

ECO 610: Lecture 5

Competitors and Competition: Introduction to Market Structure

Competitors and Competition: Outline

- Defining a market: product market and geographic market
- Identifying competitors: who are your rivals?
- Porter's Five Forces model
- Characteristics of market structure: sellers, buyers, product differentiation, entry conditions, information
- Measuring market structure
- Taxonomy of market structures:
 - Perfect competition
 - Monopolistic competition
 - Oligopoly
 - Monopoly

Defining a market

- What is a market? Buyers, sellers, product, place.
- Two dimensions to a market: product market and geographic market
- Examples? Product market and geographic market scope of the following markets? UK-UL EMBA degree program; new Camry at Green's Toyota; Tempur-Pedic gel-cooled mattress; Alltech's Bioplex.
- Key element is price sensitivity: firms competing in the same market will be sensitive to one another's prices.
- How to measure price sensitivity? Cross-price elasticity of demand

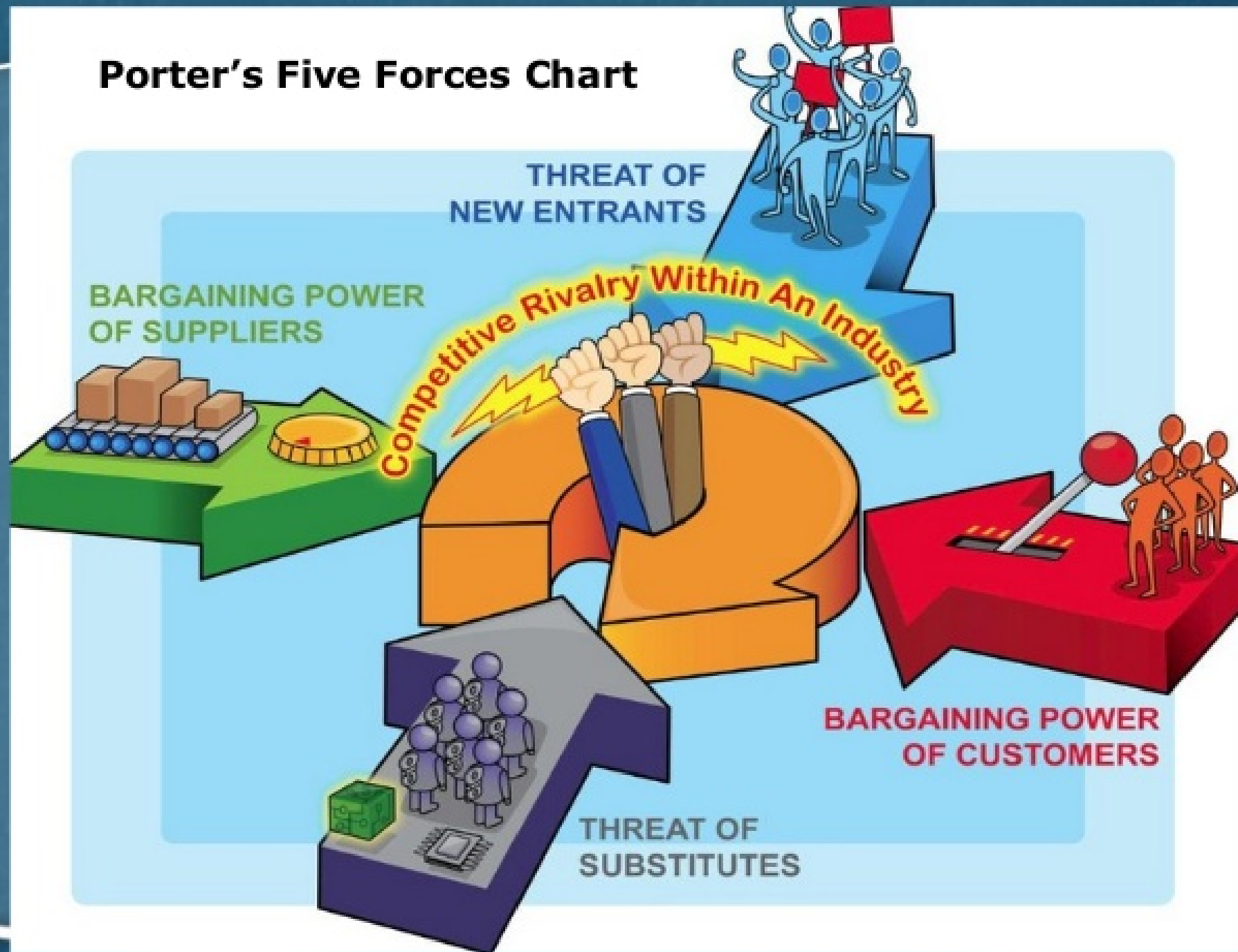
Identifying competitors

- Who are your rivals?
- Are you competing against “the market”? Examples?
- Do you have identifiable rivals? Examples?
- If you have identifiable rivals, how close are they?
- Do you have to take into account your rivals’ possible reactions when deciding what the best course of action is for you? Examples?

Porter's Five-Forces Model

- Michael Porter developed a model for industry analysis that incorporates many of the concepts we have studied so far.
http://www.youtube.com/watch?v=mYF2_FBCvXw
- If we want to understand the nature and intensity of competition among firms in a market, we must understand the outside forces acting on firms in that industry. These forces include supplier power, buyer power, the threat of substitutes, and the threat of entry. We must also understand the market structure of the industry that inherently affects internal rivalry.
- When there are only a few firms in an industry, and those firms are somewhat insulated from the other four forces, then the internal rivalry aspect of a market gets interesting.

Porter's Five Forces Chart



Market structure

- Definition: Market structure refers to those characteristics of market organization that influence firms' behavior and performance.
- What market characteristics matter most?
 - Number and size distribution of sellers
 - Number and size distribution of buyers
 - Extent of product differentiation
 - Ease or difficulty for new firms to enter the industry
 - Availability of information to buyers and sellers

Measuring market structure

- Are there numerical measures that might indicate how competitive or uncompetitive the supply side of a market might be?
- Number of firms, n .
- Concentration ratios: the share of total industry output (or sales or employment) accounted by the top four (CR_4), top twenty (CR_{20}), or top fifty (CR_{50}) firms.
- Herfindahl-Hirschman Index (HHI):
 - $HHI = \sum_{i=1}^n s_i^2$, where s_i represents the market share of the i^{th} firm.
 - $0 < HHI < 10,000$; atomistic firms: $HHI \rightarrow 0$; monopoly: $HHI \rightarrow 10,000$

Number and size distribution of sellers

- Many sellers, each one small relative to the market
 - <http://www.wlf.louisiana.gov/wildlife/alligator-industry-participants>
<https://www.zomato.com/lexington-ky/downtown-restaurants>
- Many sellers, but one (or a few) dominant firm and many fringe producers
 - <http://www.statista.com/statistics/216573/worldwide-market-share-of-search-engines/>
- Small number of sellers, each with a significant share of the market
 - <http://www.statista.com/statistics/236309/market-share-of-global-express-industry/>
 - [https://en.wikipedia.org/wiki/Competition_between_Airbus_and_Boeing#/media/File:Lufthansa Airbus A380 and Boeing 747 \(16431502906\).jpg](https://en.wikipedia.org/wiki/Competition_between_Airbus_and_Boeing#/media/File:Lufthansa_Airbus_A380_and_Boeing_747_(16431502906).jpg)
- One seller of a product with no close substitutes
 - <http://www.scientificamerican.com/article/we-now-have-the-cure-for-hepatitis-c-but-can-we-afford-it/>
 - <http://ancient-greece.org/architecture/parthenon.html>

Number and size distribution of buyers

- Many buyers, each one small relative to the market
 - <https://foursquare.com/top-places/lexington/best-places-pizza>
- Small number of buyers, each with a significant market share
 - <http://www.wsj.com/articles/aircraft-makers-narrow-engine-options-1405457174>
- Only one buyer
 - <http://www.gdeb.com/>

Extent of product differentiation

- Homogeneous product: In some markets buyers consider each seller's product to be a perfect substitute for every other seller's product, i.e. commodity markets. Price is the only thing that matters.
- Differentiated product: In many other markets, especially markets for final goods and services, sellers are able to differentiate their product from rival firms' products in a myriad of ways.

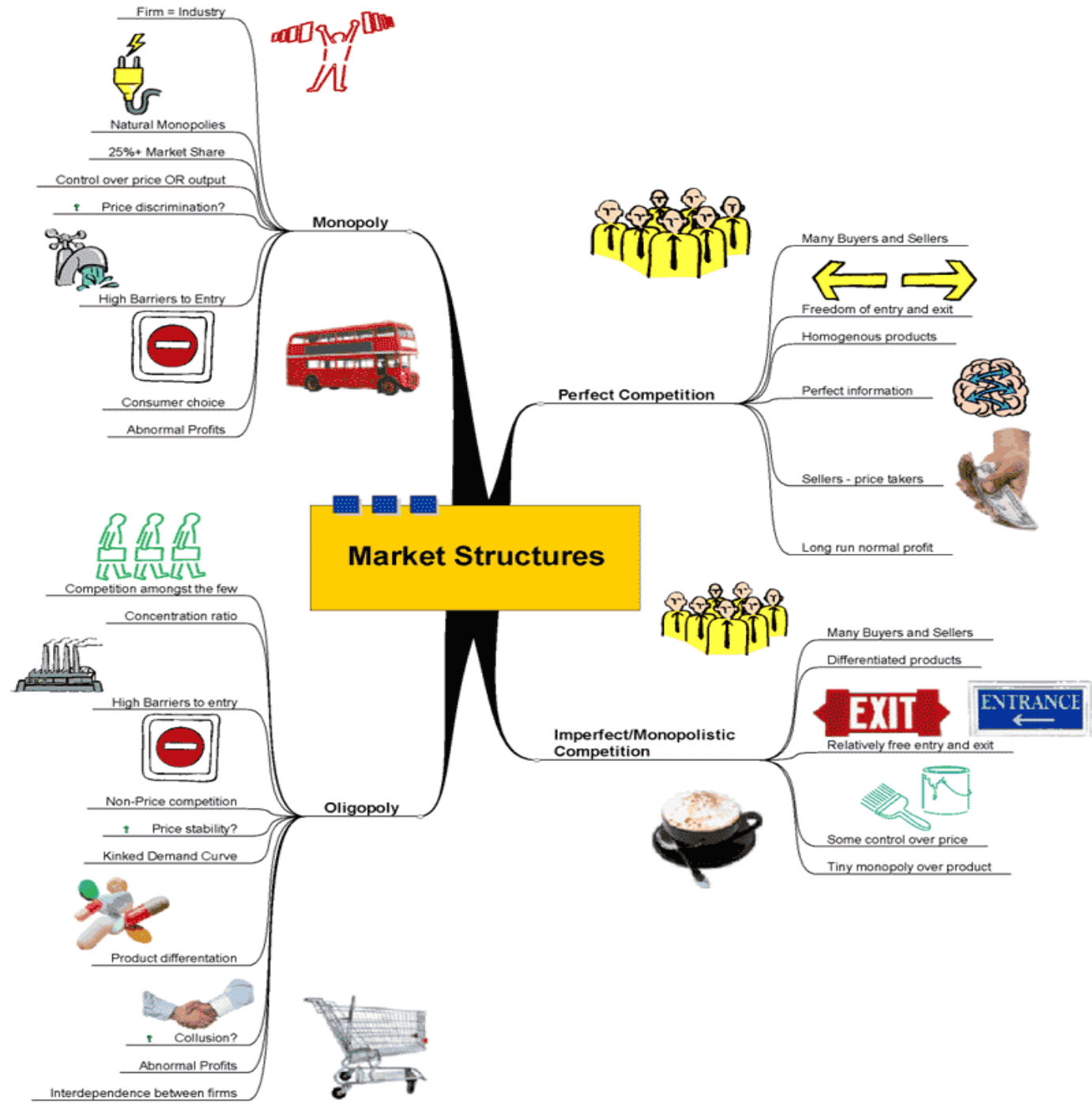
<https://www.lexingtonburgerweek.com/burgers>

- Physical attributes
- Quality
- Location
- Brand image
- Etc.
- Etc.

Conditions of Entry

- Barriers to entry: how easy or difficult is it for new firms to enter the industry and compete with existing sellers?
- Insignificant barriers to entry
 - <https://www.entrepreneur.com/article/73384>
 - <http://myfwc.com/wildlifehabitats/managed/alligator/farming/>
- Significant barriers to entry
 - <http://www.greentechmedia.com/articles/read/tesla-founder-marc-tarpenning-how-to-start-a-car-company>
- Blockaded entry
 - <https://www.highbeam.com/doc/1G1-82277010.html>

A taxonomy of market structures



Why study market structure?

- Goal has been to understand the supply decisions of firms
- Assumption (with qualifications) is that firms seek to maximize profits
- Supply decision: Choose Q so as to maximize $\pi(Q) = TR(Q) - TC(Q)$
- The principles we developed relating the firm's output with its short-run and long-run costs do not depend on the type of market structure in which the firm operates.
- The relationship that a firm sees between its output and its total revenue does depend on the type of market structure in which the firm competes.
- Price takers vs. price searchers
- So we will undertake to study firms' supply decisions in the different types of market structures in which firms compete.

Required outside readings:

“Greece is the Word,” *WSJ*, 7/30/04.

http://www.sailingissues.com/online.wsj.com/article_email/0,,SB109112801159177914-INje4Nplad3oZunaoKGbauBm4,00.html

“Boeing, Airbus Confront Crowded Skies,” *WSJ*, 7/17/17.

<https://search-proquest-com.ezproxy.uky.edu/docview/1919400529/1A3F32BEECF54CB3PQ/57?accountid=11836>

“Show Stopper: How Plastic Popped the Cork Monopoly,” *WSJ*, 5/1/10.

<http://ezproxy.uky.edu/login?url=http://search.proquest.com/docview/220157523?accountid=11836>