

ECONOMICS I.

Sponsored by a Grant TÁMOP-4.1.2-08/2/A/KMR-2009-0041
Course Material Developed by Department of Economics,
Faculty of Social Sciences, Eötvös Loránd University Budapest (ELTE)
Department of Economics, Eötvös Loránd University Budapest
Institute of Economics, Hungarian Academy of Sciences
Balassi Kiadó, Budapest

Author: Gergely Kőhegyi, Dániel Horn, Klára Major

Supervised by Gergely Kőhegyi

June 2010



ECONOMICS I.

week 8

Monopolistic competition

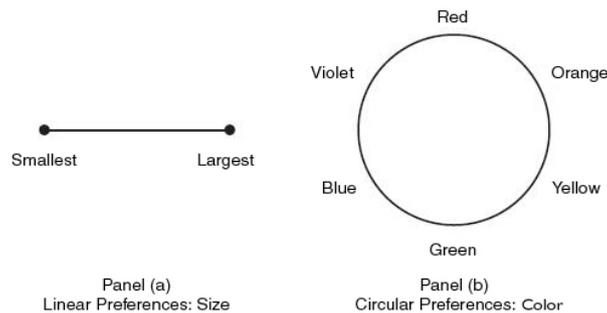
Gergely Kőhegyi – Dániel Horn – Klára Major

Prepared by: Gergely Kőhegyi, using *Jack Hirshleifer, Amihai Glazer és David Hirshleifer (2009) Mikroökonómia. Budapest: Osiris Kiadó, ELTECON-könyvek (henceforth: HGH), and Kertesi Gábor (ed.) (2004) Mikroökonómia előadásvázlatok. <http://econ.core.hu/kertesi/kertesimikro/> (henceforth: KG).*

Monopolistic competition

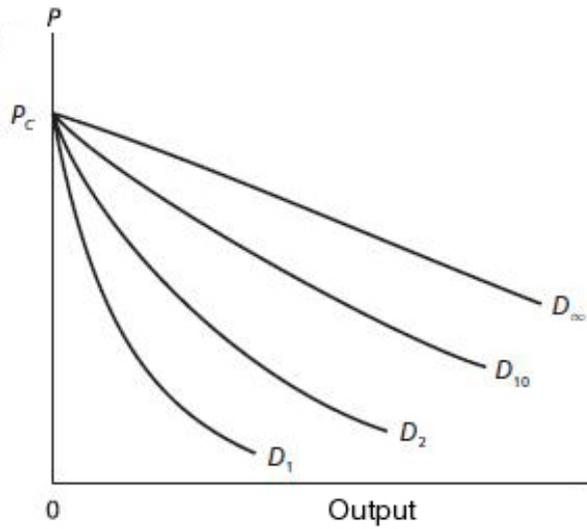
Product variety

Consumers take into consideration the characteristics of goods. For a characteristic such as size, individual consumer preferences range from smallest to largest. For a characteristic such as color, individuals' preferences may be thought of as distributed around a ring. For simplicity, assume the preference distribution is uniform over the linear range in the one case, or around the circle in the other case.



Aggregate demand

The rising aggregate effective demand, as viewed by a monopolist seller, achieved by increasing the number of plants (production locales) spaced evenly around the ring of the previous figure. Effective demand increases with the number of plants, because consumer preferences are better matched (there is less wastage in transport costs). However, demand grows at a decreasing rate.



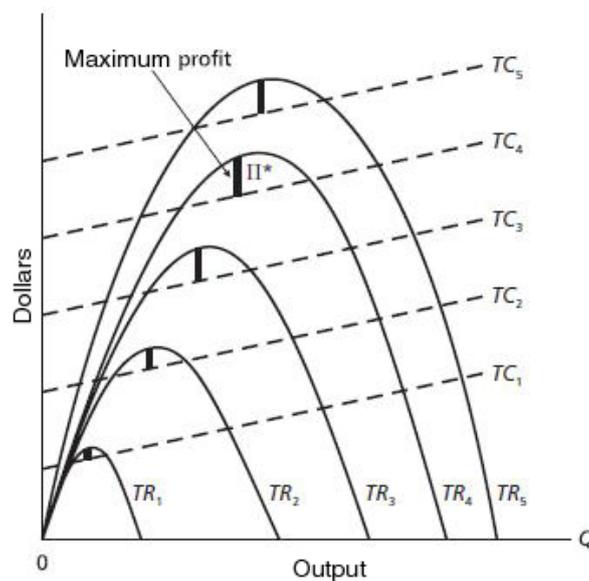
Religious attendance and concentration (Protestant denominations, percentages)

Country	% attendance	Concentration (%)
US	43	2
Canada	31	2
Netherlands	27	10
Switzerland	25	21
W. Germany	21	23
Australia	21	18
New Zealand	20	21
Britain	14	40
Norway	8	85
Sweden	5	72
Finland	4	92
Denmark	3	94

Source: Hirsleifer et al., 2009, 349.

Change of number of plants

Due to the increasing demand total revenue rises but at a decreasing rate. Under the assumption of an identical linear cost function each plant shifts upward by a constant amount as N rises.



Monopolistic competition

1. Definition. *The market structure in which each product variety is produced by an independent competing firm having some monopoly power is called monopolistic competition.*

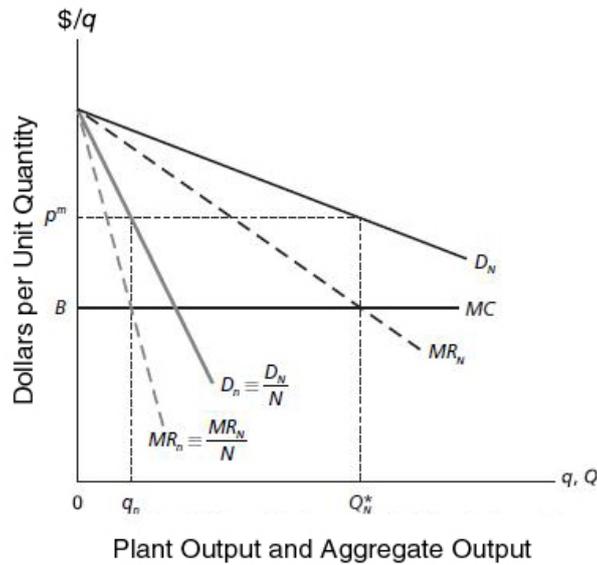
- Models containing representative participants (e.g. competition among brands)
 - Chamberlin-model: Free entry in and exit out of the market, differentiated product
- Location ('spatial') models
 - Hotelling-model (one-dimensional, linear product differentiation, fixed number of participants)
 - Salop-model (one-dimensional, circular product differentiation, fixed number of participants)

Monopoly solutions: aggregate and plant

For a given number of plants N , the monopolist's effective aggregate demand curve is D_N . $D_n = D_N/N$ is the pro rata plant demand curve. For either the plant or the firm solution, the same profit-maximizing price

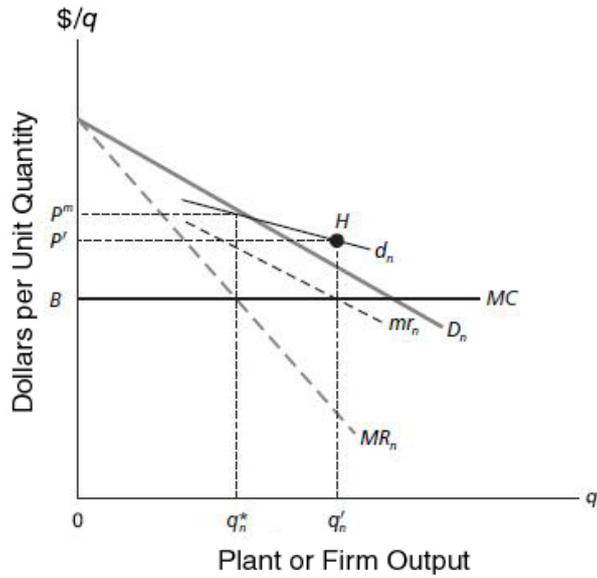
$$P^m$$

is found along the associated demand curve.



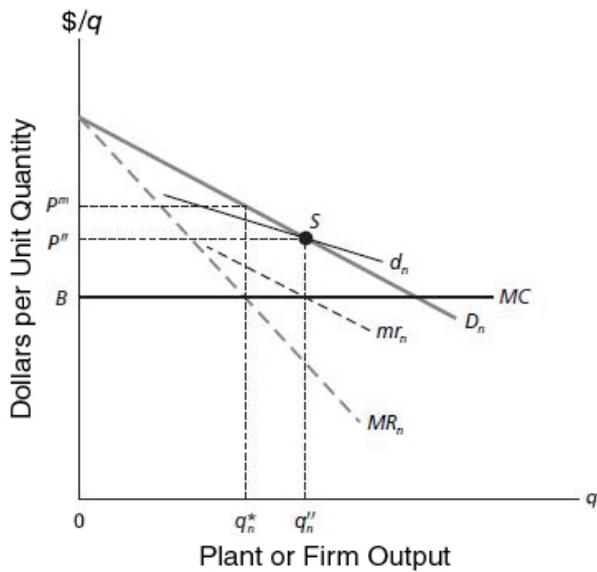
Monopoly plant at monopolistic-competition equilibrium

In case of a monopoly plant the optimal solution is given by $MC = MR_n$. In case of an individual firm the demand curve is d_n , therefore the optimum is in H .



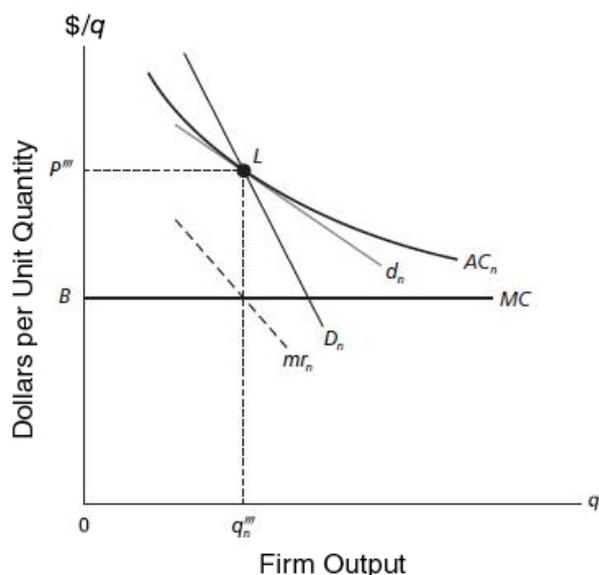
Monopolistic-competition equilibrium

s in the diagram represents a monopolistic-competition equilibrium. In this point each firm is maximizing profit, price is lower and output greater than in the monopoly case.



Representative firm in monopolistic competition

In the long-run the representative firm's price-output combination at *L* lies on the true pro rata demand curve D_n . The additional long-run condition is that entry or exit takes place until the representative firm earns zero profit (price equals Average Cost AC_n).



1. Statement. Under monopolistic competition, aggregate output is greater and price is lower than under multiplant monopoly. But the number of independent firms under monopolistic competition, each offering its own unique variety, could be either larger or smaller than the profit-maximizing number of varieties offered by a monopolist producer. Thus, though consumers benefit from a lower price under monopolistic competition, they may or may not enjoy a better assortment of varieties.

Product type	Early 1970s	Late 1990s
Vehicle models	140	260
Vehicle styles	654	1212
Personal computer models	0	400
Software titles	0	250000
Websites	0	4000000+
Movie releases	267	458
Airports	11261	18292
Amusement parks	362	1174
McDonald's menu items	13	43
National soft drink brands	20	87
Milk types	4	19
Levi's jeans styles	41	70
Running shoe styles	5	285
Women's hosiery styles	5	90
Contact lens types	1	36
Bicycle types	8	31

Source: Hirshleifer et al., 2009, 358.