

Labor Supply: Third Lecture

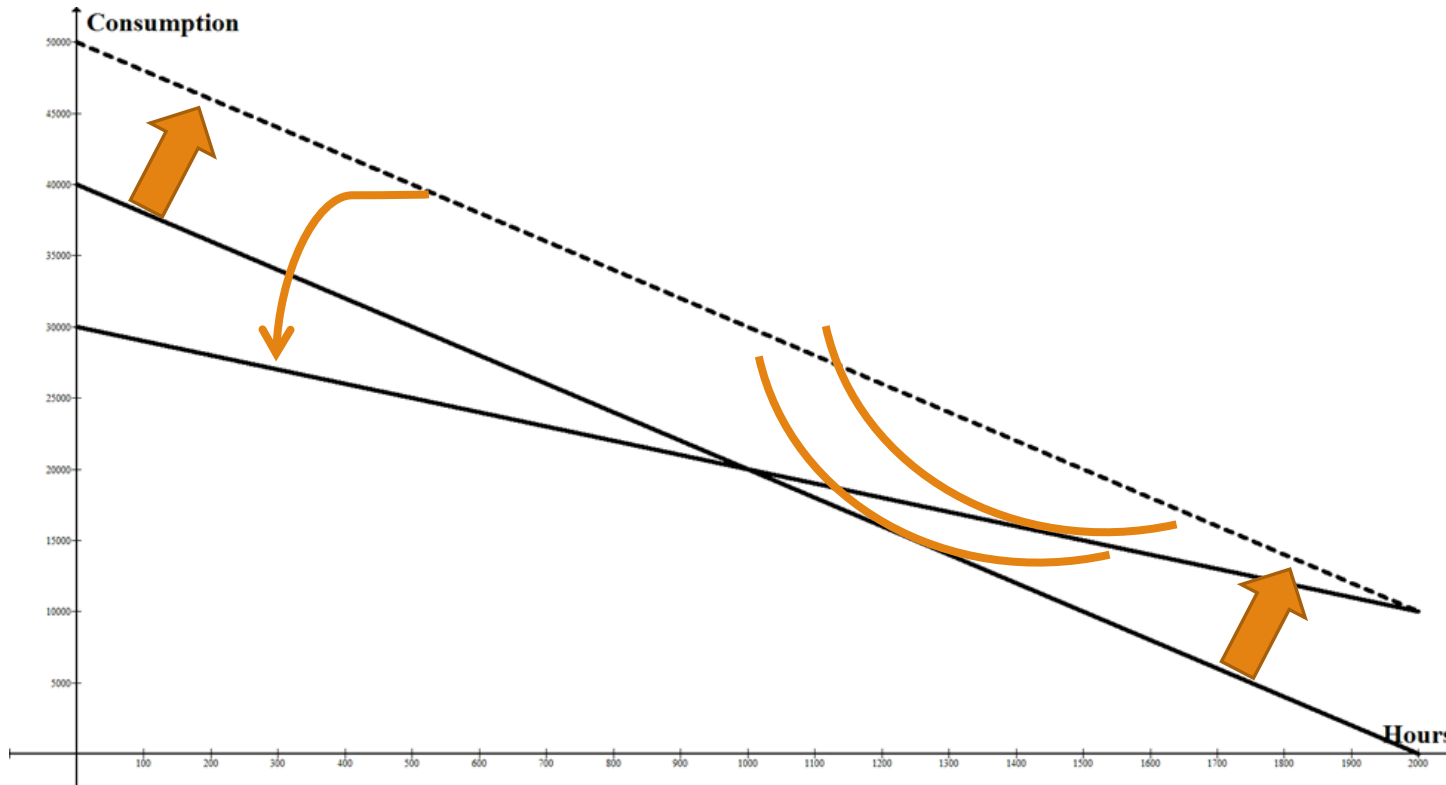
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Extension: effect of welfare programs

Consider an anti-poverty program that furnishes a “means tested” amount of monetary aid to an individual, like the AFDC [program](#) the TANF [program](#).

- Aid to Families with Dependent Children and Temporary Assistance for Needy Families, respectively.
- A sum of income, D , is added to the budget constraint, and labor income is taxed at a rate intended to discourage households with high consumption from taking the grant. This has the effect of shifting out the budget and then rotating it, making it flatter.
- Surely this is not the objective of the program, but the unintended consequence is that a work disincentive is created.

“Grant and tax” welfare programs



- The grant shifts out the budget constraint.
- A tax proportional to income makes the wage smaller, rotating the budget counter clockwise around the end point.
- For simplicity, this graph assumes that all income is taxed at the same rate.
 - This avoids kinks and discontinuities.

Labor supply disincentive

“Grant and tax” welfare programs discourage labor supply in two ways.

- They increase non-labor income. The outward shift of the budget constraint gives the individual more of both normal goods: consumption and leisure (less labor supply).
- The taxation, which some states have eliminated for low levels of income, reduces the opportunity cost of leisure by making the after tax wage lower.
 - Many of the cross-state differences in taxation for TANF recipients, as well as differences in the duration of benefits eligibility and other design features, began after the 1996 Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA).
 - These experiments with different welfare policies and what they reveal about labor supply are fertile ground for finding a paper topic. Just saying.

Extension: effect of the Earned Income Tax Credit (EITC)

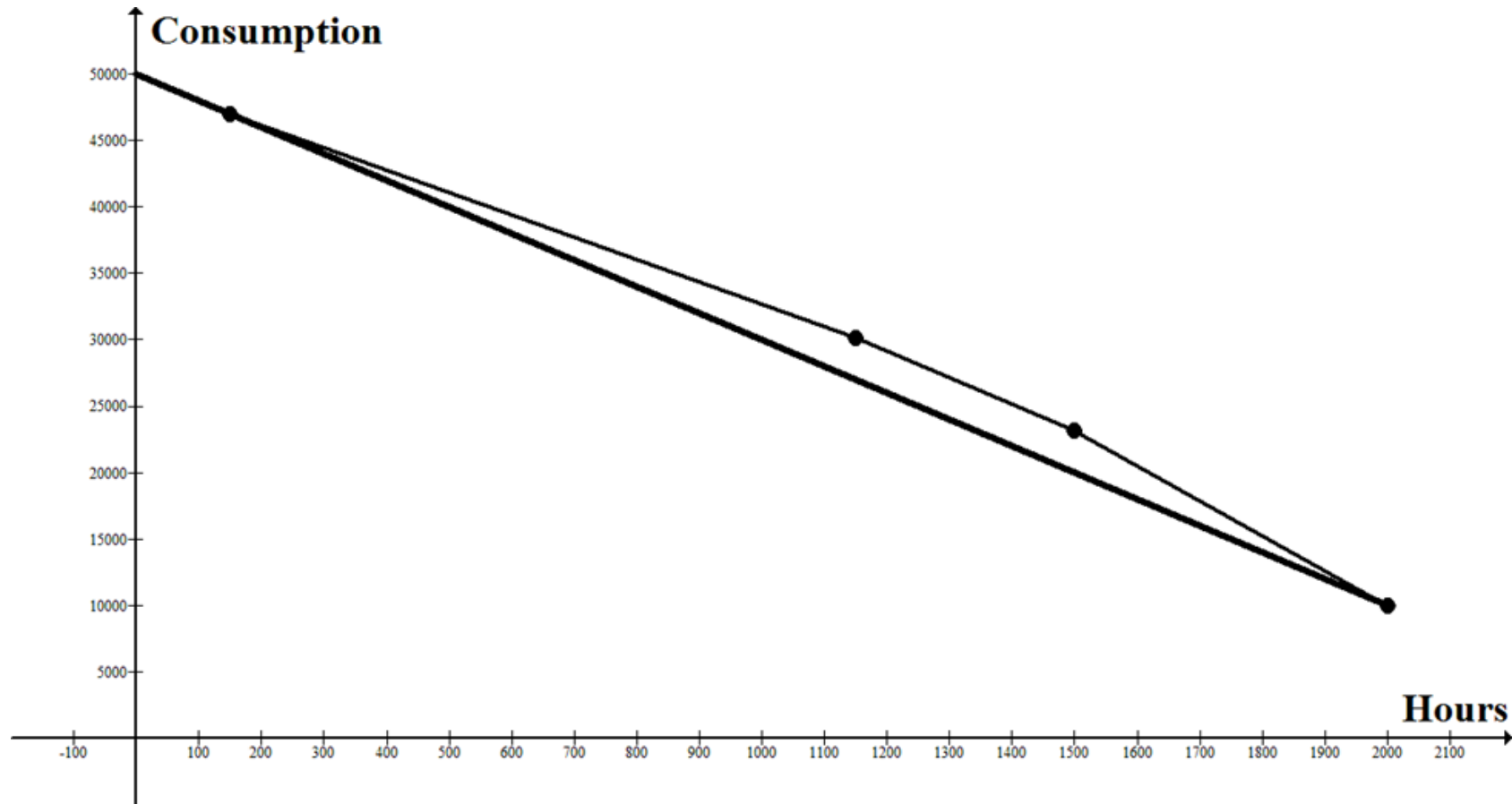
An alternative strategy for improving the wellbeing of poor individuals changes not only the “height” and slope of the budget constraint, but also its concavity. Introducing a tax rate that varies depending on labor income accomplishes this “bowing out” of the budget constraint. This is what the EITC intends to do.

- Think of it as subsidizing wages at low levels and taxing them at higher levels. This is true despite the method of disbursement—which works like a [refundable credit](#) on the Federal tax return.

EITC: example

- The budget constraint for a single individual with one child would change as follows if he is eligible for the EITC.
 - If the person earns less than \$37,000, the refundable credit adds to their consumption—and at a greater rate for lower income.
 - This occurs up to a maximum credit of \$3169.
 - Individuals who earn less than \$10,000 begin to have the credit phased out for working less. This acts as a work incentive by increasing the opportunity cost of leisure beyond just the foregone wage.
 - You will also notice, though, that the budget constraint is uniformly higher with the EITC than in its absence. And it is raised the most for individuals who earn a modest amount of income (between 10 and 30 thousand dollars).

Example: effect of the EITC on the budget constraint

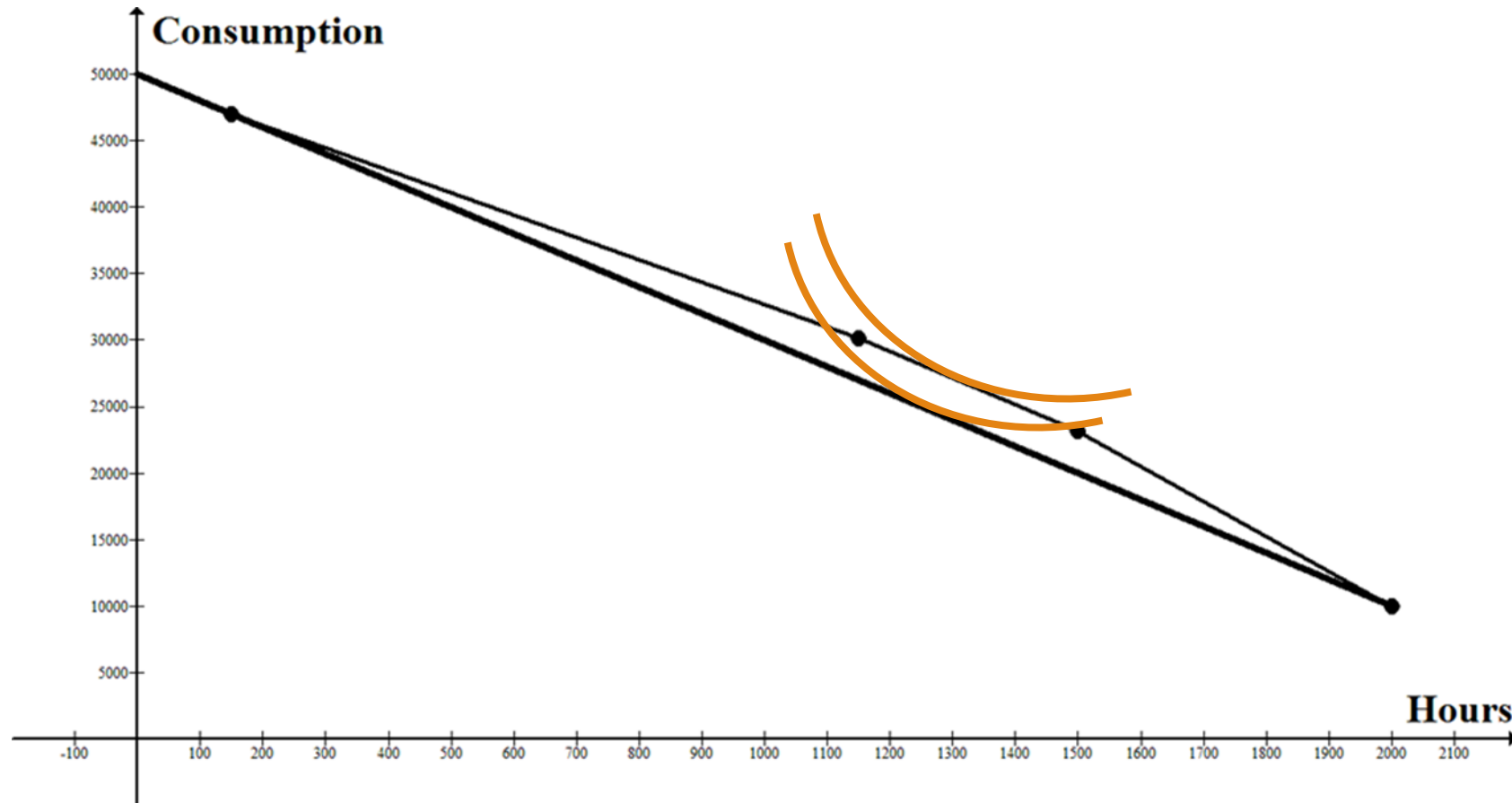


EITC and labor supply

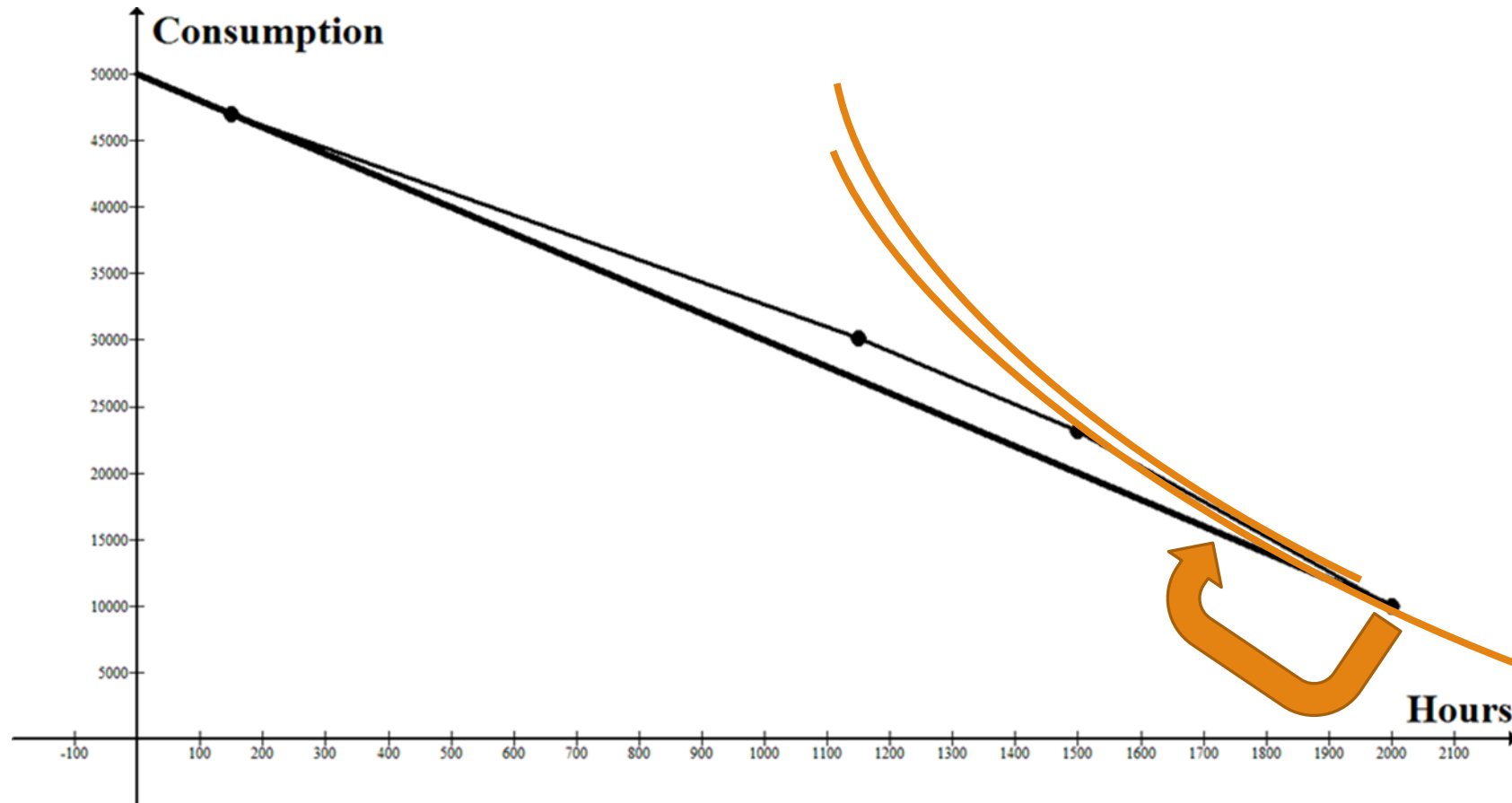
- The effect is to induce someone facing a low wage to participate in the labor market by increasing the effective wage. So participation should increase as a result of the EITC.
 - An individual at the margin of participation (right-most kink point on the graph) would participate in response to the EITC.
- Someone facing the same wage that was already participating, however, will be induced to supply fewer hours. They will collect the credit and just move outward—which entails reducing labor supply as with a cash grant.
 - A reader is gratified to discover that these negative effects have not been measured empirically, though the positive participation effects have!*

*Eissa, Nada and Jeffrey B. Liebman. 1996. "Labor Supply Response to the Earned Income Tax Credit." *The Quarterly Journal of Economics*. Vol. 111, No. 2: 605-637.

EITC and labor supply: hours disincentive ... leisure is a normal good



EITC and labor supply: participation incentive . . . subsidizes wage



EITC and labor supply (concluded)

- Estimates of the effect on labor market participation indicate, indeed, that it increased participation among eligible individuals.
 - Meyer, Bruce D. 2002. “Labor Supply at the Extensive and Intensive Margins: The EITC, Welfare, and Hours Worked.” *AEA Papers and Proceedings*, Vol. 92, No.2: 373-379.
- This capacity to attract people to the labor force that would otherwise not participate is the advantage of EITC compared to a “grant and tax” welfare program.

Conclusion

Next we will combine the forces of supply and demand and analyze the resulting equilibrium.