

## Income Tax Cuts without Spending Cuts: Hazards to Efficiency, Equity, Employment and Growth

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Few fields of economics have seen more shifts of opinion than has fiscal policy. In the beginning, now shrouded in mist, the orthodoxy was “sound finance,” preached in the 1920s by Harley Lutz and Frederick Fairchild. While brief passive deficits triggered by dips in economic activity were tolerated, attempts to moderate dips through aggressive reductions in tax rates and attendant deficits or widening of deficits were judged inappropriate.

With the rise of Keynes’s monetary theory of employment in the 1930s, Keynesians like Abba Lerner (1944) saw the old fiscal orthodoxy as dysfunctional and proposed anticyclical tax-rate policy – functional finance – as the quickest and safest (in some cases the only) method of controlling “effective demand.”

In the 1950s, the *neo*-Keynesians, led by Paul Samuelson (1948, 1956), broke with functional finance. His “neoclassical synthesis” would analyze fiscal policies from a *non-monetary* perspective, i.e., with “real” models, on the grounds that monetary policy was available to control effective demand.<sup>1</sup> This principle rapidly won acceptance in mainstream academic economics. But after that, it was one disagreement after another. What *kind* of real model was to be used?

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<sup>1</sup> Milton Friedman extended the idea with his dictum to render unto monetary objectives those instruments that are monetary and to real objectives those tools that are real.

The neo-Keynesians came down again against the policy of secular budgetary deficit, regarding it as *anti-growth*. Franco Modigliani (1961) argued in formal terms that enlargement of the public debt distorts saving, dampening the accumulation of wealth and so impairing the rise of productivity. James Tobin (1960) advocated a policy of secular budgetary surplus – “growth through taxation”. The rationale was that surpluses engineered through high tax rates would dampen the spirits of consumers who didn’t care about future generations, which would increase investment and growth; and if income effect exceeded the substitution effect the surpluses would also restrain leisure, boosting the level of economic activity.

Next, Robert Mundell (1971), seeming not to have heard of the neo-Keynesians’ stance, proposed in a now almost biblical work that fiscal policy be “assigned” to the goal of “stabilizing” employment (or some other measure of economic activity) – and if that meant running big budgetary deficits indefinitely, so be it. This pamphlet suggested setting *tax rates low* when low employment prevailed or threatened, *high* when high employment was in prospect. As public-finance specialists were able to confirm, a temporary cut in income tax rates – provided the economy is Ricardian *or* the tax cut is (and is expected to be) followed by a temporary tax increase of offsetting magnitude and duration – would have no income effects, only unopposed substitution effects, which would unambiguously boost current labor supply and thus output but not boost consumption; both employment *and* investment would be lifted – a very anti-neoKeynesian thesis. Yet a band of “supply-siders” went beyond Mundell in the

1980s. If deficit-widening tax rates would strengthen an economy when weak, they said, deficit-creating rate cuts would strengthen it when pretty strong too. With boundless technical progress, they explained, deficits could be positive and grow with output forever and, in a Ricardian economy, a high debt-output ratio wouldn't mean higher interest rates, less investment and less employment in either long run or short.<sup>2</sup> Budgetary deficits were for all seasons. Even in the fat years, they talked up tax rate cuts as “insurance” – as a way to shift up the fluctuating employment path so that, when falling, it would fall from a high level and wouldn't hurt so much.

Fiscal fashion swung to Wall Street in the 1990s when, facing a secular deficit, Robert Rubin and Larry Summers at the Treasury contended that markets' anticipation of the long-term impact – a massive pile-up of public debt as a ratio to productivity – elevates the long rate of (real) interest, which impairs investment, slows productivity growth and – if we adopt the sort of “structuralist” models that I use – reduces both hiring and the wages firms can afford to pay. They urged secular surplus. When the budget went into surplus later in the decade, they gave it some credit for the phenomenal boom in investment and employment of those years.

None of these three camps offers a generally safe guide, as I see it. Yet there is the common ground of the neoclassical synthesis, there are valid ideas there, and there are ideas from outside the three camps we can add. In what follows I will be drawing (except occasionally) on the neoKeynesians' non-Ricardianism, the supply-side premise that tax rates on wage income matter and Wall Street links

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<sup>2</sup> Mundell opposed Ricardianism but he did see Pigou-Metzler liquidity in government debt.

from future public debt to present investment and employment. Incorporating these elements into stripped-down variants of my “structuralist” kind of model (Phelps 1994), I ask whether such a stylized representation of the Bush tax cut on personal income – which has the characteristic of delayed implementation – passes the test for inter-temporal efficiency, for intergenerational equity and, finally, for effectiveness in boosting present employment. In this framework, it will be shown, a Bushian tax cut causes some inefficiency, some inequity and a perverse near-term effect on employment. Even a tax cut made effective immediately is of ambiguous effectiveness. Some concluding comments place these results in a wider context.

#### INEFFICIENCY

The wave of analyses using rational expectations in stochastic and nonstochastic settings has caused us to lose sight of the fact that the effect of fiscal policy on an economy’s efficiency is not just a matter of the tax structure and the timepaths of the various tax rates in the manner of journal articles– as if the future was *known*, subject only to the absence of new, unforeseeable shocks. In real-life economies, where the actors do not know the present discounted value of the stream of total government outlays to come (government purchases, entitlement benefits and payments of interest and principal on the public debt ), either because they don’t foresee the medium- and far-term future very well or they can’t calculate very well, the effect of fiscal policy on efficiency is, in general, also a matter of income earners’ *expectations* of the level of the present discounted value of the taxes they expect to pay over the coming years and into the far future. And these expectations

won't generally be so-called *rational expectations*. Almost certainly we will want to suppose that people's expectations of future tax payments are, in part at any rate, a function of the tax rates currently on the books, including, in general, already-legislated adjustments to take effect in upcoming years.

It was on the basis of such thinking that I argued in a short monograph many years ago (Phelps, 1965) that the government's choice of current tax rates may have a serious impact on households' expectations of their net-of-tax lifetime total wealth (financial plus human) – an impact that is clear if households interpret current tax rates to be the government's expectations of *sustainable* rates, but obviously the existence of such an impact is more general than that; further, the higher expected wealth so calculated, the greater will be the total effect of this wealth on household consumption demand and labor supply. In particular, households, whether Ricardian dynasties or not, can plan their future better if the taxes on the books convey to them a correct impression of how much of their lifetime income is to be diverted to government purchases and transfer payments – thus how rich or poor they really are. They will be less likely to over-spend and under-work, for example, if they do not under-forecast the government's tax-take from their lifetime earnings. I called the fiscal policy *neutral* if current tax rates, in view of their effect on households' expectations of the present discounted value of the future stream of their tax payments, were at a level such that this present discounted value was equal to the present discounted value of the government's projected total outlays over the future; then households will not be led (at least not on this account) to over-estimate or under-estimate their true wealth. And, in some

models at any rate, there is a prima facie case that such a condition is necessary (though hardly sufficient) for intertemporal optimality.

Clearly, under this neutral fiscal policy, tax rates for the near-term future would have to counterbalance far-future projected deficits, given programmed spending, with near-term surpluses.<sup>3</sup> Accordingly, in the context of the present U.S. situation, the *deficits* projected to arise some two decades from now with the retirement of the baby boomers and in the latter part of this decade with the development of the missile shield and other investments in security require *big surpluses* between now and then – lest households be fooled at present into consuming more and working less than they would under correct information. Judged against the standard of this perspective, therefore, it wasn't optimal of the Congress to dissipate the near-term surpluses with a 2 to 3 trillion dollar tax cut. If we take at all seriously the calculations by Laurence Kotlikoff, the previously projected surpluses in this decade were already insufficient to cover the projected Social Security deficits down the road – and he didn't factor in the missile shield!

It is perhaps interesting to note that when, in 1981, the first Reagan tax cut was made the situation was the reverse. The near-term prospect was several years of *deficit* while Reagan evidently attached high probability to a future resumption of investment, thus a return of normal growth and employment, with the eventual end of the Cold War for which he was working – thus a future inundation of *surpluses*. It was arguable that tax rates should be lowered to levels producing big deficits in order to reflect their true sustainable level in view of the tidal wave of

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<sup>3</sup> Symmetrically, it would counterbalance far-future surpluses with near-term deficits.

surpluses projected to come in the medium-term future. Why should households be misled into thinking that their true lifetime wealth – after deducting the true lifetime tax-take of the government – was less than it really was? The difference in the *conjuncture* could not be more stark: President Reagan found himself in the middle years of a *temporary slump* to be followed 15 years later by a *future* resumption of normalcy and *surpluses* (barring a big tax cut) while President Bush, with the temporary boom over, found himself at the outset of permanent *normalcy*, to be followed 15 years later by a lengthy period of *deficits*. (Bush’s massive tax cut would have passed the efficiency test had it been believed that the level of tax rates was too high *before* the temporary boom – so that plenty of surplus would have been left after his tax cut. Symmetrically, Reagan’s *not* cutting tax rates would have passed the efficiency test had it been believed that the level of tax rates was already too low *before* the long ’70s-’80s slump.)

I would add that, from the present perspective, there is a lot of merit in constraining the choice of fiscal policies to those in which the tax rates, once set, are expected to stay on a *plateau* over the future and – let me speak of *the* tax rate – the rate is pegged at the *right* level in view of the government’s prospective outlays and tax base. Such a regime is a sort of adjustable peg: Once set at the initially right level, it is subject to an unanticipated reduction to a lower plateau if prospective outlays (in terms of their present discounted value) unexpectedly fall (or unexpectedly fail to rise) *relative* to the tax base, but not otherwise.<sup>4</sup> The “right level” of the peg is the minimum sustainable level in the light of future projections

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<sup>4</sup> Similarly, the peg receives an unanticipated hike to a higher plateau if prospects worsen.

of outlays and of the tax base.

The expectation of constancy of tax rates is, of course, an attractive principle from another angle as well. In a paper by Robert Barro (1979), reminiscent of the classic tax paper by Ramsey (1927) and corroborated by Christophe Chamley (1985), the thesis is that, under certain specifications, the proportional tax rate on wage income must be constant over time for the lifetime utilities of the (maximizing) worker-savers to be the maximum possible.

## INEQUITY

Another test to which I would submit any proposal for a general cut in income tax rates or, equally, for a general hike in the rates, is intergenerational equity. What is this equity, though? Intergeneration equity, I understand now, is not a matter of maximizing the consumption or the wage or the related “utility” of the worst-off generation, that is, the one with the lowest consumption or wage or utility; it’s not simply a standard application of the maximin criterion, therefore – just as John Rawls warned in his landmark 1970 book.<sup>5</sup> But he didn’t say exactly what it is.

From a Rawlsian perspective, it appears to me, the “worst off” generation is one with the poorest opportunity for problem-solving, discovery, development of skills and personal growth. In this spirit, we might think of the least-advantaged generation as the one facing the highest proportional tax rate on its income.

Another consideration is the quantity of capital it has to work with in relation to the level of the technology, measured by the labor-augmentation parameter, but I will

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<sup>5</sup> Earlier work of mine on “Rawlsian growth” now seems to me not to represent very well what Rawls would have meant by intergeneration justice, though I think it is still of interest.

abstract from that influence. Then a country to achieve intergeneration equity will proceed to solve the programming problem of *minimizing* the proportional tax rate of the generation or generations having the highest such tax rate. The solution of that problem, of course, is the equalization of the tax rate across the generations at the lowest possible level. That way, no generation will be disadvantaged by the happenstance obligation to pay the pensions of a bulging group of retirees, the bad luck of having to put up a missile shield, and so forth.<sup>6</sup>

Thus the policy feature of expected constancy of the tax rate comes back, only with a different rationale. The Bush tax cut can again be criticized as an unwarranted deviation from such a tax regime. This time, however, the cost of the deviation is not a loss of intertemporal efficiency but rather the inequity of the damage done to the next generation, which will have to deal with a higher stock of public debt than they would otherwise have faced. If the next generation adopts the sort of (adjustible) peg I have described, despite the departure from it by the previous generation, it will have to set a *higher* tax rate than would have been needed had the present generation behaved equitably.

#### INEFFECTIVENESS/PERVERTSITY

What about the Rubin-Summers contention? They said that cutting rates of income tax, in widening the deficit and thus driving up future short rates of (real) interest,

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<sup>6</sup> Tobin's Ely lecture (1964) now seems to me to have been about this idea. It says that if productivity (as represented by the labor-augmentation parameter in the production function) is expected to rise in the future relative to the present, a society ought to respond by applying a discount factor to the future consumption or utility that is equal to the productivity-growth factor. I don't know that such a correction will generally deliver equalization of the tax rate, but perhaps it will moderate the magnification of differences in tax rates that would otherwise occur.

has a chilling effect on present and future investment, reducing growth and employment on that account; and they suggested that this countervailing effect was strong enough to make such tax cutting utterly perverse – the lower tax rates notwithstanding. It should be mentioned that Olivier Blanchard (1981) was the first to get this mechanism working in a formal model. But his was a crude Keynesian model, in present-day parlance, in that it lacked a natural unemployment rate, let alone an endogenous natural rate, which is surely required in studying tax cuts whose implementation has a long delay.

I have been working of late on this financial hypothesis of a perverse effect from tax cuts in a paper with Hian Teck Hoon (2001). The framework is in the structuralist spirit of Phelps (1994) – hence non-monetary and inter-generational though, for simplicity, we exclude unemployment arising from incentive wages and use instead a variable supply of “hours” that is modeled much like the demand for consumption.

Our model describes a closed economy. It is not the Ricardian type of economy favored by public finance theorists: worker-savers toil throughout life, save by buying annuities invested in the shares of the firms, and *die off* exponentially. (See Blanchard 1985) The model is also not of the perfect-competition, perfect-information type: each of the firms holds a stock of the business asset that is simply its stock of customers; and firms set mark-ups below the monopolist’s level but above the pure competitor’s level – how high depending upon the value per unit placed on the average and marginal customer. The output supply and thus also employment is an increasing function of this per-unit asset

value *normalized* by dividing it by the exponentially rising productivity parameter and of the tax rate. Aggregate investment and national saving here are always zero but we study employment and the other variables.

In the first thought-experiment we use the property of the Bush tax cut (and to a lesser degree the first Reagan tax cut) that the tax law enacted builds in a long *delay* in the implementation of most of the tax cutting and it has the sunset feature that it terminates.<sup>7</sup> In the stylized model, when the tax cut is announced at  $t_0$ , the economy is initially in a steady-growth state with a nonnegative public debt-to-productivity ratio (called the normalized debt); the tax cut is announced for implementation at future  $t_1$  and is to last until  $t_2$ ; thereupon the government stabilizes the normalized debt through the necessary path of the tax rate. This scenario has two impacts operating to depress future values of the business asset and thus to depress the value placed on the asset at  $t_0$ . One is the impact of increased steady-state normalized debt level on the long rate of interest and thus asset valuation. The other is the impact from the fact that tax rates must be higher after  $t_2$ , when the cut is over, than the tax rate was up to  $t_0$ , when the tax cut was announced (but not implemented); these more elevated tax rates drive up the cost of labor to firms and thus drive down the value of the business asset. To repeat, these two negative impacts on the asset value are transmitted to the asset value at  $t_0$  and that has the effect in turn of depressing the willingness of firms to compete for customers and thus to supply output. Employment is contracted.

The second thought-experiment we have been studying characterizes the

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<sup>7</sup> In Blanchard's model the delayed tax cut is expansionary in the *long* run, contrary to ours.

post-tax-cut period beginning at  $t_2$  as a return to the original tax rate. (I can't discuss here how that is possible, given that there is now more debt in the system; we don't claim that it is generally possible.) Obviously that shuts off the impact on the business asset value in the first scenario stemming from the increase in the tax rate serving to stabilize the normalized public debt level. But it leaves in operation the impact on the asset value stemming from the elevation of interest rates forced by the rise of the public debt, which Rubin and Summers focused on.

Our third and last thought-experiment studies a much tougher case: the tax cut takes effect *without delay* and has *no sunset*. Furthermore, we stylize the tax cut as producing a sudden increase in the deficit-to-output ratio from its initial steady-state level to a (infinitesimally) higher level. Since the tax rate is immediately reduced in this experiment, employment is expanded on *this* account. On the other hand, the fall in the business asset's value, which results from the future elevation of both interest rates and the tax rate ultimately above their initial (flat) paths, still operate to contract employment on *that* account. The net result is ambiguous. But this is not a useless finding. It may serve us as a salutary sign that the common-sense understanding of the expansionary effect of a tax cut – with no corresponding cut in government purchases and entitlement programs – is not theoretically adequate in an *intertemporal* general-equilibrium setting. In my view, there is no longer any strong presumption that, in a closed economy such as the global economy, a permanent tax cut or even a long-duration tax cut (until sunset) will be effective in expanding employment at least in the short run.

FINAL THOUGHTS

As is well-known, the economics of fiscal policy has for several years been a battleground of the Wall Street financial theorists, the supply-side economists and the neo-Keynesians. What is extraordinary is that each of these factions places enormous importance on the power of income taxation to boost or depress economic growth and the level of economic activity (despite or because of the budget imbalance it causes); and yet they disagree about the key channel from cause to effect and, as it happens, that has brought them to opposing conclusions as to the *direction* of the effect on growth and employment.. I suspect that the strong disagreement among the conflicting camps on fiscal policy and the instability from one decade to the next in the majority view among us is in some significant part responsible for the loss in influence of economists on fiscal policy.

One of the conclusions pointed to by my analysis, which is based on structuralist models containing *both* supply-side and Wall Street channels, is that neither side can expect a lopsided victory over the other. For one thing, the net effect of a (permanent) income tax cut is *theoretically* ambiguous. We can't put an algebraic sign on it a priori and if we calibrated the model in order to calculate a sign we would not have much confidence that such a result would be robust to enlargement of the model to encompass more things. In a parallel development, recent statistical analyses fuel the growing impression that the effects of tax policy changes are ambiguous as an *empirical* matter as well (see Evans and Marshall, 2001).<sup>8</sup>

Why don't findings such as these persuade both the supply-side and the

Wall Street forces to lower their voices for budgetary deficits and surpluses, respectively? A possible factor is that many or most of them believe a shift in the government's income tax stance *will* have an effect on government *spending*: Many opponents of surpluses then argue that, with expenditures falling in line with falling revenues, the supposed reduction of long-term interest rates will be muted, if not cancelled. But whether the effect on spending is large enough to weaken fatally the Wall Street effect on asset prices is still an unsettled empirical question.

Many supply siders, it appears, want a budgetary deficit because they suppose that it will starve the legislature of revenue and thus force curtailment of public spending. And many of those espousing the Wall Street financial mechanism, it appears, want a budgetary surplus to safeguard future programs that will expand public spending. These parties to the tax debate are driven to their positions by that unspoken policy difference *whether or not* they believe that the tax change they advocate will serve to expand employment and quicken productivity growth.

It's an unhappy situation. If all parties to the debate privately believe there will be no appreciable consequences for growth and employment, the façade has the cost that the public is deceived about the nature of the contest, which is really over the size of government. The spectacle is worse than that, though, should the victory tend to go to the side that convinces the public of the merits of its position for employment and growth – if, so far as economists can tell, the balance of theory and evidence does not yet clearly favor one side or the other.

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<sup>8</sup> When, at the suggestion of Larry Summers, Gylfi Zoega and I tried adding the budgetary *deficit* to the right-hand side of the regressions in the econometric chapter of *Structural Slumps* (Phelps

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1994) no noticeable effects were found. But the world public *debt* is consequential.

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