

# Notes 1: Introduction to Agricultural Markets

## I. General description of a market and market structure

### A. Definition of a market

1. One definition of a market defines it as a **situation** in which **buyers and sellers** can negotiate the **exchange** of some product or products. One might say that it is a group of buyers and sellers with facilities for trading. A market may be located in a specific place such as the local farmers' market, but can just as easily operate without all participants or the product in question being present such as the market for corn (including futures), or the market for used cars. The traders may be spread over a whole city, region, country or the world as long as they are in close communication with each other and can convey the necessary information to promote exchange. This definition considers a market as a general means to facilitate the exchange of goods and services.
2. Another definition of a market attempts to narrow this explanation to include only **one particular product** (or the product and its close substitutes and complements) and the economic interactions of **individuals** who **own, produce, trade and consume** this product. This second definition is often imprecise since it not always obvious how generally the product should be defined. In a pure sense the product should be homogeneous. **Homogeneity is usually defined in terms of form, place, time, and possession.** For example in some cases the product may be exactly the same as far as physical characteristics (form), but may differ as far as its location (place) or its time of availability. In many cases close substitutes must be considered in analyzing a market as with John Deere and CASE-IH tractors. But the extent to which close substitutes must be considered is not always this obvious as for example chicken versus beef in considering meat consumption. For some purposes one definition of a market is appropriate, for other tasks a different one may be more applicable. In general we will assume that a market under consideration is well defined and involves either a homogeneous good or a group of differentiated products that are **fairly close substitutes (or complements) for at least one good in the group and have limited interaction with the rest of the economy.**

### B. Product differentiation and market definition

1. definition

As mentioned in defining a market, the product under consideration is usually assumed to be homogeneous or close to it. **A product that is not homogeneous is referred to as differentiated.** Differentiated products usually differ by form, place, time or possession. These differences are sometimes called form, time, place and possession utilities though they are not assumed to be additive.

## 2. form utility

**Products that differ physically are said to differ in form.** For example, Pepsi and Coke are two similar cola products but they differ (at least to sensitive mouths) physically enough that they are not considered the same product. Similarly with hamburgers, a Big Mac and a Burger King Whooper are physically different. Form utility may also be in the eye of the beholder. Processing is a common way to change the form utility of a good.

## 3. place utility

Speaking of **place and time utility** Marshall (p. 325) specifies that “the more nearly perfect the market is, the stronger is the tendency for the same price to be paid for the same thing at the same time in all parts of the market; but of course if the market is large, allowance must be made for the expense of delivering the goods to different purchasers; each of whom must be supposed to pay in addition to the market price a special charge on account of delivery.”

**Place utility** is defined as the difference (to a single consumer as an argument in the utility function or in value in general equilibrium) in an otherwise homogeneous good that occurs because of the **good’s physical location or circumstance**. Transportation is the most common way to change the place utility of a good.

## 4. time utility

In addition to differences such as those based on location, a good may trade at different prices or terms based on its date of delivery as evidenced by the pattern of cattle futures prices or the term structure of interest rates.

**Time utility** is defined as the difference in an otherwise homogeneous good that occurs because of the **time at which the good will be available for delivery**. Storage and futures or forward contracts are the most common way to change the time utility of a good.

## 5. possession utility

In an advanced economy where legal titles and contract terms are important, the exact rights conveyed with the good may be important. Often the title to delivery of a product will specify certain terms such as time of payment, limited liability, ability to return the product if defective, ties to other products or actions such as agreement to purchase additional product, pricing based on some index, etc. All of these terms differentiate an otherwise homogeneous product.

**Possession utility** is defined as the difference in an otherwise homogenous product that occurs because of the **terms and conditions of sale and transfer of title**.

**C. Market structure**

1. Definition of market structure

**Market structure** refers to all features of a market that affect the behavior and performance of firms in that market. The keys factors in defining a market structure are the short run and long run objectives of buyers and sellers in the market, their beliefs about the ability of themselves and others to set prices, the technologies they employ, the amount of information available to them about the good and about each other, the degree of coordination or noncooperation they may exhibit, the extent of entry and exit barriers, and the degree of product differentiation.

2. Some simple examples of market structures

A number of structures may be described using only the number of firms and entry barriers as differentiating factors.

<b>Simple Market Structures</b>					
	<b>Sellers</b>		<b>Buyers</b>		
<b>Market Structure</b>	<b>Entry Barriers</b>	<b>Number</b>	<b>Entry Barriers</b>	<b>Number</b>	<b>Possible Examples</b>
Competition	none	many	none	many	Hard red winter wheat
Monopoly	significant	one	none	many	U.S. West (local telephone)
Monopsony	<b>none</b>	many	significant	one	Apple Computer and Motorola
Oligopoly	significant	few	none	many	Farm equipment
Oligopsony	none	many	significant	few	Live cattle for slaughter
Monopolistic Competition	none	many	none	many	Fast food

## II. Perfect competition

### A. Definition

The standard model on which all others are based is the model of perfect (atomistic) competition. This model usually makes seven assumptions concerning market structure. These assumptions follow.

1. All firms produce **homogeneous goods** and consumers view them as identical
2. All buyers and sellers have **perfect information** regarding the price and quality of the product.
3. Buyers and sellers cannot influence the price at which the product can be purchased or sold nor do they believe they can affect the prices. In other words buyers and sellers are **price takers**.
4. There are **no transactions costs** to participate in the market
5. Each firm bears the full cost of its production process. That is there are **no externalities** that the firm imposes on others. An example of an externality would be pollution.
6. Firms can enter and exit the industry quickly at any time without having to incur special expenses. Thus firms have **freedom of entry and exit**.
7. There is **perfect divisibility of output**.

### B. Definition of a competitive agent

A buyer or seller (agent) is said to be competitive if the agent assumes or believes that the market price is given and that the agent's actions do not influence the market price.

### C. Comparative analysis of six markets

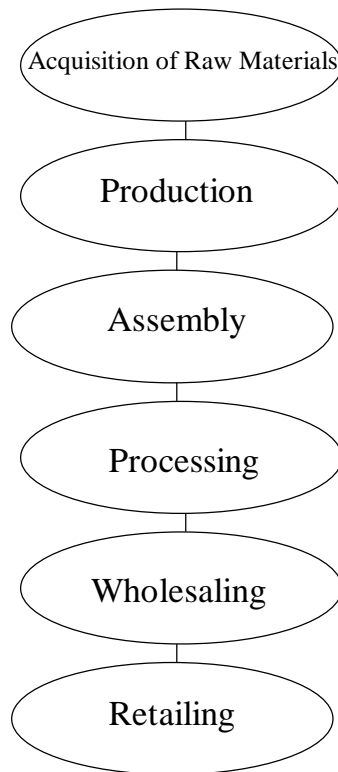
Consider the six markets listed below. To what extent do they satisfy the conditions for perfect competition. In each case give reasons for your conclusion.

1. Market for fresh vegetables in Madison, Wisconsin.
2. Market for seed corn in Iowa.
3. Market for unskilled farm labor in California.
4. World market for wheat.
5. Market for combines in the United States.
6. Market for live cattle in western Kansas.

### III. Vertical chains and market channels

#### A. Definition of vertical chain

The process that begins with the acquisition of raw materials and ends with the distribution and sale of finished goods is known as a **vertical chain**.



#### B. Definition of market channel

A **market channel** is a description of the set of firms or activities that add place, time, form or possession utility to a product as it is transformed from a raw material or intermediate product into one that is purchased by another firm or final consumers. A broadly defined market channel is synonymous with a vertical chain, while a more narrowly defined one may be a subset of a particular chain. Thus we can say that a market channel is a subset of the vertical chain.

**C. Vertical chains in agriculture**

In studying agricultural markets it is often useful to consider not just the exchange of a commodity in one of its forms but to consider the whole chain of markets that exist from production to consumption. While the form of this chain or channel is different for each good, some general stages usually apply.

1. Production
  - a. creation of form utility by converting raw materials into a specific product
  - b. addition of time utility if the product is stored after production
2. Assembly
  - a. addition of place utility through transportation
  - b. addition of time utility by coordinating delivery and use
  - c. provision of form utility through sorting, grading etc.
3. Processing
  - a. addition of form utility as the product is altered, modified, transformed, etc.
  - b. addition of place utility depending on location of processor
4. Wholesaling
  - a. addition of place utility through transportation
  - b. addition of time utility through storage
5. Retailing
  - a. addition of place utility through transportation and display
  - b. addition of time utility through storage
  - c. addition of form utility through promotion
6. Consumption
  - a. addition of place utility in bringing the product home
  - b. addition of form utility if the product is prepared by the consumer
  - c. addition of time utility through storage

**Literature Cited**

Marshall, A. Principles of Economics, 8th edition. London: Macmillan, 1946