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Feedback Effects and the Laffer Landscape: Do Tax Cuts Pay for Themselves?

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Abstract

Under what conditions will a tax cut be self-financing? This paper provides an answer by examining a dynamic scoring model with multiple government expenditures and revenue sources. An analytical description of the feedback effects from tax cuts to government revenues is derived in terms of substitution, income and government budget effects. The linkage between these effects and the shape of the Laffer curve is revealed. Self-financing tax cuts are shown to be more likely when government allocates its funds to nonproductive uses such as debt financing or lump-sum transfers, rather than government consumption and productivity-enhancing public capital. The benefit of self-financing, however, comes at the cost of lower overall revenues. Results indicate that how a government spends its revenues is as important as how the revenues are raised.

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1. INTRODUCTION

The effect of tax cuts on government revenues has received renewed interest from politicians and economists alike. Some supply-side economists and political supporters of the U.S. tax cuts of 2001 and 2003 argue that growth effects from tax cuts to national output will result in higher tax revenues. These growth effects include higher saving, investment and labor supply. Conventional measures of revenue generation, however, yield the opposite result in which tax cuts necessarily lead to lower tax revenues. These measures, such as those used by the Congressional Budget Office (CBO) and the Congressional Joint Committee on Taxation (JCT), incorporate a variety of behavioral effects but neglect the macroeconomic feedback effects.[1] Two analytical devices for measuring the impact of tax cuts on revenues have received particular attention, dynamic scoring and Laffer curve analysis. Dynamic scoring models are used to estimate the macroeconomic feedback effects from tax cuts to government revenues and measure the degree to which tax cuts may be self-financing. Laffer curves provide a graphical analogue by specifying the shape of the tax revenue function under various governmental spending and tax regimes. This paper links the analytical to the graphical analysis by specifying the macroeconomic feedback effect in terms of substitution and wealth effects and showing their impacts on the shape and size of the Laffer curve.

Recent models of dynamic scoring, such as Mankiw and Weinzierl (2006) and Leeper and Yang (2008), use Neoclassical growth models to estimate the macroeconomic feedback effects of tax cuts by separating static effects from dynamic effects. The feedback effects measure the degree to which tax cuts may be self-financing. Mankiw and Weinzierl (hereinafter, MW) show that cuts in labor tax rates and capital tax rates can stimulate enough economic growth to offset 17 percent of the static revenue loss for labor taxes and 53 percent of the loss for capital taxes. Leeper and Yang add deficit financing and government consumption to the MW model and show the MW results are highly dependent upon their assumption of a transfers-only government. For example, financing a tax cut with offsetting decreases in government consumption, rather than transfers, can significantly reduce the positive impact on output and revenues. In fact, the impact may even be negative.

The literature on Laffer curves attempts to specify the shape of the tax revenue function under various government tax and spending regimes. Early work on the theoretical underpinnings of the Laffer curve include Gahvari (1988, 1989) which use a static general equilibrium model with a wage tax to examine how the shape of the Laffer curve is affected by government expenditures on cash transfers and a utility-enhancing good. The response of labor supply to tax cuts is characterized in terms of substitution, income and government budget effects. It is shown that greater provision of transfers increases the likelihood that a wage tax cut is self-financing and that it is possible for Laffer curves to be entirely upward-sloping with a discontinuity at tax rates of 100%. More recent theoretical research on Laffer curves uses macroeconomic growth models to examine the steady state impacts of tax changes under different government financing and fiscal regimes. Becsi (2000) and Becsi (2002), for example, use a simple equilibrium growth model with a single income tax and government expenditures on transfers, consumption, and investment in public capital. The results are similar to those of Gahvari (1988, 1989). Specifically, 1) governments that allocate their income tax revenues to transfers are most likely to experience self-financing tax cuts but at a cost of low overall tax revenues; 2) governments that allocate their income tax revenues to government consumption generate larger overall tax revenues but are less likely to generate self-financing tax cuts; and 3) governments that allocate their revenues to public capital investment experience revenue generation and the likelihood of self-financing tax cuts in between the transfers and consumption regimes.

As such, the paper contributes to the dynamic scoring literature in at least three ways. First, a generalized dynamic scoring model with multiple government expenditures, including public capital investment, and multiple revenue sources, including deficit financing is presented. This model subsumes various models in the literature to provide a general analysis of the impact of tax cuts on government

[1] Details on how microeconomic, but not macroeconomic, behavior is incorporated into JCT and CBO estimates can be found in

revenues. Second, the feedback effects from tax cuts to revenues are specified at the microeconomic level in terms of substitution, income and government budget effects. Third, these effects are used to explain the linkage between feedback effects for capital and labor tax cuts and their corresponding Laffer curves. The overriding result: how a government spends its revenues is as important as how it generates those revenues when estimating the effects of tax cuts on government revenues.

This paper expands on dynamic scoring and Laffer curve literatures by creating a generalized dynamic scoring model with multiple government expenditures and revenue sources. The linkage between feedback effects and the shape of the Laffer is characterized in terms of substitution, income and government budget effects for both labor and capital. Government spends on investment in public capital and consumption along with transfers. The stock, rather than the flow, of public capital is analyzed. Government funds its outlays with taxes on dividends, corporate income and wage income along with deficit financing. This setup allows for a greater generalization of the Laffer curve results and is shown to provide qualifications to previous results in the literature. Fiscal regimes are shown to reduce to two general forms: a transfer regime and an expenditure regime. A *transfer regime* is a government that spends the majority of its revenues on debt payments and/or transfer payments while an *expenditure regime* is a government that spends the majority of its revenues on government consumption and/or pubic capital. Taxes are also shown to reduce to two general forms: a wage tax and a capital tax. These reductions enable the separation of feedback effects into substitution, income and government budget effects.

This paper is organized as follows. Section 2 presents the model. Section 3 previews the analytical results. Section 4 concludes.

2. THE MODEL

A simple neoclassical growth model for an infinitely-lived representative household in a decentralized closed economy is assumed. Households produce output, Y, using private capital, K, public capital per-

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Joint Committee on Taxation (2005) and Auerbach (2005).

effective-worker, g_I, and effective labor, AnN where n represents hours worked and A represents labor-augmenting technology that grows exponentially at rate z, i.e., $A = A_0e^{zt}$. The size of the workforce, N, is normalized to one. Public capital is complementary to private factors, non-excludable and proportionally congestible in AnN. The latter implies that the more effective workers are, the more intensively they use public capital. The production function has constant returns to scale in private capital and effective labor of the form

$$Y = F(K, g_I) = K^{\beta}(AnN)^{1-\beta}{g_I}^{\alpha} \tag{1}$$

The production function in per-effective-worker terms is

$$y = f(k, n, g_I) = k^{\beta}n^{1-\beta}{g_I}^{\alpha} \tag{2}$$

Given constant returns to scale, competitive input and output markets, profits are exhausted by payments to capital and labor and firms have the familiar input demands

$$r = \beta k^{\beta-1}n^{1-\beta}{g_I}^{\alpha} \tag{3}$$

$$w = (1-\beta)k^{\beta}n^{-\beta}{g_I}^{\alpha} \tag{4}$$

Given $\alpha + \beta < 1$, the aggregate production function produces steady state growth in which the per-effective-worker growth rate is equal to zero.

Government outlays (in per-effective worker terms) are separated into *expenditures* that consist of investment in public capital, i_g, government consumption, g_c and *transfers* that consist of lump-sum transfers, g_T, and interest payments on its debt, br_2. The first two represent expenditures that appear in NIPA because they affect the resources of the economy. Increases in government consumption affect the demand side of the economy by reducing the amount of resources available to individuals. Increases in government investment affect the demand side in the same manner but also affect the supply side by increasing marginal products of labor and private capital. Transfers and interest payments, on the other hand, do not appear in NIPA because both represent a transfer from one individual to another that does not directly affect the resources available in the economy. Outlays are financed from debt issues, $\dot{b}$ and tax revenues, R. Tax revenues come from wage taxes, $t_w wn$, dividend taxes, $t_d rk$, and taxes on firm earnings $t_e E$. Taxable firm earnings net of the return on capital are $E = f(k, n, g_I) - wn$. After-tax profit is given by $(1 - t_e)[f(k, n, g_I) - wn] - rk$ and is distributed to investors as dividends. Under perfect competition, economic profits are zero and $E = rk$.[2] In per-effective worker terms, the government budget constraint is given by

$$\dot{b} + zb + t_k rk + t_w wn = g_T + i_g + br_2 + g_c. \tag{5}$$

where capital tax, $t_k = t_e + t_d(1 - t_e)$, accounts for the double taxation paid by the household on its capital earnings. This proves to be a very useful simplification for examining feedback effects and Laffer curves because the analysis of a one percent change in t_e is the same for t_d. Public investment per-effective worker is a function of the growth rate of the economy, z, given by $i_g = \dot{g}_I + zg_I$.

Government outlays are linked to revenues via *allocation parameters* that specify how the government allocates its revenues to its outlays. Fiscal policy is represented by the following four equations

$$i_g = \mu_b(\dot{b} + zb) + \mu_R(t_k rk + t_w wn)$$

$$g_c = \phi_b(\dot{b} + zb) + \phi_R(t_k rk + t_w wn)$$

[2] For more detail see Barro, Robert J. and Sala-i-Martin, Xavier, *Economic Growth 2nd Edition* (2004) pp.143-144.

$$g_T = \chi_b(\dot{b} + zb) + \chi_R(t_k rk + t_w wn)$$

$$r_2 b = \nu_b(\dot{b} + zb) + \nu_R(t_k rk + t_w wn). \tag{6}$$

Fiscal policy is completely characterized by the terms μ_i, ϕ_i, χ_I, ν_i, t_d, t_e and t_w where $i = b$, R. In this framework, the government directly chooses the proportion of its outlays and only indirectly chooses the level of outlays. Though the allocation parameters appear in the solutions for the steady state variables, we will see that they only appear in the feedback effects for the elastic labor supply model.

The economy is populated by an infinitely-lived household that derives utility from consumption per-effective-worker, c, and disutility from hours worked in form proposed by King, Plosser, and Rebelo (1988)

$$U(c,\, n) = \frac{(ce^{zt})^{1-\gamma} e^{-v(n)(1-\gamma)} - 1}{1-\gamma}.$$

where the parameter γ is the inverse of the intertemporal elasticity of substitution. This utility function generates hours worked that are constant in the steady state but may increase or decrease along transition paths from one steady state to the next. Discounted utility over an infinite time period is given by

$$Max_{c,n} \int_{t=0}^{\infty} e^{-\rho t} U(c,\, n)dt \tag{7}$$

where ρ represents household's rate of time preference.[3] To finance consumption, the household faces a budget constraint that incorporates the existing fiscal regime. Disposable income is derived from after-tax wages, $(1 - t_w)wn$, transfers from the government, g_T, interest payments on government bonds, $r_2 b$ and

[3] To ensure a well-defined, infinite stream of discounted utility, $\rho > z(1-\gamma)$ is assumed.

after-tax returns on private investment, $(1 - t_k)rk$. Input prices w and r are taken as given along with government outlays. Per-effective-worker disposable income is divided among consumption, investment in capital, i_k and bond purchases, i_b. The consumer's budget constraint is

$$(1 - t_w)wn + (1 - t_k)rk + br_2 + g_T = c + i_k + i_b \tag{8}$$

where $i_k = \dot{k} + zk$ and $i_b = \dot{b} + zb$.

The representative household maximizes utility by maximizing discounted utility given by equation (7), subject to the budget constraint, equation (8), and the standard transversality condition for capital and debt.

$$Max_c \int_0^\infty e^{-\rho t} U(c, n)dt$$

$$subject\ to\ \dot{k} + \dot{b} = (1 - t_w)wn + (1 - t_k)rk + br_2 + g_T - c - zk - zb$$

$$lim_{t\to\infty} \lambda e^{-(\rho + z)t}k = lim_{t\to\infty} \lambda e^{-(\rho + z)t}b = 0 \tag{9}$$

where λ represents the shadow price of private capital. The steady state for the economy occurs where per-effective-worker consumption, private capital, public capital and output are constant and is described by the following six equations.

$$\frac{\dot{c}}{c} = \frac{1}{\gamma}[(1 - \gamma)v'(n)\,\dot{n} + (1 - t_k)r - (\rho + z\gamma)]$$

$$v'(n) = \frac{(1 - t_k)w}{c}$$

$$\dot{k} + \dot{b} = (1 - t_w)w + (1 - t_k)rk + br_2 + g_T - c - zk - zb$$

$$i_g = \mu_b(\dot{b} + zb) + \mu_R(t_k rk + t_w w)$$

$$g_c = \phi_b(\dot{b} + zb) + \phi_R(t_k rk + t_w w)$$

$$g_T = \chi_b(\dot{b} + zb) + \chi_R(t_k rk + t_w w)$$

$$r_2 b = \nu_b(\dot{b} + zb) + \nu_R(t_k rk + t_w w). \tag{10}$$

The first equation is derived from the first-order conditions in the maximization problem. The second equation determines the allocation of time between work and leisure in all periods. From this, the constant-consumption elasticity of labor supply, denoted σ, is derived as $\sigma = \frac{v'(n)}{v''(n)n}$. The functional form used here is $v(n) = \psi n^{(1+\sigma)/\sigma}$ where ψ is a scalar. For $\sigma = 0$, labor supply is unresponsive to changes in the after-tax wage and the model reduces to the inelastic version. For $\sigma > 0$, higher values imply a higher disutility from each hour worked leading to a lower total amount of hours worked. This parameter has an important impact on the feedback effects and corresponding Laffer curves. The remaining equations come from the budget constraint and the government's rules of allocation. These equations constitute a system that can be solved for optimal values k^*, n^*, g_I^* in terms of the allocation, production and preference parameters. A dynamic revenue function is created by substituting k^*, n^* and g_I^* and equations (3) and (4) into the static revenue function, $R = t_w wn + t_k rk$.

$$R^* = t_w(1-\beta)k^{*\beta}n^{*-\beta}g_I^{*\alpha} + t_k\beta k^{*\beta}n^{*-\beta}g_I^{*\alpha}. \tag{11}$$

3. FEEDBACK EFFECTS AND LAFFER CURVES

The dynamic effect of a marginal cut in profit, dividend and wage tax rates on tax revenues is examined by taking derivatives of equation (11) with respect to t_k and t_w, respectively. The results from each derivative can be dissected into a static effect, dynamic effect, feedback effect and growth effect. The *static effect* represents the conventional scoring method in which national income and other macroeconomic variables are unaffected by changes in tax rates. The static effects on revenues from capital and wage tax cuts are

$$\frac{dR}{dt_k}\Big|_{\text{Static}} = rk = \beta y \qquad \text{and} \qquad \frac{dR}{dt_w}\Big|_{\text{Static}} = wn = (1-\beta)y.$$

These equations indicate that the static effect is unambiguously positive: when tax rates decrease, tax revenues decrease by an amount equal to the tax base of the respective tax. Using the standard measure of capital's share of $\beta = 0.33$, these results indicate that a one percent decrease in either t_d or t_e will decrease revenues by 0.33 percent.[4] The *dynamic effect* takes the same derivatives but with respect to the dynamic revenue function, R^*. For example, the dynamic effect of a wage tax cut on government revenue is given by the derivative of R taken with respect to t_w at the steady state, given by

$$\frac{dR}{dt_w}\Big|_{\text{DYN}} = \Big[1 + \underbrace{\frac{\alpha}{(1-\alpha-\beta)}}_{\substack{\textit{public capital}\\ \textit{effect}}} + \underbrace{\Big\{\underbrace{-\frac{1}{(1-t_w)}}_{\textit{labor sub effect}} + \underbrace{\frac{(1-\beta)G}{(W(P - z\beta(1-t_k)) - TG)}}_{\textit{income/gov budget effect}}\Big\} \frac{\sigma}{(1+\sigma)} \underbrace{\frac{T}{(1-\alpha-\beta)}}_{\textit{tax base effect}}}_{\textit{elastic labor supply effect}}\Big] \frac{dR}{dt_w}\Big|_{\text{Static}} \qquad (12)$$

The term preceding $\frac{dR}{dt_w}\big|_{\text{Static}}$ represents the *feedback effect* from tax cuts to economic growth in the dynamic setting. The feedback effect measures the amount of the static revenue effect that is actually incurred. A feedback effect of one implies that tax cuts produce no additional economic growth to offset the decline in tax revenues; in other words, the dynamic revenue loss equals the static revenue loss.[5] A feedback effect of zero implies tax cuts induce enough growth to keep tax revenues constant. A feedback effect that is negative implies tax cuts actually raise revenues. The feedback effect for the inelastic labor model exceeds one, implying the dynamic effect of a cut in wage tax rates amplifies, rather than

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[4] If we substitute $t_e + t_d(1 - t_e)$ for the aggregate capital tax, t_k the static effects are $\frac{dR}{dt_d}\big|_{\text{Static}} = (1 - t_e)\beta y$ and $\frac{dR}{dt_e}\big|_{\text{Static}} = (1 - t_d)\beta y$.

[5] Such a result obtains when $\alpha = 0$, which is the standard result in the theoretical literature which ignores public capital.

mitigates, the negative static effect.[6] This occurs for two reasons: the public capital effect and the inelastic labor supply. The *pubic capital effect*, $\frac{\alpha}{(1-\alpha-\beta)}$, captures the negative impact from tax cuts to g_I: decreases in tax rates lower tax revenues thereby decreasing investment in public capital. Less public capital, ceteris paribus, lowers steady state output and revenues. The higher the productivity of public capital, the larger the feedback effect. The inelastic labor supply means that lower wage taxes do not induce more labor supply. At the microeconomic level, the labor substitution effect cancels the income effect leaving labor supply unchanged. Assuming $\beta = 0.33$ and $\alpha = 0.10$, the wage tax cut generates a feedback effect of 1.1765.[7] In other words, the long-run impact on revenue of a wage tax cut is 117.65% of its static impact so that the dynamic effect lowers tax revenues by an additional 17.65% of the static effect. The Laffer curve associated with this feedback effect is illustrated as an upward-sloping line with a discontinuity at t_w = 100% as seen in Figure 1. The linkage between the two exists because the slope of the Laffer curve is the derivative of the dynamic revenue function with respect to tax rates. In essence, this derivative is the feedback effect multiplied by a positive constant. Thus the sign of the slope and its peak are determined by the feedback effect. For example, the monotonic upward slope for the t_w Laffer curve is obvious from equation (12) with its positive public capital effect and the absence of t_w in the feedback effect.[8]

The dynamic effect for capital tax cuts is derived by taking the derivative of the dynamic revenue function with respect to t_k.[9]

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[6] This result stands in sharp contrast to those of Mankiw and Weinzierl whose simulations show that the static revenue loss is always larger than the dynamic revenue loss. Leeper and Yang (2006) also found that the inclusion of government consumption can generate larger dynamic than static revenue losses.

[7] Estimates of β are typically between 0.25 and 0.36 while those for α are between 0.05 and 0.15. For a survey of the latter see Glomm and Ravikumar (1997).

[8] This is the same result derived in Gahvari (1988).

[9] Because derivatives with respect to firm profits and the capital taxes are the same; i.e., $\frac{dR}{dt_d}\Big|_{\text{Dynamic}} = \frac{dR}{dt_e}\Big|_{\text{Dynamic}} = \frac{dR}{dt_k}\Big|_{\text{Dynamic}}$, the feedback effects for the taxes are the same.

$$\frac{dR}{dt_k}\Big|_{\text{Dynamic}} = \Bigg[1 \underbrace{+ \overbrace{\frac{\alpha}{(1-\alpha-\beta)}}^{\textit{public capital effect}} - \underbrace{\frac{1}{(1-t_k)}}_{\textit{capital substitution effect}} \overbrace{\frac{T}{(1-\alpha-\beta)}}^{\textit{tax base effect}}}_{\textit{feedback effect}}\Bigg] \frac{dR}{dt_k}\Big|_{\text{Static}} \qquad (13)$$

Unlike the wage tax feedback effect, a second term appears in the capital tax feedback effect that represents the positive impact from capital tax cuts to investment in private capital. It is given by – $\frac{1}{(1-t_k)}\frac{T}{(1-\beta-\alpha)}$ where $T = (1-\beta)t_w + \beta t_k$. The term, $-\frac{1}{(1-t_k)}$ represents the capital substitution effect which is always negative and as such, reduces the feedback effect. This substitution effect exists because lower t_k leads to a higher after-tax return on capital and thereby induces agents to substitute away from consumption toward investment. The substitution effect is attenuated by a *tax base effect*, $\frac{T}{(1-\beta-\alpha)}$, so called because T represents the tax base. That is, T indicates the revenue increase for a one-unit increase in output.[10] The size of the tax base also indicates the size of the tax distortion. The larger this distortion, the more likely it is that a decrease in taxes will raise revenues. The tax base is magnified by the capital elasticities, β and α, that appear in the denominator; the higher these elasticities, the greater the effect.[11] Using $\beta = 0.33$, $\alpha = 0.10$ and $t_k = t_w = 0.25$, the feedback effect of a capital tax cut on revenue is only 58.8% of its static impact. Put differently, the growth from capital tax cuts covers 41.2% of the static loss. To cover a range of feasible tax rates, we also consider Feldstein's (2006) estimates of capital and wage tax rates of $t_w = 0.45$ and $t_k = 0.50$. These higher rates suggest capital tax cuts can pay for themselves with a feedback effect of –0.46. The negative feedback effect of –0.46 implies a positive growth effect of 1.46. Not only does a tax cut pay for itself at these rates, it actually raises government revenue by 46 percent of the static revenue loss. The Laffer curve for t_k is shown in Figure 2.

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[10] Total government revenues may be written as $R = Ty$.

[11] Note that α positively impacts the third term meaning that the overall impact of an increase in α is ambiguous. It is easily shown, however, that the overall impact of α on the feedback effect is negative so long as $t_k > (1-\beta)(1-t_w)$ and nonnegative otherwise.

LAFFER CURVES FOR INELASTIC LABOR SUPPLY MODEL

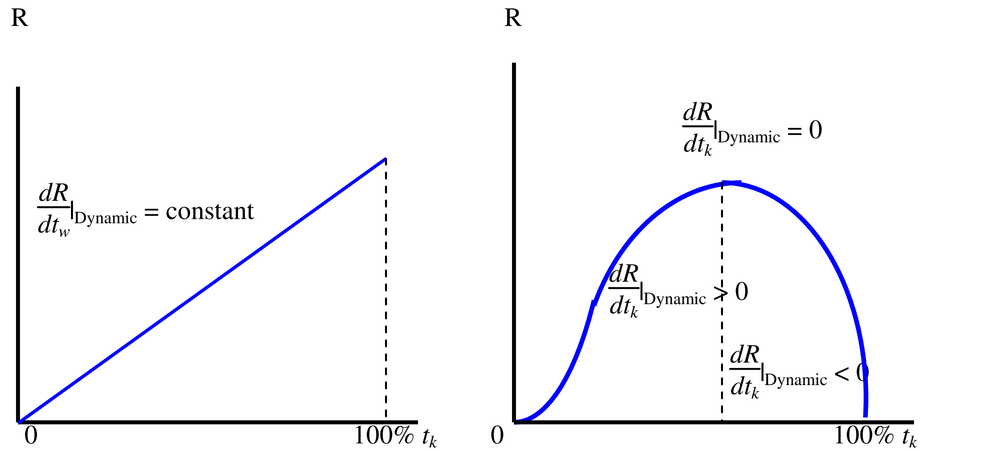

Figure 1: WAGE TAX LAFFER CURVE

Figure 2: CAPITAL TAX LAFFER CURVE

The capital tax Laffer curve has the familiar inverted-hyperbola shape. As with the wage tax Laffer curve, the slope of the curve, $\frac{dR}{dt_k}|_{\text{Dynamic}}$, is equivalent to the capital tax feedback effect. The significant point on the Laffer curve is its peak, $\frac{dR}{dt_k}|_{\text{Dynamic}} = 0$, where the feedback effect is zero and the revenue-maximizing tax rate is found. Incremental cuts in tax rates on the left-side of the peak decrease revenues because the substitution effect from lower capital tax rates to higher investment is overwhelmed by the combined static and public capital effects. The substitution effect dominates on the right-side of the peak where capital tax cuts lead to higher revenues. In other words, tax cuts from a point on the right of the peak are self-financing.

The peak rates for the Laffer curves are derived by setting the feedback terms equal to zero and solving for the relevant tax rate. For example, setting the feedback equation in (13) equal to zero and solving for t_k reveals that total revenue with respect to the capital tax rate peaks at $t_k^{peak} = (1 - \beta)(1 - t_w)$. Using the MW parameter values, $t_k^{peak} = 0.5$; using the Feldstein values, $t_k^{peak} = 0.367$. Increases in t_w lower t_k^{peak} and skew the Laffer curve leftward. This increases the likelihood that a cut in capital tax rates will be self-financing. In terms of the feedback effect, increased t_w exacerbates the tax distortion, increases the tax base effect and lowers the feedback effect. Increases in β have a similar effect on t_k^{peak} and the capital tax feedback effect.

It is interesting to note that the assumption of an inelastic labor supply means no wage tax rate peak exists and there is no point at which a wage tax cut is self-financing. Thus, the basic model of the inelastic labor supply has limited use in elucidating the mechanisms by which feedbacks affect macroeconomic aggregates. This problem is resolved for the model by introducing an elastic labor supply. Also of interest is that the government's allocation parameters do not appear in the result. Only when the labor supply can respond to a tax cut do government decisions on what to spend on and how to finance it matter.

4. CONCLUSION

The linkage from tax cuts to changes in output and revenues is crucial to evaluating the impact of fiscal policy. This paper shows how a relatively complex dynamic scoring model can provide a relatively simple analytical expression of the important feedback effects from tax cuts to revenues and how these effects determine the shape of the Laffer curve. By examining different government spending and financing regimes, the constituent substitution, income and government budget effects are isolated. These effects explain the incentives to investing and working that arise from cuts in capital and labor taxes. Transfer regimes are shown to experience a greater likelihood of self-financing tax cuts but at the cost of lower overall revenues. Expenditure regimes experience higher overall revenues but a lower likelihood of self-financing tax cuts. Calibrating the model to the U.S. government regimes, shows that only 38.5% of a capital tax cut is likely to be self-financing while wage tax cuts actually exacerbate the static revenue loss by approximately 4% under the Mankiw and Weinzierl (2006) parameter values. If the Feldstein (2006) tax rates are more accurate for the United States, only 18.1% of a wage tax cut is self-financing while capital tax cuts actually increase tax revenues above the estimated static loss by approximately 21%. These results indicate that how a government spends its revenues is as important as how the revenues are raised.

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