point the paper provides an extensive numerical example to explain the AS Theorem

There exists a large literature showing that the AS Theorem is **not robust** to reasonable relaxations of assumptions, and that positive taxation of capital income is optimal, especially:

- Uncertainty, imperfect and incomplete capital markets, liquidity constraints (see Aiyagari (1995), Boadway and Pestieau (2003), Chamley (2001), Conesa, Kitao and Krueger, (2009), Cremer and Gahvari (1995), Golosov, Tsyvinski and Werning (2007), Hubbard and Judd (1986), Varian (1980), inter al.)
- Heterogeneous preferences, saving a signal of type (Diamond and Spinnewijn (2011), Saez (2002))
- Rejection of weak separability (Browning and Meghir (1991), Apps and Rees (2015))
- Non-existence of optimal nonlinear taxes on labour income (Boadway and Pestieau (2003))
- Basically these kill it, but the corpse won't lie down (Bankman and Weisbach (2006), Mankiw et al. (2009), Mirrlees Review (2011) ch. 13)
- And there have been attempts to bring it back to life.....

The Konishi/Laroque/Kaplow (KLK) extension:

- **Proposition**: Under the AS assumptions, if we have capital income taxation then abolishing it allows a Pareto improvement, **given that** any nonlinear earnings tax, not necessarily an optimal one, can be chosen - so still have to separate wage types
- Drops requirement that an optimal tax must be in place, but requires feasibility of any required relationship between individual incomes and the tax they pay (+technical requirement)
- Actual policy proposals though do not assume this, but see the income tax system being replaced by an alternative system with two features:
- 1. no taxation of capital income
- 2. an alternative tax base, either wage income or consumption, with an existing type of tax system - piecewise linear - to ensure tax revenue requirements are met.

A Simple Example: AS assumptions still hold

	y	x_0^*	x_1^*	s^*
Anna	60,000	23,442	21,156	18,558
Brad	150,000	58,605	52,890	46,395
Charlie	45,000	17,582	15,867	13,918
Deborah	200,000	78,140	70,520	61,860
Edwin	300,000	78,140	70,520	161,860
Totals	755,000	255,909	230,953	272,591

- Anna, Brad and Charlie: incomes y = earnings from labour supply.
- Deborah: inheritance of \$200,000, no labour income
- Edwin: salary \$200,000, profit \$100,000, "bequest motive": \$100,000, part of "saving". Assume bequest tax free but tax on interest income
- Has income/consumption-switching possibilities of \$100,000
- Preferences: $u = 2[\sqrt{x_0} + 0.8333\sqrt{x_1}] + v(T - l)$, Interest rate 20%, tax rate 30%

Mainly for Economists

3-line proof (well just about)

$$(\mathbf{p}+\mathbf{t})\mathbf{x}_i^* = w_i l_i^* - T(w_i l_i^*) \Rightarrow \mathbf{p}\sum_{i=1}^{n}\mathbf{x}_i^* = \sum_{i=1}^{n}(w_i l_i^* - T(w_i l_i^*) - \mathbf{t}\mathbf{x}_i^*) \quad (1)$$

Given $u(.)$ strictly quasi-concave:

$$\hat{\mathbf{x}}_i = \arg\min_{x_i} \mathbf{p}\mathbf{x}_i \quad \text{s.t.}\, U(u(\mathbf{x}_i), l_i^*) \geq U(u(\mathbf{x}_i^*), l_i^*) \Rightarrow \mathbf{p}\hat{\mathbf{x}}_i < \mathbf{p}\mathbf{x}_i^* \quad (2)$$

$$\Rightarrow \mathbf{p}\sum_{i=1}^{n}\hat{\mathbf{x}}_i < \sum_{i=1}^{n}(w_i l_i^* - T(w_i l_i^*) - \mathbf{t}\mathbf{x}_i^*) \quad (3)$$

- Abolishing tax on the return to saving implies:

Table 8: Everybody Can Be Better Off!

	$\hat{x}$	$\hat{X}$	X^*	T_y	T_s
Anna	22,338	41,040	41,070	18,000	930
Brad	55,970	102,610	102,680	45,000	2320
Charlie	16,791	30,780	30,800	13,500	700
Deborah	74,626	136,810	136,900	60,000	3100
Edwin	74,626	136,810	136,900	60,000	4650
Totals	281,665	516,460	516,800	196,500	11,700

- Hold labour supplies and incomes constant at their previous values
- If no tax on saving, how much consumption would make them just as well off ?
- Answer: $\hat{x}$ and $\hat{X}$. Then $\hat{X} < X^*$
- Reason: $\hat{X}$ minimises cost over all time streams that yield the same utility
- Punch line: raise the same amount of tax in total, still have income left over so everyone could be better off.

But, But, But

- Only a *potential* Pareto improvement, which raises issues discussed in the famous controversy concerning the *Kaldor-Hicks Compensation Principle*
- Conclusion: not an acceptable criterion
- Key assumption for KLK: planner can choose any set of taxes on individuals
- In the example therefore, obvious policy: set lump sum tax on each individual at previous $T_y + T_s$
- In moving from theory to practical policy, attention has to be paid to whether this assumption can be expected to hold, have to take account of feasibility of tax systems
- e.g. individualised lump sum taxes are not regarded as feasible

- Bankman and Weisbach (2006) "prune/figs" example (pp1425-26): essentially assume we simply impose a wage tax equal to $(T_y + T_s)/y$ on each individual in Table 8 so tax revenue remains the same and everybody gains from the abolition of tax on interest income
- But this can't work in this example because of Deborah's inheritance (zero wage income) and Edwin's profit income and bequest motive (only \$100,000 wage income) not to mention income-switching possibilities
- Taking these into account, if only a flat rate wage tax feasible, would need a rate of about 60% to achieve revenue neutrality, making Anna, Brad and Charlie worse off after tax reform, while Edwin (+heir) and Deborah far better off.
- This likely to be unacceptably regressive

- In this example, can't be done with a simple wage tax: need a consumption tax and wealth and/or inheritance taxes (cf James Meade: wanted **annual wealth tax** as well as consumption tax)
- But consumption tax implies replacing individual by joint taxation for 2-earner households
- Contradicts often asserted equivalence between wage and consumption taxation
- Essentially, severe constraints exist on feasible tax systems: piecewise linear, very restricted wealth and inheritance taxes, individual taxation
- Therefore Kaplow's "replicating tax" not in general feasible
- Banks and Diamond:

> *"[H]ypothetical alternatives that would not be adopted are not legitimate arguments against a policy that would increase social welfare ....[A]rguing on the basis of a dominating proposal is somewhat hypocritical if [this] is not supported and will not be adopted [....] in the future."*

Keeping it alive: Steps in the argument

Step 1: Denial:

- Weak separability is approximately satisfied (Bankman and Weisbach)

> *There is little reason to believe that saving is either a relative complement or a relative substitute to leisure. Armchair reasoning suggests that the answer will be complex and does not point in any one direction*

- So "armchair reasoning" is all we need - we don't do empirical work
- Mistake to think in terms of aggregate consumption and "leisure"

Step 2: More denial:

- The Mirrlees Review concludes

> *A case could be made that the benefits of some (even very approximate) movement towards the theoretically superior positions described in the previous four subsections justify accepting some of the problems it would reintroduce. But taking all of the counter-arguments together, we think it would be better to make neutrality the central goal of savings tax policy.*

- Theoretical arguments (discussed in preceding 4 sections) so complicated, might as well stick with intuition.
- Though not really defensible, this point would carry more weight if consumption taxation was the *status quo*
- Not convincing grounds for *tax reform* however

Conclusion: Gut feelings

- Illuminating remark by John Kay (member of Meade Commission):

  So why was expenditure tax both the starting point and the conclusion [of the Meade Report]? I think that at a visceral level, James Meade believed in the moral case that people should be taxed on what they took out [i.e. consumption], not on what they put in [i.e. saving and investment]. This is not really a satisfactory argument, as he knew. But I have no doubt that he, along with most of the Committee, came to the issue from this sort of perspective.

- But why do labour earnings not represent "putting something in" to the economy?
- Further work for this paper: example to show effect of introducing progressive consumption taxation in economy with 2-earner households
- Risk and uncertainty?