

Bid Rent of Manufacturing Firms--Fixed Factor Proportions

Distance (Miles to Road)	Non-Land					Size of Site (Acres)	Bid Rent Per Acre
	Total Revenue	Production Cost	Freight Cost	WTP for Land	WTP for Land		
0	\$250	\$130	0	\$120	\$120	2	\$60
1	\$250	\$130	\$20	\$100	\$100	2	\$50
2	\$250	\$130	\$40	\$80	\$80	2	\$40
3	\$250	\$130	\$60	\$60	\$60	2	\$30

- (a) Total Revenue = 5 bikes x \$50 price per bike = \$250
 (b) Assume non-land production cost = \$130
 (c) Freight Cost of Bikes = Cost to ship one bike, one mile (\$4) multiplied by output (5 bikes) = \$20 per mile
 (d) WTP - willingness to pay

Bid Rent of Manufacturing Firms--Input Substitution

Distance (Miles to Road)	Non-Land					Size of Site (Acres)	Bid Rent Per Acre
	Total Revenue	Production Cost	Freight Cost	WTP for Land	WTP for Land		
0	\$250	\$150	0	\$100	\$100	0.5	\$200
1	\$250	\$110	\$20	\$120	\$120	1.0	\$120
2	\$250	\$70	\$40	\$140	\$140	1.5	\$93
3	\$250	\$30	\$60	\$160	\$160	2.0	\$80

Bid Rent Function of Office Firms--Fixed Factor Proportions

Distance (Blocks from Center)	Building Height (Floors)	Total		Capital Cost	Other Non- Land Costs	Travel Cost	WTP for land	Lot Size (Acres)	Bid Rent Per Acre
		Revenue	Revenue						
0	4	\$500	\$100	\$150	\$0	\$250	0.25	\$1,000	
1	4	\$500	\$100	\$150	\$36	\$214	0.25	\$856	
5	4	\$500	\$100	\$150	\$200	\$50	0.25	\$200	

The bid rent curve is negatively sloped and concave to the origin (bowed outward). The slope is negative since travel costs increase with distance from the center. It is concave because travel costs increase with distance at an increasing rate. The further from the center the greater the increase in travel cost and the greater the reduction in rent