# Lecture 09 – Market Structure (III)

## B. Monopolistic Competition (MC) and more

### 1. Product Differentiation Revisited

Product differentiation by their characteristics or attributes.

Ex) Automobile models are distinguished by their attributes: number of cylinders; type of upholstery; number of doors; horsepower; length; width; and weight; front-, back- or four-wheel drive; air conditioning; stereo system; transmission type; fuel efficiency; exterior styling; and so on.

Products are ***horizontally differentiated*** if consumers have heterogeneous preferences regarding the most preferred mix of different attributes – there is no agreement among consumers regarding which particular product or brand is the best. When the tastes of consumers are asymmetric and prices identical, a wide range of substitutable products are demanded.
Ex) light vs. regular beer; thin- vs. thick-crust pizza.

Products are ***vertically differentiated*** if consumers unanimously agree on which product or brand is preferred. Vertical differentiation corresponds to situations where consumers agree on a quality index so that if all products had the same price, consumers would all purchase the identical brand. Automobile brands within a class are horizontally differentiated. But automobile classes are vertically differentiated – if the price of a Ford Focus were the same as a Saab Turbo 900, all consumers would purchase the Saab.

There are two common approaches to the specification of consumers' preferences when products are horizontally differentiated. The *address* branch assumes that consumers have preferences over the characteristics of products. The *goods* branch assumes that consumers have preferences over goods and a **taste for variety**. These different approaches to specifying the preferences of consumers give rise to different modeling approaches, **address models** and **monopolistic competition**.

### 2. Monopolistic Competition

The "goods are the goods approach" dates from Edward Chamberlin's publication of *The Theory of Monopolistic Competition* in 1933.

1) Preference Specification

Two key assumptions typically underlie the specification of preferences in models of MC.

- There is a very large set of possible differentiated products over which the preferences of consumers are defined.
- The preferences of consumers over the set of all possible differentiated brands are symmetric → close substitutability among the goods within the group

2) Monopolistic Competition: Equilibrium

The focus of MC models is not (typically) on the strategic decisions regarding product specification or design, since the products of all firms are equally differentiated by assumption. Instead the analysis is used to focus on the issue of the extent of variety – the number of products available in the market.

- **Equilibrium Conditions**

a) Profit-Maximization.
b) Free-Entry Condition.

• **Determinants of MC Equilibrium**
Elasticity of substitution and scale economies

• **Excess-Capacity Results**
Price exceeds marginal cost, so that firms are exercising market power.
Firms are not producing where their average costs are minimized.