

Subject : Managerial Economics

Semester/Year : Second (Semester II)

Name of the Teacher: Dr. Sudip Kumar Ghosh

Name of the Topic: Kinked Demand Curve Model
(Oligopoly)

Kinked Demand Curve Model

Another model of stable oligopoly price that was at one time popular is the "kinked demand curve hypothesis" of Sweezy, illustrated in Figure 2.

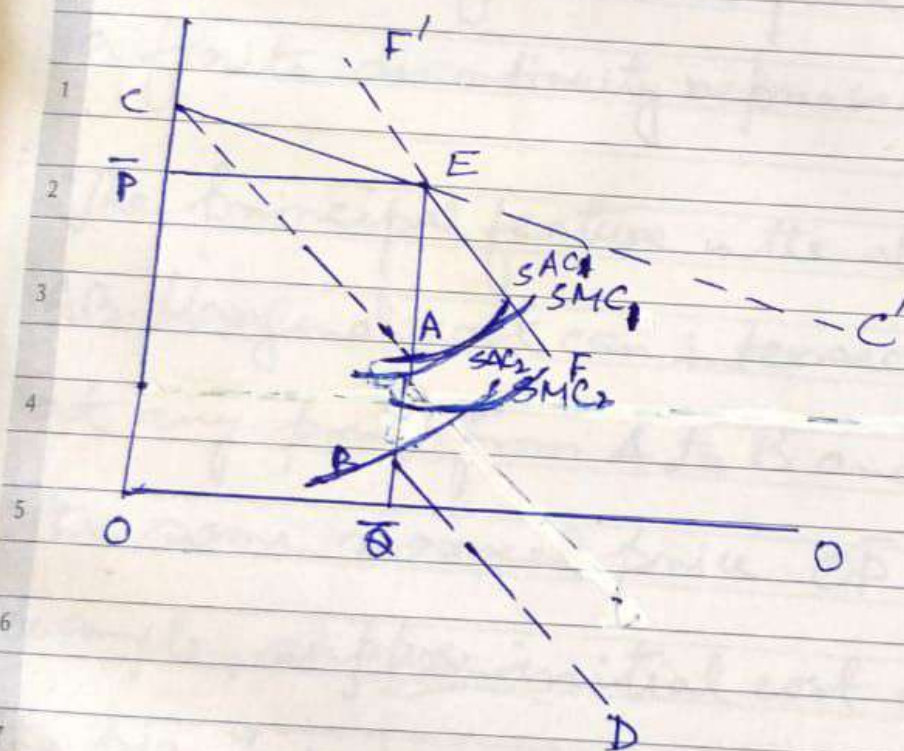


Fig 2: Sweezy Solution

Suppose the demand curve confronting an oligopolist is given by the "kinked" curve CEF. The slope of the curve changes drastically at the point E, corresponding to price $\bar{P}$. The kink in the demand

2010

JULY

JUNE

Wednesday

23

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Week 26 • 174-191

curve causes a finite discontinuity in the marginal revenue curve, which is given by the dashed line $CABD$. CA is the segment corresponding to CE portion of the demand curve, BD corresponds to the less elastic EF segment. At point E , however, there is a finite discontinuity represented by the segment AB .

The principal feature is the absolutely vertical section AB . Marginal cost can intersect marginal revenue at any point from A to B and nonetheless result in the same market price OP and sales OQ . For example, suppose initial cost conditions give rise to the plant represented by SAC_2 and SMC_2 . SMC_2 intersects marginal revenue ~~curve~~ in the vertical segment AB , so price is OP . If costs rise appreciably, so that SAC_1 and SMC_1 now represent the plant

Notes

Birthday / Anniversary

2010

JULY

JUNE

Friday

25

Th Fr Sa Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa

Week 26 • 176-189

operating costs, prices does not change. Or going the other way around, cost could fall from SMC_1 to SMC_2 without affecting market equilibrium price and quantity. Thus, according to Sweeney, oligopoly price tends to be very sticky, changing only infrequently and as the result of very significant changes in cost.

The question on which the Sweeney thesis falls is why the kink occurs at a specific point E and remains there. One approach is to regard CC' in Chamberlin's Δ curve. ~~FF~~ is the D curve. This would set a temporary price to E. Then one must assume that each entrepreneur believes (a) competitors will not match a price increase, so CE is relevant for price increases, but (b) they will match any price decreases, so the proportional market demand curve

Notes

Birthday / Anniversary

2010

JULY

JUNE

Monday

28

Th Fr Sa Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Week 27 • 179-186

EF is relevant for price declines. This analysis explains how a kink occurs but it does not explain where. If one knows the equilibrium price (OP) one can rationalise it by means of the Sweezy hypothesis. But the purpose of price theory is to explain how the interaction of demand and cost establishes a unique price-quantity equilibrium. The kinked demand ~~curve~~ theory does not do this because market equilibrium is consistent with a wide variety of cost situations. The Sweezy thesis, accordingly, must be regarded as an *ex post* rationalisation rather than as an *ex ante* explanation of market equilibrium.

Notes

George Stigler challenged Sweezy's theory on both theoretical and empirical grounds. Stigler found in several industries with a small number of sellers (cigarettes,

Birthday / Anniversary

2010

JULY

JUNE

Wednesday

30

Week 27 • 181-184

Th Fr Sa Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

automobiles, anthracite, steel, dynamite, gasoline and potash) that price increases by one firm were often followed by rivals and that in potash a price decrease was not followed.

The main analytical difficulty of the kinked demand model is that it does not explain the price output decisions of the firms. It does not define the level at which price will be set in order to maximise profits.

The kinked demand curve can explain the rigidity of prices in a situation of changing costs and of high rivalry. But it does not explain the level of the price at which the kink will occur. In other words, the kinked demand curve analysis does not explain

Notes

the height of the kink. Hence, it is ~~a~~ not a theory of pricing, but rather a tool of explaining why

Birthday / Anniversary

2010

AUGUST

July

Friday

02

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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Week 27 • 183-182

the price, once determined in one way or another, ~~will tend in one way or another~~, will tend to remain fixed. Sweezy introduced the kinked demand curve as an operational tool for the determination of equilibrium in oligopolistic markets. However, Hall and Hitch used the kinked demand curve not as a tool of analysis for the determination of ~~equilibrium~~ price and output in oligopolistic markets but to explain why the price, once determined on the basis of average cost pricing principle will remain sticky. Hall and Hitch used the kinked demand curve in order to explain the stickiness of prices in oligopolistic markets and not as a tool for the determination of prices.

Notes

In conclusion, it can therefore be said that the

Birthday / Anniversary

2010

AUGUST

July

Monday

05

Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa Su Mo Tu
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Week 28 • 186-179

7 kinked demand ~~curve~~ analysis as a method of
8 price output determination is not analytically
9 sound. But it can be accepted as a reasonable
10 explanation for the rigidity of price and output
11 in oligopolistic markets.