MEMORANDUM TO JIM NUNNS

FROM: TIM GOODSPEED

SUBJECT: The Income Tax Offset

I have recently run across an article that explains the income tax offset, as well as discussing other issues involved in excise taxes. I highly recommend it for those interested in excise taxes. The article is "The Effect of Excises on Taxation," by George S. Tolley and C. Eugene Steuerle, and is contained in the 1978 Compendium of Tax Research.

Tolley and Steuerle derive the following formula for "the percentage decrease in nominal tax collections resulting from a one percent increase in the excise tax rate":

$$- \frac{dT}{dv} * \frac{(1-v)}{T} = (1-h) * \frac{dT}{dF} * \frac{F}{T}$$

where T is nominal income tax collections, v is the excise tax rate, F is factor incomes, and

$$h = \frac{dP}{dv} * \frac{(1-v)}{P}$$

where P is a price level index. Tolley and Steuerle explain h as "the percentage rise in prices resulting from a one percent rise in excises as a fraction of value remaining after excises." Thus, the income tax offset depends crucially on the assumption that the tax is not fully shifted forward (in which case h would be equal to 1), the marginal tax rate dT/dF, and the average tax rate T/F.

Some off-the-cuff reaction that I have is that the Tax Reform Act presumably changed the marginal and average tax rates and consequently changed the appropriate offset. I would guess that the shifting assumption can be debated for a long time. However, it might be useful to have a consistent story to tell here for both revenue estimating and analysis purposes.

9/25

Tim —

Thanks for the note. As I understand it, this is the basic analysis the revenue estimators use. But, please check w/ Sonia to see what their precise assumptions are now for tax rates & shifting

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