Dyanmic General Equilibrim Tax Scoring with Micro Tax Simulations *

Richard W. Evans† Kerk L. Phillips‡

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Abstract

This paper ...

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†Brigham Young University, Department of Economics, 167 FOB, Provo, Utah 84602, (801) 422-8303, revans@byu.edu.

‡Brigham Young University, Department of Economics, 166 FOB, Provo, Utah 84602, kerk_phillips@byu.edu.

1 Introduction

2 Details of the Macro Model

We use a model based heavily on Zodrow and Diamond (2013).

2.1 Households

$$LU_t(a,\gamma) = \frac{1}{1-1/\sigma_U}\left[\sum_{s=t}^{t+T-a-1}\frac{U_s(a,\gamma)^{1-1/\sigma_U}}{(1+\rho)^{s-t}} + \frac{1}{(1+\rho)^{T-a-1}}\alpha_B(\gamma)B_{t+T-a-1}(a,\gamma)^{1-1/\sigma_U}\right] \tag{2.1}$$

where $LU_t(a,\gamma)$ is utility for a household of age a and ability level γ in period t, $U_t(a,\gamma)$ is within-period utility for a household of age a and ability level γ in period t, $B_{t+T-a-1}(a,\gamma)$ is the bequest left by a houshold of age a and ability level γ when it dies in period $t+T-a-1$. σ_U is the intertemporal elasticity of substitution for utility across periods, and rho is the pure rate of time preference.

Within-period utility depends on consumptions of composite goods CH and leisure LE.

$$U_s(a,\gamma) = \left[\alpha_u^{1/\sigma_u}CH_s(a,\gamma)^{1-1/\sigma_u} + (1-\alpha_u)^{1/\sigma_u}LE_s(a,\gamma)^{1-1/\sigma_u}\right]^{\frac{\sigma_u}{\sigma_u-1}} \tag{2.2}$$

Composite goods are made up of housing goods HR and non-housing goods CN.

$$CH_s(a,\gamma) = \left[\alpha_H^{1/\sigma_H}CN_s(a,\gamma)^{1-1/\sigma_H} + (1-\alpha_H)^{1/\sigma_H}HR_s(a,\gamma)^{1-1/\sigma_H}\right]^{\frac{\sigma_H}{\sigma_H-1}} \tag{2.3}$$

Non-housing goods are made up of those produced by the corporate secotor C and non-corporate sector N.

$$CN_s(a,\gamma) = \left[\alpha_N^{1/\sigma_N}[C_s(a,\gamma)-b_s^C(a,\gamma)]^{1-1/\sigma_N} + (1-\alpha_N)^{1/\sigma_N}[N_s(a,\gamma)-b_s^N(a,\gamma)]^{1-1/\sigma_N}\right]^{\frac{\sigma_N}{\sigma_N-1}} \tag{2.4}$$

Housing goods are made up of owner-occupied housing H and rental housing R.

$$HR_s(a,\gamma) = \left[\alpha_R 1/\sigma_R [H_s(a,\gamma) - b_s^H(a,\gamma)]^{1-1/\sigma_R} + (1-\alpha_R)^{1/\sigma_R} [R_s(a,\gamma) - b_s^R(a,\gamma)]^{1-1/\sigma_R}\right]^{\frac{\sigma_R}{\sigma_R - 1}} \tag{2.5}$$

2.2 Firms

2.3 Market Clearing

3 Incorporating Feedbacks with Micro Tax Simulations

4 Conclusion

TECHNICAL APPENDICES

References

Zodrow, George R. and John W. Diamond, *Handbook of CGE Modeling - Vol. I*, North Holland,