8.3 Demand

Saturday, February 20, 2021 4:19 PM

$v(x,y)$ subject $m = p_x x + p_y y$

money metric: $v(x,y) = v(x) + \text{expenditure on } y$

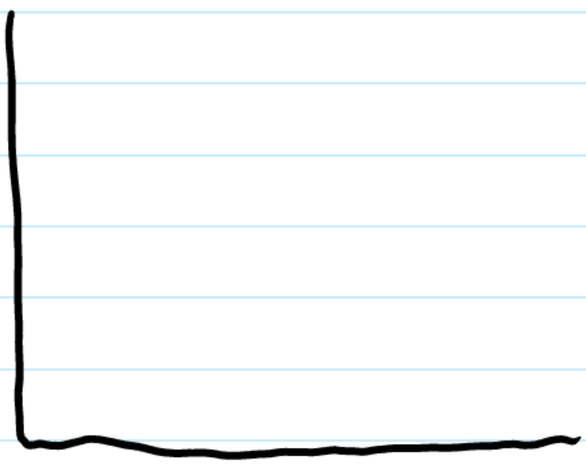
$v(x,\epsilon) = v(x) + \epsilon \quad p_\epsilon = 1$

$v = v(x) + m - p_x x \quad m = \epsilon + p_x x$

$mcx \; v(x) + m - p_x x$

$\frac{dv}{dx} = \frac{dv}{dx} - p_x = 0$

$\downarrow$ inverse demand for x



$\frac{dv}{dx}$ = marginal value of x

change in m don't affect

$V(x)$ total value to consumer = WTP

$\frac{dv}{dx}$ = marginal WTP

$v = 10q - \frac{1}{2}q^2 + \epsilon \quad m = 100$

$= 100 + 10q - \frac{1}{2}q^2 - pq$

$\frac{dv}{dx} = 10 - q = p \qquad 10 - q$ = inverse demand

$Q = \sum_{i=1}^{n} q_i(p)$