

Part 1. Introduction

Demand Curve, Supply Curve, Competitive Equilibrium,
Pareto Efficiency, Market Failure

May 2016

A Brief Review of Competitive Markets

A Simple Model of Exchange

Allocating tickets for a Canucks game

- The **demand curve** is constructed by asking consumers their willingness to pay for one ticket

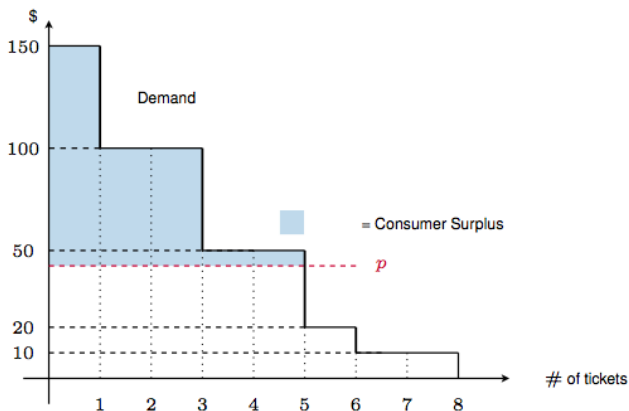


Figure 1: The Demand Curve for Hockey Tickets

A Simple Model of Exchange

- The **supply curve** is constructed by asking producers/ticket holders their reservation price

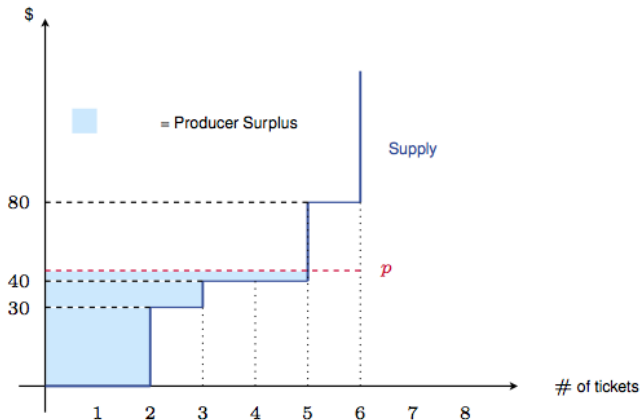


Figure 2: The Supply Curve for Hockey Tickets

Competitive Equilibrium

- In a **competitive equilibrium**, demand equals supply

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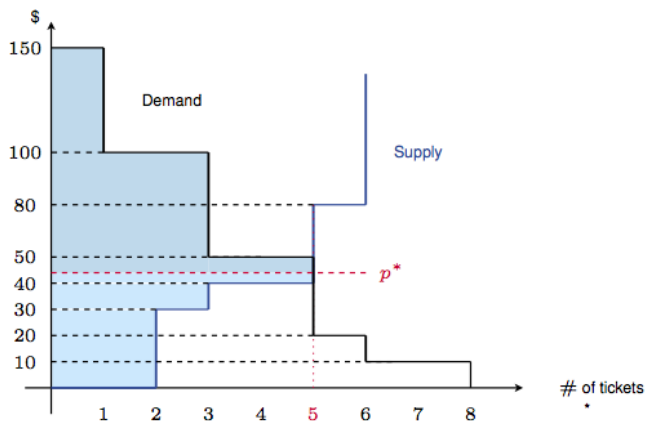


Figure 3: Equilibrium in the Market for Hockey Tickets

Properties of Equilibrium

Why do we care about the competitive equilibrium?

- use equilibrium to predict outcomes
 - $p = p^*$, no one wishes to change their behavior
 - $p > p^*$: surplus \rightarrow downward pressure on prices
 - $p < p^*$: shortage \rightarrow upward pressure on prices
- the competitive equilibrium allocation is **Pareto optimal (efficient)**
 - total gains from trade are maximized (see Figure 3)
 - there is no other allocation (of goods and money) that would make somebody better off without making somebody else worse off

Efficiency and Market Failure

Under certain conditions, every competitive equilibrium allocation is Pareto optimal, or efficient. (First Theorem of Welfare Economics)

- These conditions are:
 - market participants **take prices as given**
(no one participant has market power)
 - the choices of market participants have **no direct effect on the utility or profit of others**
(no externalities and public goods)
 - market participants have **perfect information**
(no uncertainty about prices or goods' characteristics) *

This Course

- This course covers
 - Imperfect competition
 - Externalities and public goods
 - Asymmetric information
- Need: new theory about how people behave “strategically” and “in small numbers” → **Game Theory**
- Several ideas have led to Nobel Prizes in Economics
 - 1991, RONALD COASE
 - 1994, JOHN HARSANYI , JOHN NASH and REINHARD SELTEN
 - 1996, JAMES MIRRELES and WILLIAM VICKREY
 - 2001, GEORGE AKERLOF, MICHAEL SPENCE, and JOSEPH STIGLITZ
 - 2005, ROBERT AUMANN and THOMAS C. SCHELLING
 - 2007, LEONID HURWICZ, ERIC MASKIN, ROGER MYERSON
 - 2014 JEAN TIROLE