Finance 30220
Answers to Problem Set #8

1) a)-c)

	Old Tax Code	**Flat Tax Code**
I = $20,000	Marginal Rate = 10%	Marginal Rate = 25%
	Tax Bill = (.10)($15,000) = $1,500	Tax Bill = (.25)($10,000) = $2,500
	Average Rate = $1,500/$20,000 = 7.5%	Average Rate = $2,500/$20,000 = 12.5%
I = $60,000	Marginal Rate = 40%	Marginal Rate = 25%
	Tax Bill = (.10)($20,000) + (.20)($30,000) + (.40)($5,000) = $10,000	Tax Bill = (.25)($50,000) = $12,500
	Average Rate = $10,000/$60,000 = 17%	Average Rate = $12,500/$60,000 = 21%
I = $110,000	Marginal Rate = 40%	Marginal Rate = 25%
	Tax Bill = (.10)($20,000) + (.20)($30,000) + (.40)($55,000) = $30,000	Tax Bill = (.25)($100,000) = $25,000
	Average Rate = $30,000/$110,000 = 27%	Average Rate = $25,000/$110,000 = 23%

2)

a) Bill Clinton is offering to provide a service that consumers value at $720 per year ($60/month * 12) for a cost of $500. If this legislation passes, it would have the same effect as $220 of extra income appearing out of thin air. However, because this legislation is under the treat of being overturned, this extra $220 in income is viewed as temporary. The analysis looks exactly like a temporary increase in income. Savings increases as consumers save some of their extra income. The result is lower interest rates, and higher levels of savings and investment.

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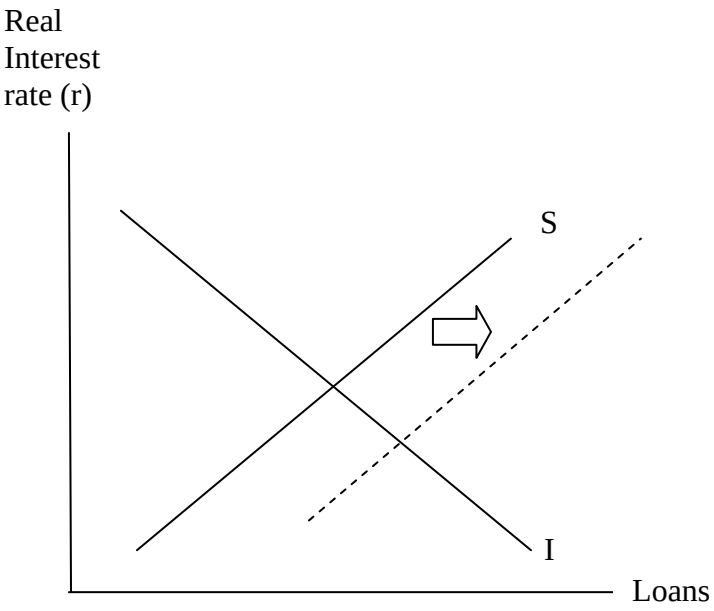
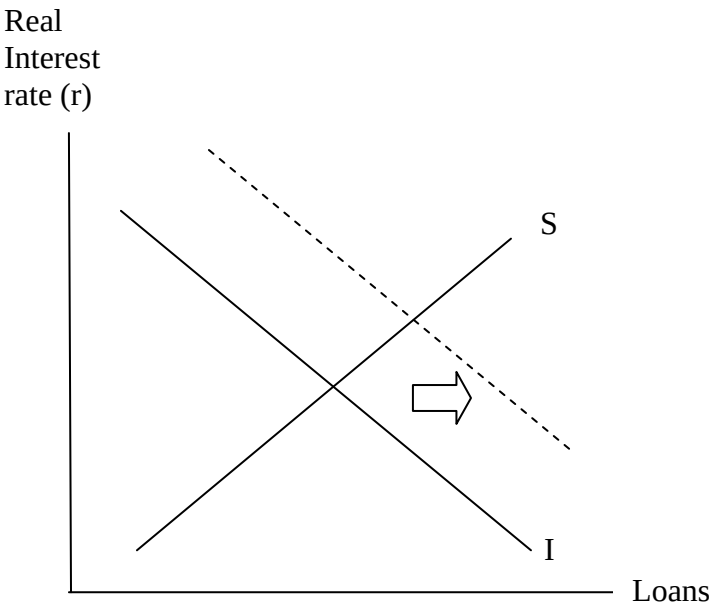
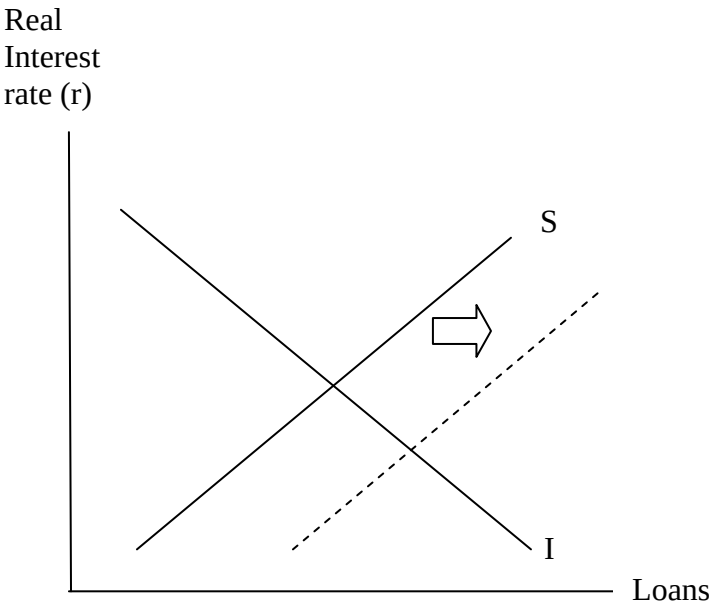


b) If there is know threat of reversal, the yearly "gift" of $220 can be viewed as permanent. Hence, there is no reason to increase savings. Therefore, interest rates, savings and investment remain constant.

3) The key to analyzing distortionary taxes is to recognize the fact that people tend to do less of the activities that are being taxed.
   a) In this case, an investment tax credit lowers the user cost of capital thereby increasing investment demand. Note that the secondary price effects act to reinforce the original policy. As interest rates rise, the incentive to save increases. The end result is that interest rates are higher, consumption is lower (hence, saving is higher) and investment is higher.

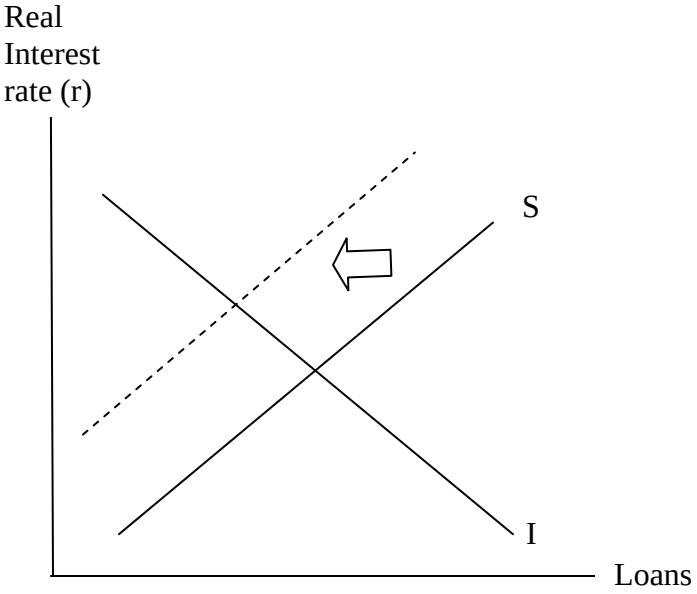


b) With this policy, the lowering of the tax on savings gives consumers the incentive to save more. However, as the demand for consumption falls, interest rates start dropping, which lowers the effectiveness of the policy. The end result is that consumption is lower (hence, saving is higher), investment is higher, and interest rates are lower.



4) To analyze the effects of transfers, we need to recognize that income is not being created, but simply transferred. Therefore to decide the aggregate effect, we need to compare the behavior if the "winners" with that of the "losers". In the case of social security, the "winners" are the retirees and the "losers" are those currently working.

   a) Think of aggregate consumption demand as the sum of workers and retirees. The retirees have received a gift in the form of their social security check and, hence, consume more. Those who are working just lost an amount exactly equal to the retirees gain and hence, consume less. In principle, these two effects could exactly cancel each other out, leaving all aggregate variables unchanged. However, it is my guess that the marginal propensity to consume for the retirees is higher that that of workers. In this case the increase in demand by retirees would be greater than the drop by workers resulting in higher consumption (lower savings) and interest rates and lower investment.



b) If the social security system is financed by an income tax, everything from part (a) holds, but we must also consider the distortion created by the tax. With higher marginal tax rates, aggregate labor supply falls, lowering output and raising wages. Note that this loss in output magnifies the results from part (a).