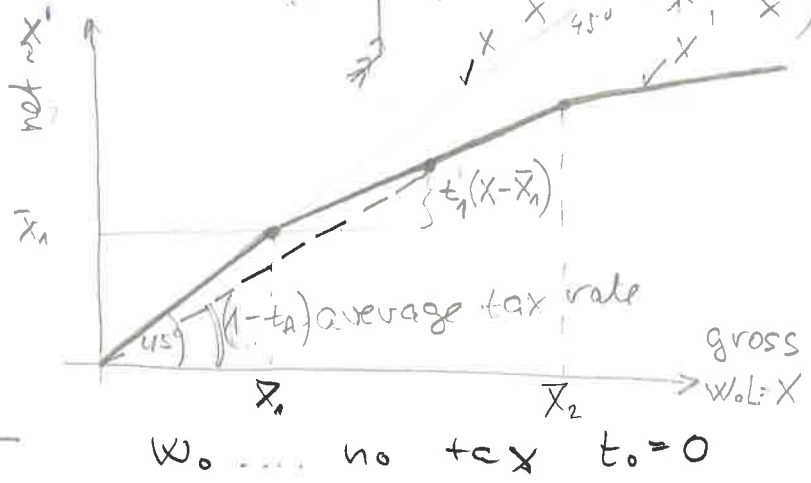
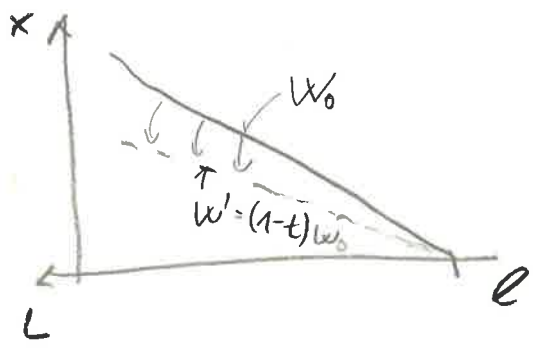


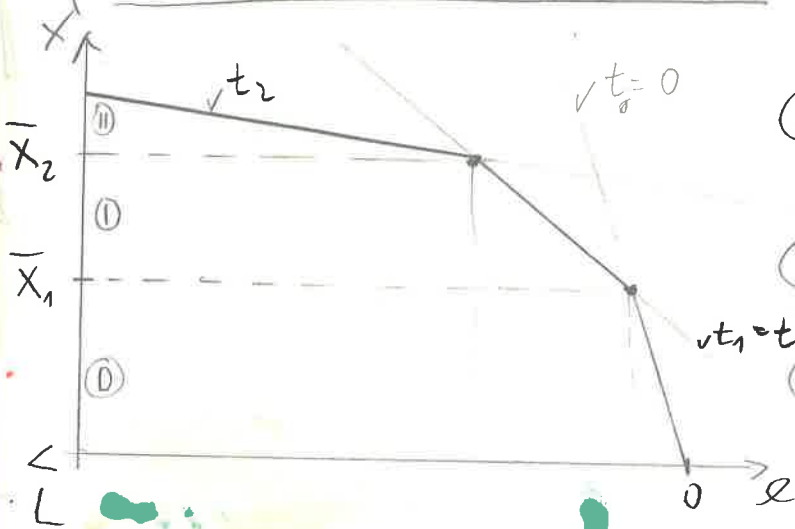
• PROPORTIONAL TAX

$W' = (1-t)W$
 ↑ employee ↑ firm

$X' = (1-t_A)X$
 $t_A = \frac{tX - t\bar{X}_n}{X} = t \left(1 - \frac{\bar{X}_n}{X}\right)$



• PROGRESSIVE TAXATION



① $X' = W_0 L$ $W_0 L < \bar{X}_1$

① $X' = W_0 L - \underbrace{(W_0 L - \bar{X}_1)}_{>0} t'$

② $X' = W_0 L - \underbrace{(W_0 L - \bar{X}_1)}_{=0} t' - \underbrace{(W_0 L - \bar{X}_2)}_{>0} t''$

$X' = W_0 L (1 - t' - t'') + (\bar{X}_1 t' + \bar{X}_2 t'')$

$t'' = t_2 - t_1$
 $t' = t_1 - 0 = t_1$

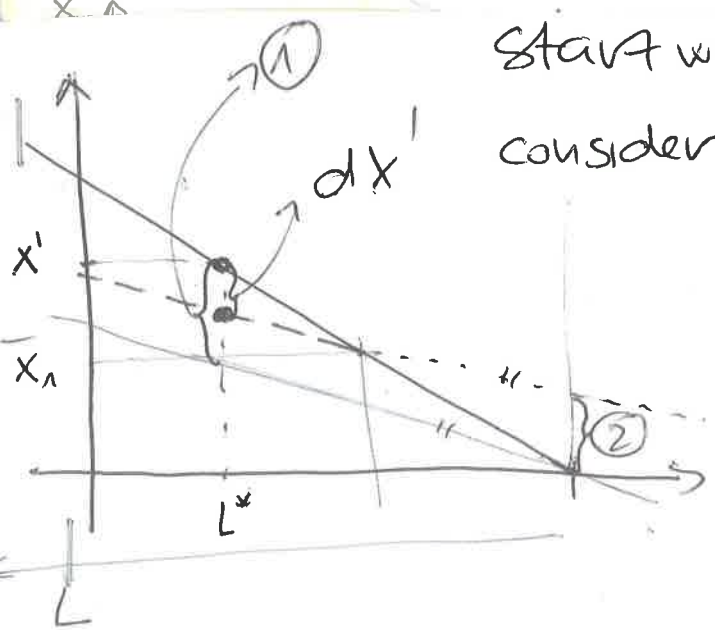
marginal wage

income shifts

intercept

increments

start with $t' = 0$
 consider $dt' > 0$



EXAMPLE: introduce $t' > 0$
 $X'_n = W_0 L$ ($X'_n > \bar{X}_1$)
 $X'_{xy} = W_0 L - t'(W_0 L - \bar{X}_1)$
 $= L \underbrace{W_0(1-t')}_{\text{new slope}} + \underbrace{\bar{X}_1 t'}_{\text{new intercept}}$
 ↓ slope shift ↑ income shift

$X' = W_0 L^* (1 - t') + (\bar{X}_1 t')$