



AGRICULTURAL ECONOMICS & MARKETING

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**Upstep Review Center
2023 LEA Review**

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Introduction

Commonly Used Terms in Agricultural Economics

Agriculture

- Root Word: Latin “ Ager Cultura” Meaning, “Cultivation of the Fields”
- is the most comprehensive word used to denote the many ways in which crop plants and domestic animals sustain the global human population by providing food and other products (Harris and Fuller, 2014)
- a form of land use and economy that resulted from the combination of cultivation (a bundle of human actions focused on preparing soil and planting, tending, and harvesting plants) and domestication (a bundle of genetic and morphological changes that have increased the ability of plants to adapt to cultivation)
 - **Cultivation** - activity through which humans become directly involved in the management of the lives and life cycles of certain plants
 - **Domestication** - a biological phenomenon traits in crops that result from adaptation to cultivation and by which they differ from close wild relatives
- is the systematic raising of useful plants and livestock under the management of man (Rimando, T.J. 2004. Crop Science 1: Fundamentals of Crop Science)
- the deliberate effort to modify a portion of Earth's surface through the cultivation of crops and the raising of livestock for sustenance or economic gain. (Rubenstein, J.M. 2003. The Cultural Landscape: An Introduction to Human Geography)
- the art and science of cultivating the soil, growing crops and raising livestock. It includes the preparation of plant and animal products for people to use and their distribution to markets (National Geographic, 2023).
- includes farming in all branches and, among other things, includes the cultivation and tillage of soil, dairying, the production, cultivation, growing, and harvesting of any agricultural and horticultural commodities, the raising of livestock or poultry, and any practices performed by a farmer on a farm as an incident to or in conjunction with such farming operations, but does not include the manufacturing or processing of sugar, coconuts, abaca, tobacco, pineapple or other farm products. (Art. 97 (d), Chapter I, Title II, Labor Code of the Philippines).

Subsectors of Philippine Agriculture (Philippine Statistics Authority)

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The Philippine Statistics Authority (PSA) classifies the subsectors of the country's agriculture sector into:

1. Crop subsector

- includes industrial, major, minor, non-food, permanent/perennial, priority, root, temporary, and vegetable crops .

Classifications

a. Major crops

- 22 crops, which collectively account for almost 95 percent of the total crop production. These include palay, corn, coconut, sugarcane, banana, pineapple, coffee, mango, tobacco, abaca, potato, mongo, cassava, sweet potato, onion, tomato, ampalaya fruit, cabbage, eggplant, calamansi, rubber, and cacao.

b. Minor crops

- refer to all the remaining crops other than the major crops. This group accounts for the remaining 5 percent of the total crop production.

Commodity grouping

a. Cereals

- defined as any plants cultivated for seed as human food (Barton, 2016) eg. palay and corn

b. Industrial crops

- crops that are used as inputs to other industries such as rubber, castor beans, abaca, and oil palm

c. Non-food crops

- crops other than for food consumption; grown for their aesthetic values such as ornamental plants and cut flowers; also include agriculture-derived products such as rice hay and coconut leaves.

d. Permanent or perennial crops

- crops which occupy the land for a long period of time and do not need to be replaced after each harvest such as fruit trees, shrubs, and nuts; include productive or fruit-bearing crops such as avocado, coffee, coconut, and other fruit trees

e. Root crops

- crops with well-developed underground edible roots; classified into tubers and roots; roots are starchier and richer in carbohydrates which include *gabi*, *ubi*, and white potato; tubers include beets, radish, carrots, and turnips

f. Temporary crops

- crops which are grown seasonally and with a growing cycle of less than one year and which must be sown and planted again for production after each harvest. Some of these crops grow beyond one year but are eventually uprooted to start another production cycle, e. g., peanut, mongo, cassava, tomato, garlic, onion, cabbage, and eggplant.

g. Vegetable crops

- mostly temporary crops which are either classified agronomically as such or based on the purpose for which they are used, like jackfruit which on its young stage, is classified as a vegetable.

Priority crops

- identified national banner crops and various regional priority crops of the Key Commercial Crops Development Program (KCCDP), High-Value Commercial Crops (HVCC) Program and now the Key Commodity Road Maps of the Department of Agriculture, which are being developed because of their industrial and commercial potentials; include cashew, durian, highland vegetables, papaya, lanzones, and ginger

2. Livestock subsector

- includes beef cattle, carabao, swine/hog, goat, and dairy animals
- a. **Commercial farm** - refers to any farm which satisfies at least one of the following criteria:
 - at least 21 heads of adult animals and no young animal
 - at least 41 heads of young animals
 - at least 10 heads of adult animals and 22 heads of young animals
- b. **Backyard farm** - all livestock raisers that did not satisfy the above criteria
- c. **Dairy farm** - where dairy animals are raised for milk production and classified as:
 - *full-time dairying* - operators engaged in dairying all throughout the year;
 - *incidental dairying* - operators engaged in dairying occasionally and/or incidental to the giving birth of dams

3. Poultry subsector

- includes chicken, duck, and other poultry types in the form of meat and egg
- a. **Commercial farm** - refers to any farm which satisfies at least one of the following conditions:
 - at least 500 layers or 1,000 broilers
 - at least 100 layers and 100 broilers if raised in combination
 - or at least 100 head duck regardless of age
- b. **Backyard farm** - any farm that does not qualify as a commercial farm

4. Aquaculture

- fishery operations involving all forms of raising and culturing of fish and other fishery species in fresh, brackish, and marine water areas
- a. **Aquafarm**
 - farming facility used in the culture or propagation of aquatic species including fish, mollusk, crustaceans, and aquatic plants for purposes of rearing and culturing to enhance production
- b. **Fishpond**
 - land-based type of aquafarm; body of water (artificial or natural) where fish and other aquatic products are cultured, raised, or cultivated under controlled conditions

c. Fish pen

- artificial enclosure constructed within a body of water for culturing fish, fishery/aquatic resources made up of bamboo poles closely arranged in an enclosure with wooden material, screen, or nylon netting to prevent the escape of fish

d. Fish cage

- stationary or floating fish enclosure of synthetic net wire/bamboo screen or other materials set in the form of an inverted mosquito net ("hapa" type) with or without cover with all sides either tied to poles staked to the water bottom or with anchored floats for aquaculture purposes

e. Oyster/mussel farm

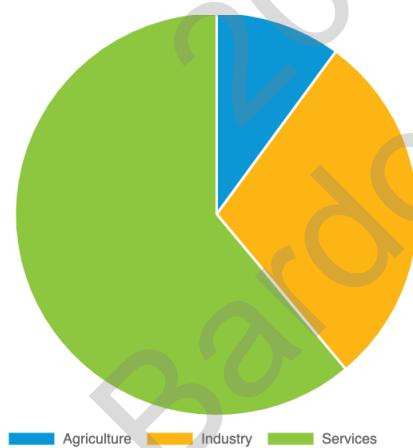
- aquafarm involved in the cultivation of oyster/mussel in shallow brackish or marine areas by any method for production purposes

f. Seaweed farm

- aquafarm involved in the cultivation of seaweed in suitable water areas by any method with appropriate intensive care for production in commercial quantities

Three Sectors of the Philippine Economy (Source: Asian Development Bank Key Indicators Database)

- **Agriculture value** - refers to the gross output of the agriculture sector, less the corresponding value of intermediate consumption.
- **Industry value** - refers to the gross output of industry sectors, less the corresponding value of intermediate consumption
- **Service value** - refers to the gross output of services sectors, less the corresponding value of intermediate consumption

**Performance of Philippine Agriculture**

In 2021, agriculture generated 10.07 percent of the Philippines' gross domestic product in 2021, industry contributed approximately about 28.89 percent, and the services industry made up about 61.05 percent.

**Nature and Scope of Economics**

Basics of Economics

Economics

- comes from the Greek words *oikos* which means household and *nomos* which means management.
- the study of how people allocate scarce resources can be efficiently allocated to produce goods and services to satisfy unlimited wants and needs
 - Scarce resources - human, natural, physical and financial
 - Allocation (methodology of economics) - framework, assumptions
 - Human wants and needs - consumption and enjoyments of goods and services

Good

- a physical product, and a service is an intangible product such as a haircut, an insurance policy, or cell phone service.

Scarcity

- a situation wherein the amount of something available is insufficient to satisfy the desire for it. It means that human wants for goods, services and resources exceed what is available.

Resources

- productive items used to produce the goods and services that satisfy human wants and needs.

Trade offs

- are all the alternatives that we give up whenever we choose one course of action over others.

Main Branches of Economics

Microeconomics

- micro comes from Greek word *mikros*, meaning “small”
- the study of individual decision-making units such as individuals, households, and firms
- choices they make and their interaction in specific markets
- focuses on individual parts of an economy, rather than the whole

Macroeconomics

- macro comes from Greek word, *makros*, meaning “large”
- the study of economy-wide activities such as economic growth, business fluctuations, inflation, unemployment, recession, depression, and booms
- economy-wide phenomena, including inflation, unemployment, and economic growth
- focuses on big picture and ignores fine details

Agricultural Economics

- started as a separate discipline in the late 19th century to the beginning of the 20th century due to the outbreak of economic issues related to agriculture after the depression in the 1980s
- applies the principle of economics to crops and animal production.
- an applied social science that deals with how producers, consumers, and societies use scarce and natural resources in the production, processing, marketing, and consumption of food and fiber products.

- Agricultural economists at the micro level are concerned with issues related to resource use in the production, processing, distribution, and consumption of products in the food and fiber system.
- Agricultural economists involved at the macro level are interested in how agriculture and agribusinesses affect domestic and world economies and how the events taking place in other sectors affect these firms and vice versa.

Positive Economics

- study of how economy works; Descriptive, factual statements about the world
- statements about how the economy works are positive statements, whether they are true or not
- accuracy of positive statements can be tested by looking at the facts— and just the facts; uses scientific principles to arrive at objective, testable conclusions
- Answers the question: “What is?”

Example: The unemployment rate is currently at 9 percent. It conveys factual, testable information about the world.

Normative Economics

- prescriptive, value-based statements about the world; study of what should be
- used to make value judgments, identify problems, and prescribe solutions; Incorporate the opinions and underlying morals/standards of those people making the analysis
- statements that suggest what we should do about economic facts, are normative statements; based on values
- Normative statements cannot be proved or disproved by the facts alone
- Answers the question: “What should

Example: The unemployment rate is too high and the government must take action in order to reduce it. Include value judgments and are of a prescriptive nature

Methodology of Economics

Ceteris Paribus

- kind of assumption in economics
- a Latin phrase that generally means "all other things being equal."
- it acts as a shorthand indication of the effect one economic variable has on another, provided all other variables remain the same.

Example of usage: The demand curve slopes downward because, ceteris paribus, lower prices imply a greater quantity demanded.

Other terms

Absolute Price

- a price in isolation, without reference to other prices.

Relative Prices

- the prices of goods relative to each other.

Opportunity cost

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- refers to the implicit cost associated with the next best alternative in a set of choices available to decision makers.

Marginal

- refers to the focus on the cost or benefit of the next unit or individual, for example, the cost to produce one more kilogram of mangoes or the profit earned by adding one more worker.

Marginal Analysis

- an examination of the additional benefits of an activity compared to the additional costs incurred by that same activity.

Producer

- an individual or firm that produces (makes; manufactures) a good or provides a service.

Consumer

- an individual or household that purchases a good or a service.

Basic Economic Problems

What to produce?

- what society desires; do we produce everything in this country? If not, which goods will we produce here and which goods will we import?

How much to produce?

- how much of the food or service society desires; once we have decided what goods to produce, next question: How much of each good will we produce?

How to produce?

- who will produce and with what resources and production techniques; Suppose we have decided on quantities of goods that will be produced. next question: What techniques to use in production?

For whom to produce?

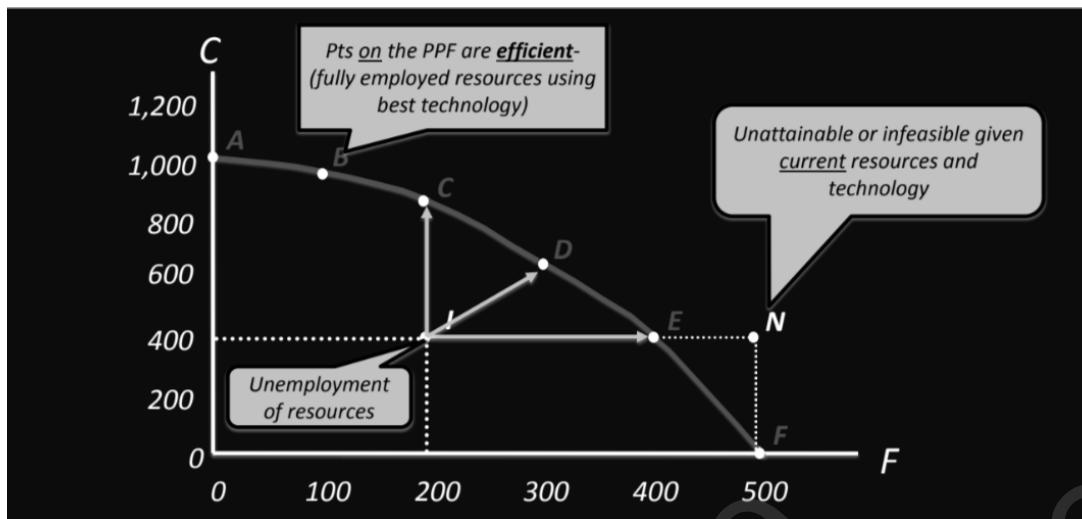
- who gets to eat the fruit of economic activity; who benefits from the goods that were produced?

Production Possibility Frontier

- is a curve illustrating the varying amounts of two products that can be produced when both depend on the same finite resources.
- demonstrates that the production of one commodity may increase only if the production of the other commodity decreases.
- is a decision-making tool for managers deciding on the optimum product mix for the company.
- graphically demonstrates growth, trade-offs, opportunity costs, and efficiency.

Assumptions about PPF

- Only two goods can be produced
- Full employment of resources
- Fixed Resources (Ceteris Paribus)
- Fixed Technology



Alternative Economic Systems

Economic system

- the method used by a society to produce and distribute goods and services.
- type of economy is determined by the extent of government involvement in economic decision making.

1. Traditional Economic System

- allocation of resources is based on traditions, rituals, habits, or customs
- roles are defined by family especially the elderly members
- people work together for the common good
- little individual choice
- Customs and religion determine the WHAT, HOW, HOW MUCH, AND FOR WHOM.

2. Free Market Economy

- Private ownership of property/resources
- Business decisions are driven by the desire to earn a profit
- Little government involvement in the economy. (Laissez Faire)
- Individuals OWN resources and answer the four economic questions.
- Wide variety of goods available to consumers.
- Competition and Self-Interest work together to regulate the economy (keep prices down and quality up).
- Consumers decide WHAT should be produced.
- Businesses determine HOW the products will be produced.
- WHO buys the products? The people with the most money are able to buy more goods and services.

3. Centrally Planned Economy

- In a centrally planned economy (communism) the government owns all the resources and decides what to produce, how much to produce, and who will receive it.
- All resources are government-owned.

- One person (dictator) or a group of officials decide WHAT products are needed.
- The government runs all businesses, controls all employment, and decides HOW goods and services will be produced.
- The government decides WHO receives the products that are produced.

4. Mixed Economy

- Individuals and businesses as decision makers for the private sector
- Government as decision maker for the public sector.
- A greater government role than in a free market economy
- Most common economic system today

Economic Ideologies of Nations

Capitalism

- an economic system characterized by private ownership of the means of production, especially in the industrial sector.
- **Laissez-faire theory of capitalism**
 - dictates that government should, for the most part, refrain from interfering in the economy, with its main role being to protect the free market and prevent the unfair economic dynamic created by monopolies and oligarchies

Communism

- is a political and economic ideology that positions itself in opposition to liberal democracy and capitalism, advocating instead a classless system in which the means of production are owned communally and private property is nonexistent or severely curtailed.

Socialism

- every member of society theoretically has equal ownership of the factors of production—natural resources, labor, capital goods, and entrepreneurship—as well as an equal share of the economic output
- is a populist economic and political system based on public ownership (also known as collective or common ownership) of the means of production.

Fascism

- system in which the government controls the private entities that own the factors of production.
- incorporates elements of both capitalism and socialism.
- Fascist economics thus supports a blend of both private and public ownership over the means of production—there is an emphasis on private profit, but at the same time, the national interest is ultimately more important.

Economic Goals

Economic policies are developed to accomplish specific objectives. In general, economic systems work toward a mix of these seven goals:

Economic Freedom

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- the degree to which producers and consumers can make their own choices in the market place

Economic Equity

- the degree to which opportunities to succeed are equal for everyone OR the degree to which everyone has an equal share of select goods, services, or resources

Economic Security

- the degree to which certain goods and services (usually employment/income, healthcare, and housing) are guaranteed to citizens by the government

Economic Growth

- the degree to which the overall production of goods and services in the economy is increasing (real GDP)

Economic Efficiency

- the degree to which productive resources are being used in the best possible method given the demand for goods and services

Price Stability

- the degree to which price changes are predictable and moderate

Full Employment

- the degree to which individuals who are able and willing to work can find jobs even when not guaranteed

Economic Sustainability

- the degree to which economic growth can be replicated and maintained in the long run given the environmental, financial, technological, and societal limitations of the country

Economic Theories

Prehistory

- encompasses the period from the origins of human culture to the advent of the written record.
- witnessed some of the most important developments that still constitute the economic basis of our modern life.
- These are, among others: (1) the transition from foraging to farming as the basic mode of subsistence; (2) intensification and extensification strategies of resource use; and, in some regions of the Near East and Europe, (3) the origins of surplus production, craft specialization, division of labour, inequality, commodification, premonetary currency, barter and trade.

Classical Economics

- focuses on producing goods and services, expanding the market, free trade, and competition to overall economic growth
- asserts that the power of the market system, if left alone, will ensure full employment of economic resources.
- Classical economists believed that although occasional deviations from full employment result from economic and political events, automatic adjustments in market prices, wages, and interest rates will restore the economy to full employment.

- **Adam Smith**

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- was considered the father of modern economics; most famous for his 1776 book, "The Wealth of Nations." (wealth of any country is not derived from its gold reserve but the national income backed by the effective division of labor and the optimum use of capital)
 - his ideas: importance of free markets, assembly-line production methods, and gross domestic product (GDP)-formed the basis for theories of classical economics.
 - coined the phrase "invisible hand" to explain the invisible market forces aligning individuals' actions out of self-interest to benefit society
 - emphasized laissez-faire ideas promoting the free market, free trade, and free competition for economic growth
- **David Ricardo**
 - best known for his theory on wages and profit, labor theory of value, theory of comparative advantage, and theory of rents.
 - David Ricardo and several other economists also simultaneously and independently discovered the law of diminishing marginal returns. His most well-known work is the Principles of Political Economy and Taxation (1817).
 - **Thomas Robert Malthus**
 - was a famous 18th-century British economist known for the population growth philosophies outlined in his 1798 book "An Essay on the Principle of Population."
 - theorized that populations would continue expanding until growth is stopped or reversed by disease, famine, war, or calamity
 - also known for developing an exponential formula used to forecast population growth, which is currently known as the Malthusian growth model.
 - **John Stuart Mill**
 - most well-known for his 1848 work, "Principles of Political Economy," which combined the disciplines of philosophy and economics and advocated that population limits and slowed economic growth would be beneficial to the environment and increase public goods.

Neoclassical economics

- It is a broad theory that focuses on supply and demand as the driving forces behind the production, pricing, and consumption of goods and services. It emerged in around 1900 to compete with the earlier theories of classical economics.
 - Neoclassical economists believe that a consumer's first concern is to maximize personal satisfaction.
 - stipulates that a product or service often has value above and beyond its production costs.
 - states that competition leads to an efficient allocation of resources within an economy
- **Leon Walras**

- created general equilibrium theory which says that all markets must be "cleared" of any excess supply and demand to be in equilibrium.
- **Alfred Marshall**
 - his Principles of Economics developed a supply-and-demand curve that is still used to demonstrate the point at which the market is in equilibrium.
 - most important contributions to microeconomics was his introduction of the concept of price elasticity of demand, which examines how price changes affect demand.
- **John Maynard Keynes**
 - founder of Keynesian economics; father of macroeconomics;
 - His theories of Keynesian economics addressed, among other things, the causes of long-term unemployment.
 - In his paper titled "The General Theory of Employment, Interest and Money," Keynes became an outspoken proponent of full employment and government intervention as a way to stop economic recession.

Socialist economics

- a term which refers in its descriptive sense to the economic effects of nations with large state sectors where the government directs the kind and nature of production.
- **Karl Marx**
 - he claimed that there are two major flaws in capitalism that lead to exploitation: the chaotic nature of the free market and surplus labor.

Microeconomics

Market, Supply and Demand

Market

- an area that facilitates transactions between buyers and sellers.
- mechanisms to determine price and quantities of goods and services in the economy
- Not necessarily a physical place (digital marketing)

Price

- value of a good or service in terms of money
- terms of exchange
 - For consumers
 - buy more of cheaper goods
 - buy less of expensive goods
 - For producers
 - produce more of goods whose price goes up
 - produce less of those whose price goes down

The Concept of Demand

Demand

- refers to the amount of some good or service consumers are willing and able to purchase at each price
- willing and able to purchase at alternative prices, ceteris paribus
- conveys both the elements of desire for the commodity and capacity to pay
 - Emphasizes the relationship between quantity bought and its price, although there may be other factors that determine how much a consumer wants to purchase.

Law of Demand

- the quantity demanded (Q_d) of a good or service is negatively or inversely related to its own price (P_o).
- this means that demand curve slopes downward.

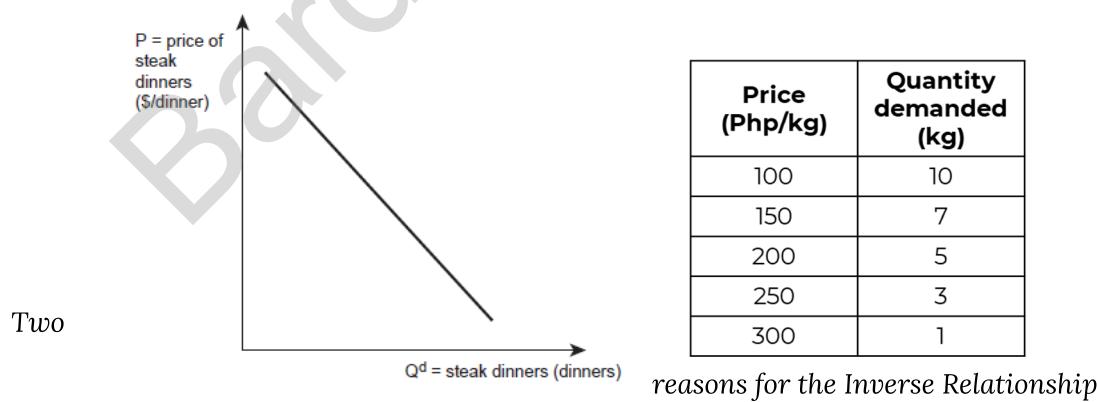


Figure 8.15 The demand for steak dinners in Philadelphia.

- Substitution Effect

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- When price of a good increases, the consumer substitutes the lower priced good for the more expensive ones.
- this assumes that the consumer is maximizing utility, as relative prices change

- **Income Effect**

- When price decreases, the consumer's real income (or purchasing power) increases, so he tends to buy more.
- this assumes that all the other prices remain constant

Presentation of Demand Relationship

a. Demand schedule

- a table that shows the quantity demanded of a good or service at different price levels.

Price (Php/kg)	Quantity demanded (kg)
100	10
150	7
200	5
250	3
300	1

b. Demand curve

- represents the relationship between the price of a good or service and the quantity demanded for a given period of time

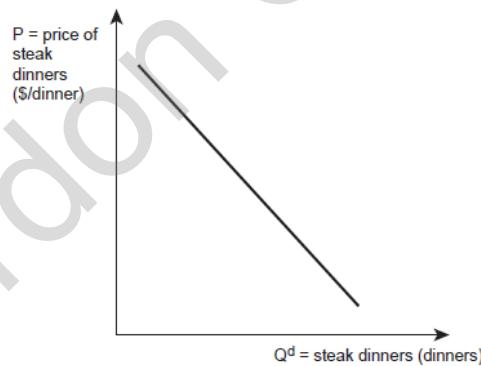


Figure 8.15 The demand for steak dinners in Philadelphia.

c. Demand function

- a mathematical equation which expresses the demand of a product or service as a function of its price and other factors such as the prices of the substitutes and complementary goods, income, etc.

$$Q_d = a - bP$$

Where:

Q_d = quantity demanded

a = horizontal intercept of the equation or the quantity demanded when price is zero

$-b$ = slope of the function

Types of Demand

Individual Demand

- defined as the demand for products or services by an individual consumer.

Market Demand

- quantities of a good (or service) which all consumers in a given market are willing and able to purchase as price varies, ceteris paribus
- summation of individual demand curves

Derived demand

- defined when the goods manufactured are related to the demand for other products. For example, the demand for silk yarn is the result of the demand for silk cloth

Price demand

- refers to the number of goods or services an individual is eager to buy at a given price.

Income demand

- means the eagerness of a person to buy a definite quantity at a given income level.

Cross demand

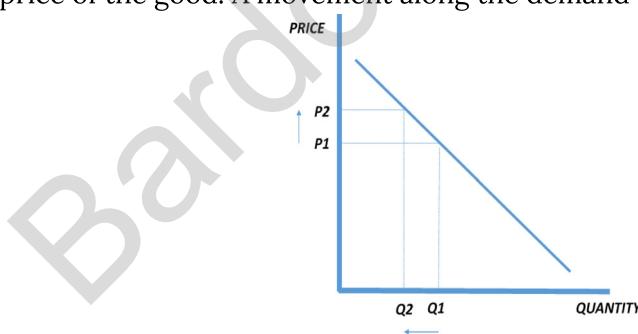
- This is one of the important types of demand where the demand of a product is not subjected to its own price but the price of other similar products is known as the cross demand

Effective demand

- consists of both a desire for the product and the ability to pay for it

Change in Quantity Demanded

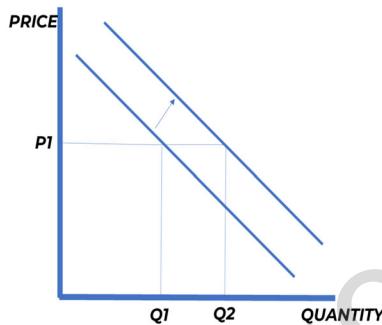
- when a change in the quantity of a good purchased is a result of a change in the price of the good. A movement along the demand curve.



Change in Demand

- when a change in the quantity of a good purchased is a result of a change in an economic variable other than the price of the good. A shift in the demand curve.

- Rightward shift means an increase in demand; leftward shift means decrease in demand
- When demand shifts to the right, demand increases. This causes quantity demanded to be greater than it was prior to the shift, for each and every price level.



Factors affecting Demand

1. Price of the commodity or Own Price

- most important determinant of demand; When the own price of a commodity falls, its demand rises and when its own price rises, its demand falls.

2. Price of related goods

- related goods are two types - substitute and complementary
 - o **Substitutes goods**
 - Goods that are substitutable with each other (not necessarily perfect).
 - Examples: Chicken and Pork
 - When the price of a substitute increases, quantity bought of a good increases (direct relationship)
 - o **Complementary goods**
 - Goods that are used or consumed together.
 - Examples: rice and chicken, rice and pork
 - When the price of a complement increases, quantity bought of a good decreases (inverse relationship)

3. Income

- As income changes, demand a commodity usually changes
 - a. **Normal good**
 - is a good that experiences an increase in its demand due to a rise in consumers' income.
 - **Luxury Good**
 - a good whose consumption increases at an increasing rate in response to an increase in income.
 - **Necessity good**
 - a good that consumers will buy regardless of changes in their income levels
 - b. **Inferior good**

- which are the opposite of normal goods—are anything a consumer would demand less of if they had a higher level of real income.
- associated with those who typically fall into a lower socio-economic class.
 - **Giffen good**
 - all Giffen goods are inferior goods, but not all inferior goods are Giffen goods.
 - is a product that people consume more of as the price rises and vice versa—violating the basic law of demand.

4. Consumer tastes and preferences

- When consumer tastes shift towards a particular good, greater amounts of a good are demanded at each price.
- Example: consumers preference for drinking mineral water increases so its demand will increase.
- If consumer preferences change away from a good, its demand will decrease; at every possible price, less of the good is demanded than before.

5. Consumer expectations

- Expectations about future prices and income affect our current demand for many goods and services.
- If we expect prices of dried fish to increase with the coming of the rainy season, we might stock up on the good to avoid the expected price increase. Thus, current demand for dried fish might increase
- Those who expect to lose their jobs due to bad economic conditions, will reduce their demand for a variety of goods in the current period.

6. Number of Consumers

- An increase in the number of consumers increases the market demand
- Example: demand for food increases with an increase in population. Less consumers will cause the market demand to decrease

Determinants of Agricultural Labor Demand

1. Demand for agricultural goods and services
2. Training and education of agricultural workers
3. Technology (e.g., mechanization)
4. Number of farms and firms
5. Government regulations (e.g., regularization of farm workers)
6. Price and availability of other agricultural inputs

The Concept of Elasticity

Elasticity

- a measure of how much buyers and sellers respond to changes in market conditions
- allows us to analyze supply and demand with greater precision.

The Elasticity of Demand

1. Own-Price Elasticity (ε_d)

- the percentage change in the quantity demanded in response to a percentage change in price.
- responsiveness of quantity demanded of a good to changes in own-price.

$$\varepsilon_d = \frac{\% \Delta Qd}{\% \Delta Po}$$

Two ways to measure:

a. Point Elasticity

- elasticity is measured for a single point; can be obtained if demand function is known

b. Arc elasticity

- computed for two points along a demand curve; done if we have limited number of observations
- elasticity at the larger segment of the demand curve
- used if price changes by a large amount
- more applicable to agriculture where prices of farm products change frequently and vary rapidly from place to place

Interpretation of Own Price Elasticity

- $|\varepsilon_d| = 0$

Perfectly Inelastic Demand- demand is perfectly unresponsive to price changes.

- $|\varepsilon_d| < 1$

Inelastic Demand- demand is relatively responsive to price changes.

- $|\varepsilon_d| > 1$

Elastic Demand- demand is perfectly responsive to price changes.

- $|\varepsilon_d| = 1$

Unit Elastic Demand- demand is changing by the same proportion as the price change.

- $|\varepsilon_d| = \infty$

Perfectly Elastic Demand- demand is perfectly responsive to price changes

2. Cross Price Elasticity (θ_d)

- the responsiveness of quantity demanded to changes in the price of another commodity

$$\theta_d = \frac{\% \Delta Qd}{\% \Delta Pr} = \frac{Qd_2 - Qd_1}{Qd_2 + Qd_1} \div \frac{Pr_2 - Pr_1}{Pr_2 + Pr_1}$$

$$\theta_d = \frac{\% \Delta Qd}{\% \Delta Pr} = \frac{\text{diff } Q}{\text{sum } Q} \times \frac{\text{sum } Pr}{\text{diff } Pr}$$

$\theta_d < 0$ (complements)

$\theta_d = 0$ (independent)

$\theta_d > 0$ (substitutes)

a. Substitute goods

- cross price elasticity of demand is positive; goods whose consumption is mutually exclusive
- A fall in the price of a substitute brings a decrease in the quantity demanded of the good.
- The quantity demanded of a good and the price of its substitute change in the same direction.

b. Complement goods

- cross price elasticity of demand is negative; goods that are consumed together
- A fall in the price of a complement brings an increase in the quantity demanded of the good.
- The quantity demanded of a good and the price of its substitute change in the opposite direction.

c. Independent goods

- cross price elasticity of demand is equal to zero
- goods whose consumption are totally independent of the other.

3. Income Elasticity (η_d)

- the responsiveness of quantity demanded to changes in the income of the consumer.

$$\eta_d = \frac{\% \Delta Qd}{\% \Delta I} = \frac{Qd_2 - Qd_1}{Qd_2 + Qd_1} \div \frac{I_2 - I_1}{I_2 + I_1}$$

$$\eta_d = \frac{\% \Delta Qd}{\% \Delta I} = \frac{\text{diff } Q}{\text{sum } Q} \times \frac{\text{sum } I}{\text{diff } I}$$

$\eta_d < 0$ (inferior good)

$0 < \eta_d < 1$ (necessity)

$$\eta_d > 1 \quad (\text{normal good})$$

a. Normal good

- the income elasticity is positive
- is a good that experiences an increase in its demand due to a rise in consumers' income
 - **Necessary Goods**
 - normal good, but one where consumption increases at a decreasing rate as income increases
 - Percentage increase in the consumption of necessary goods is less than the percentage increase in income
 - **Luxury Goods**
 - a good whose consumption increases at an increasing rate in response to an increase in income.
 - Percentage increase in the consumption of luxury goods is more than the percentage increase in income

b. Inferior good

- the income elasticity is negative
- which are the opposite of normal goods—are anything a consumer would demand less of if they had a higher level of real income.
- are also associated with those who typically fall into a lower socio-economic class.
- **Giffen good**
 - rare forms of inferior goods that have no ready substitute or alternative
 - is a product that people consume more of as the price rises and vice versa—violating the basic law of demand.

The Concept of Supply

Supply

- refers to the various quantities of a good or service that producers are willing and able to sell at alternative prices, *ceteris paribus*.
 - Firms are motivated to produce and sell more at higher prices.
 - Emphasizes the relationship between quantity sold of a commodity and its price.
 - There are other factors that determine how much a producer would like to produce and sell.

Law of Supply

- asserts that the quantity supplied (Q_s) of a good or service is positively or directly related to its own price (P_o).

- states that there is a positive relationship between price and quantity of a good supplied
- means that supply curves typically have a positive slope or upward sloping

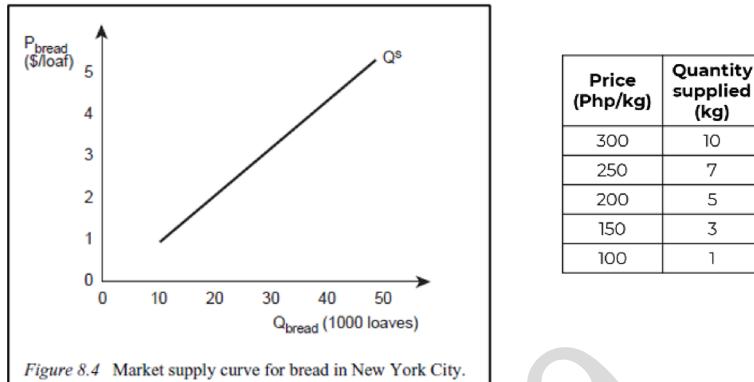


Figure 8.4 Market supply curve for bread in New York City.

Presentation of Supply Relationship**a. Supply schedule**

- a table that shows the quantity supplied of a good or service at different price levels.

b. Supply curve

- represents the relationship between the price of a good or service and the quantity supplied for a given period of time

c. Supply function

- a mathematical equation which expresses the supply of a product or service as a function of its price and other factors

$$Q_s = c + bP$$

Where:

Q_s = quantity supplied

c = horizontal intercept of the equation or the quantity supplied when price is zero

b = slope of the function

Factors affecting Supply**1. Own Price of the good (as depicted by the Law of Supply)**

- most important determinant of demand; When the own price of a commodity falls, its supply decreases and when its own price rises, its supply increases.

2. Prices of related goods in production

- Resources can be employed to produce several alternative goods and services.

3. Resource Prices

- When prices of inputs to production increase, the supply of the firm's product decreases.
- Decreases in resource prices, however, translate to an increase in supply. The entire supply curve shifts to the right.

4. Technology

- A change in production techniques can lower or raise production costs and affect supply.
- Improvements in technology increase production (or supply).
- A cost-saving invention will enable firms to produce and sell more goods than before at any given price.
- New high yielding crop varieties will increase production on the same amount of land

5. Producer Expectations

- When producers expect the price of their product to increase in the future, they may hoard their output for later sale, thus reducing supply in the present period.
- If firms expect that the price of their product will fall in the near future, supply may increase in the current period as firms try to increase production as well as to dispose of their inventory.

6. Number of sellers

- As the number of sellers increases, so will total supply.
- The market supply is the horizontal summation of the supply schedules of individual producers.
- As more firms enter the market, more will offered for sale at each possible price, increasing the supply
- Similarly, the supply decreases when firms exit the market.

The Concept of Elasticity

Elasticity

- a measure of how much buyers and sellers respond to changes in market conditions
- allows us to analyze supply and demand with greater precision.

The Elasticity of Supply

- the percentage change in the quantity supplied in response to a percentage increase in price
- measures the responsiveness of quantity supplied to changes in price.
- Defined as the percentage change in quantity supplied of a good divided by the percentage change in the price of the good.

$$\epsilon_s = \frac{\% \Delta Qs}{\% \Delta P} = \frac{diffQs}{sumQs} \times \frac{sumP}{diffP}$$

Elasticity classifications

a. Inelastic Supply

- a change in price brings about a relatively smaller change in quantity supplied.

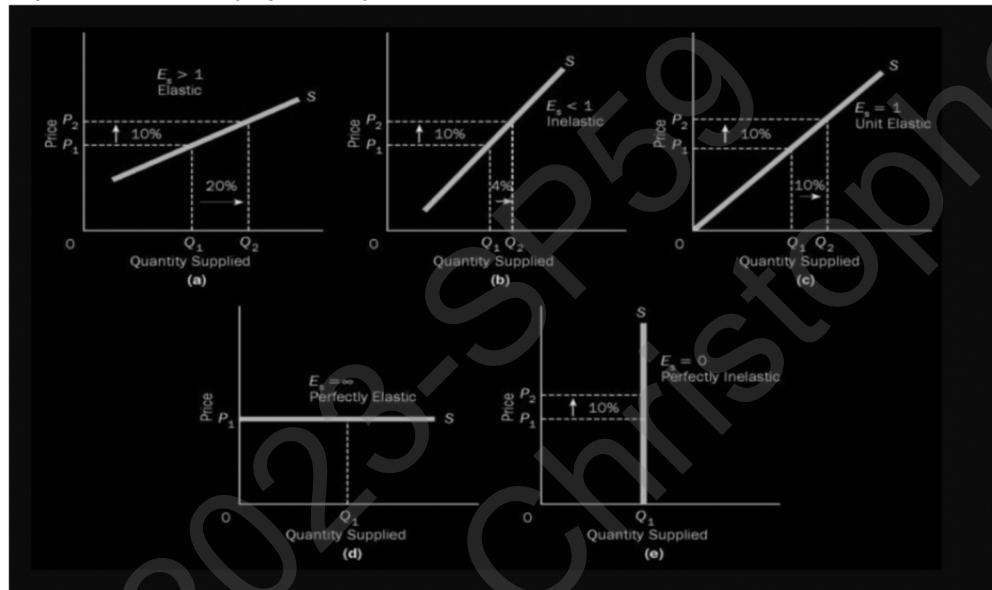
b. Elastic Supply

- a change in price brings about a relatively larger change in quantity supplied.

c. Unitary Elastic Supply

- the percentage change in price brings about an equal percentage change in quantity supplied.

Range of Price Elasticity of Supply



- $|\varepsilon_s| = 0$

Perfectly Inelastic Supply - supply is perfectly unresponsive to price changes.

- $|\varepsilon_s| < 1$

Inelastic Supply - supply is relatively responsive to price changes.

- $|\varepsilon_s| > 1$

Elastic Supply - supply is perfectly responsive to price changes.

- $|\varepsilon_s| = 1$

Unit Elastic Supply - supply is changing by the same proportion as the price change.

- $|\varepsilon_s| = \infty$

Perfectly Elastic Supply - supply is perfectly responsive to price changes.

Change in Quantity Demanded/Supplied VS Change in Demand/Supply

Change in Quantity Demanded

- a movement along the same demand curve, due solely to a change in price, i.e., all other factors held constant.

Change in Demand

- a shift in the entire demand curve (either to the left or to the right) as a result of changes in other factors affecting demand.

Change in Quantity Supplied

- a movement along the same supply curve, due solely to a change in price, i.e., all other factors held constant.

Change in Supply

- a shift in the entire supply curve (either to the left or to the right) as a result of changes in other factors affecting supply.

Market

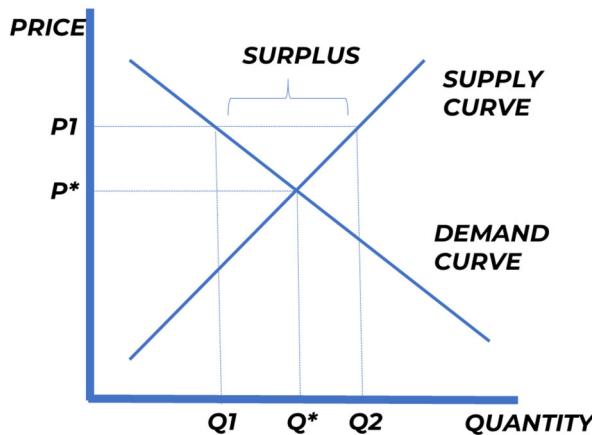
Market equilibrium

- is the condition that exists when quantity supplied and quantity demanded are equal.
- At this point, the amounts producers want to supply exactly match the amounts consumers want to buy
 - **Equilibrium Price** - the price at which the quantity supplied equals the quantity demanded.
 - **Market Price** – prevailing price
 - **Equilibrium Quantity** – the point where quantity supplied is equal to quantity demanded.
 - **Disequilibrium** – a market situation in which the market price does not equalize supply and demand

What will happen if the price is higher than the equilibrium price?

Excess supply, or surplus

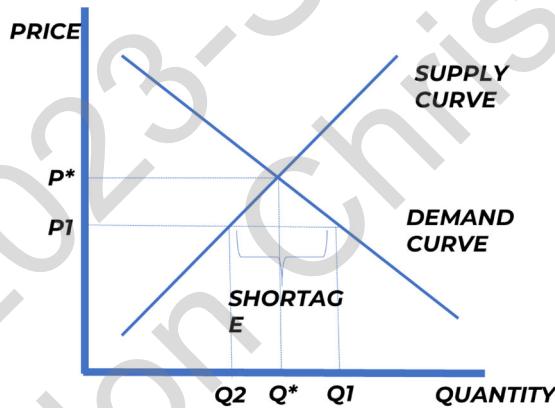
- is the condition that exists when quantity supplied exceeds quantity demanded at the current price.
- When quantity supplied exceeds quantity demanded, price tends to fall until equilibrium is restored.



What will happen if the price is lower than the equilibrium price?

Excess demand, or shortage

- is the condition that exists when quantity demanded exceeds quantity supplied at the current price.
- When quantity demanded exceeds quantity supplied, price tends to rise until equilibrium is restored.



We can summarize the changes in equilibrium with the following table:

Change	Change in P^*	Change in Q^*
Supply increases (shifts right)	decrease in P	increase in Q
Supply decreases (shifts left)	increase in P	decrease in Q
Demand increases (shifts right)	increase in P	increase in Q
Demand decreases (shifts left)	decrease in P	decrease in Q
Demand increases, Supply increases	P (indeterminate)	increase in Q
Demand Increases, Supply decreases	increase in P	Q (indeterminate)
Demand decreases, Supply increases	decrease in P	Q (indeterminate)
Demand decreases, Supply decreases	P (indeterminate)	decrease in Q

Price ceiling

- maximum price set by the government for a specified good or service.

Price floor

- minimum price set by the government for a specified good or service.

Price discrimination

- the business practice of selling the same good at different prices to different customers

Market Structure

- the organization of an industry, typically defined by the number of firms in an industry.
- Determinants of market structure includes: (1) freedom of entry and exit; (2) nature of the product – homogenous (identical), differentiated?; (3) control over supply/output; (4) control over price; and (5) barriers to entry
- Type of market structure influences how a firm behaves: pricing, supply, barriers to entry, efficiency, and competition

1. Perfect Competition

- a market or industry with four characteristics: (1) numerous buyers and sellers, (2) a homogeneous product, (3) freedom of entry and exit, and (4) perfect information

2. Monopoly

- a market structure characterized by a single seller. The firm is the industry.
 - **Natural monopoly** – a monopoly that arises because a single firm can supply a good or service to an entire market at a smaller cost than could two or more firms

3. Oligopoly

- a market structure with a small number of firms, none of which can keep the others from having significant influence.

4. Monopolistic competition

- characterizes an industry in which many firms offer products or services that are similar, but not perfect substitutes.

The Economics of Production**Theory of Production****Short Run and Long Run Concepts****Short run**

- a time span during which some factors are variable and some factors are fixed
- the period of time for which two conditions hold:
 - firm is operating under a fixed scale (fixed factor) of production
 - firms can neither enter nor exit an industry.

Long run

- a time span during which no inputs are fixed; all inputs are variable
- that period of time for which there are no fixed factors of production
 - Firms can increase or decrease the scale of operation

Firm

- an entity concerned with the purchase and employment of resources in the production of various goods and services

Assumptions:

- the firm aims to maximize its profit with the use of resources that are substitutable to a certain degree
- the firm is "a price taker" in terms of the resources it uses.

Business firm

- an organization that specializes in production

Production

- is the process of combining inputs to make outputs

Production function

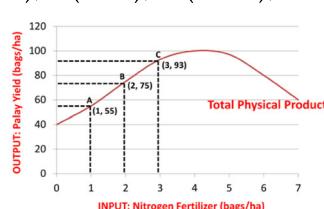
- refers to the physical relationship between the inputs or resources of a firm and their output of goods and services at a given period of time, ceteris paribus
- dependent on different time frames. Firms can produce for a brief or lengthy period of time.

$$Q = f(K \text{ (capital)}, L \text{ (land)}, N \text{ (labor)}, \text{ and } E \text{ (entrepreneurial skills)})$$

INPUT NITROGEN FERTILIZER (bags/ha)	OUTPUT PALAY YIELD (bags/ha)
0	40
1	55
2	75
3	93
4	100
5	97
6	80
7	60

increasing output

decreasing output



Inputs

- are resources that contribute in the production of a commodity
- lumped into these categories: land, labor, capital, entrepreneurial skill
 - a. **Fixed inputs** - resources used at a constant amount in the production of a commodity
 - b. **Variable inputs** - resources that can change in quantity depending on the level of output being produced

Total Product (TP)

- total amount of output produced at different levels of inputs

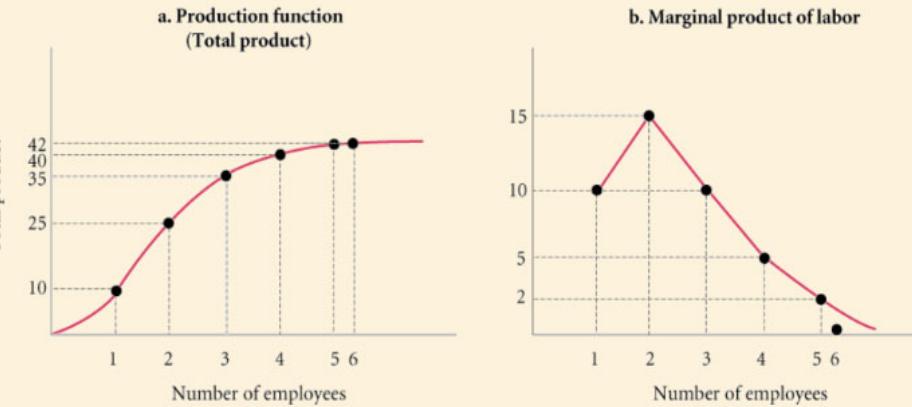
Marginal Product (MP_x)

- rate of change in output as input X is increased by one unit, cet. par.

$$MP_x = \frac{\Delta TP_x}{\Delta X}$$

Production Schedule for Kornik

Labor Units	Total Product	Marginal Product of Labor
0	0	-
1	10	10
2	25	15
3	35	10
4	40	5
5	42	2
6	42	0



Marginal Returns

Law of Diminishing Marginal Returns

- as additional units of one input are combined with a fixed amount of other inputs, a point is always reached at which the additional output produced from the last unit of added input will decline

Constant, increasing, decreasing, and negative returns

- **Constant Returns**

- when each additional unit of input added to the production process yields a constant level of output relative to the previous unit of input. Output increases at a constant rate.

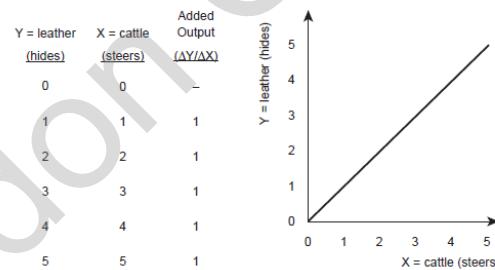


Figure 2.4 Leather production: constant returns.

- **Increasing Returns**

- when each additional unit of input added to the production process yields an increasing level of output relative to the previous unit of input. Output increases at an increasing rate.

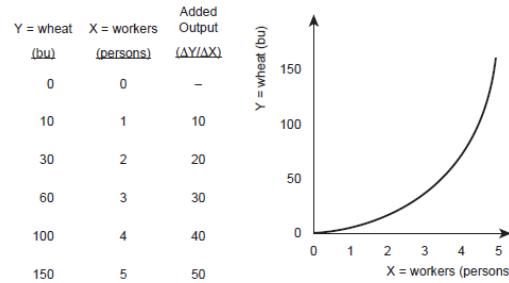


Figure 2.5 Wheat production: increasing returns.

- **Decreasing Returns**

- when each additional unit of input added to the production process yields less additional output relative to the previous unit of input. Output increases at a decreasing rate.

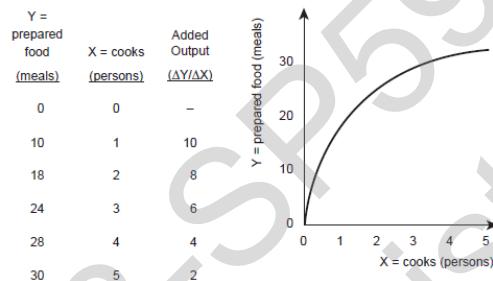


Figure 2.6 Food production: decreasing returns.

- **Negative Returns**

- when each additional unit of input added to the production process results in lower total output relative to the previous unit of input. Output decreases.

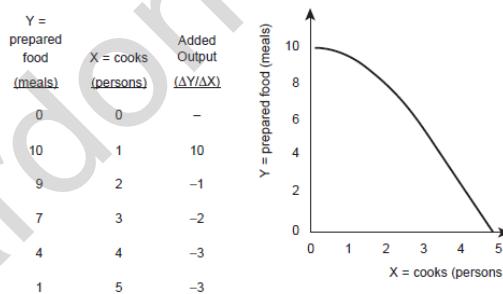


Figure 2.7 Food production: negative returns.

Average Product

- concept commonly associated with efficiency
- measures the total output per unit of input used.
- "productivity" of an input is usually expressed in terms of its average product.
- The greater the value of average product, the higher the efficiency in physical terms

Technological Change

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- change that allows the same level of inputs to produce a greater level of output. Alternatively, technological change allows production of the same level of output with a smaller number of inputs.

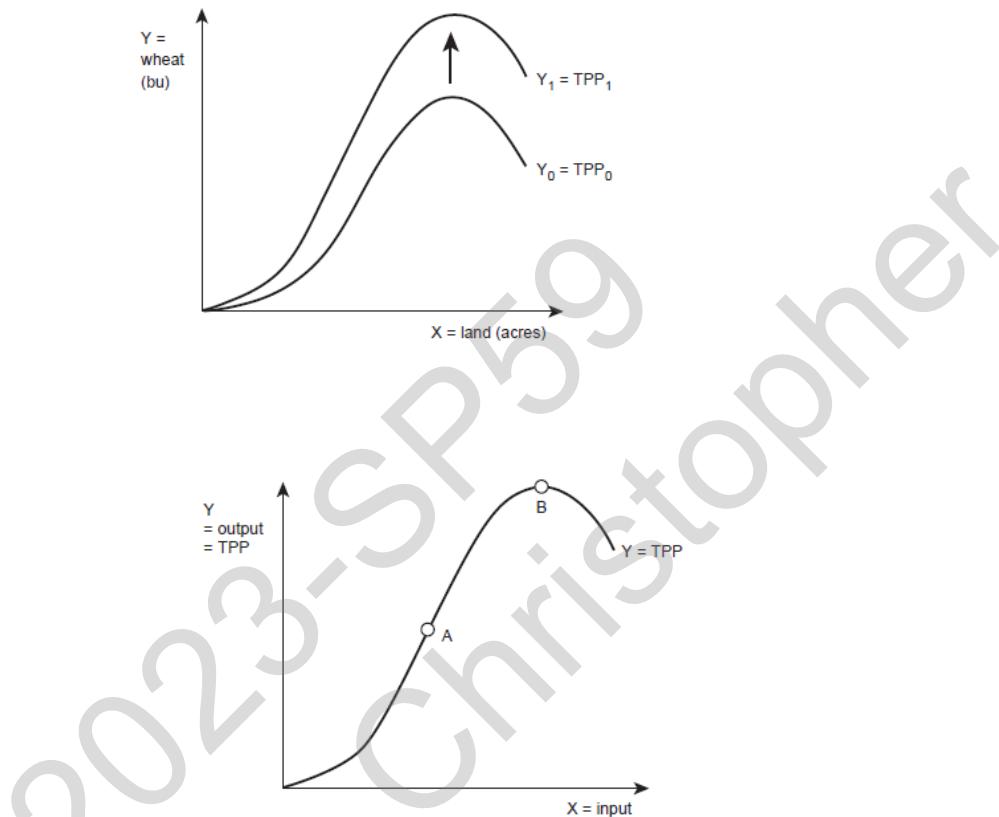


Figure 2.13 Diminishing returns.

Stages of Production

Stage I: Stage of Increasing Returns

MPP increases at first and then decreases; APP increases throughout this stage; TPP increases sharply at this stage

Stage II: Stage of Diminishing Returns

APP starts to diminish; MPP continues to diminish although it is positive; TPP increases at a diminishing rate until it reaches the maximum point

Stage III: Stage of Negative Returns

TPP declines; MPP is zero and becomes negative

Theory of Cost and Production

The Costs of Production

Concept of Cost

Profit

- total revenue minus total costs: $\pi = TR - TC$. The value of production sold minus the cost of producing that output

Total revenue

- the amount paid by buyers and received by sellers of a good, computed as the price of the good times the quantity sold

Total cost – the market value of the inputs a firm uses in production

Accounting Cost

- Explicit cost - financial outlays or costs of resources hired by a firm for production; paid in cash

Economic Cost

- Explicit cost
- Implicit cost - cost of self-owned, self-employed resources
 - **Opportunity Cost** – cost of the best forgone alternative use of the resource

Accounting Profit [π_A]

- total revenue minus explicit costs. $\pi_A = TR - TC_A$. This profit are what accountants calculate, and reflect only the revenue and explicit monetary costs of producing and selling a good.

Economic Profit [π_E]

- total revenue minus both explicit and opportunity costs. $\pi_E = TR - TC_A - \text{opportunity costs}$.

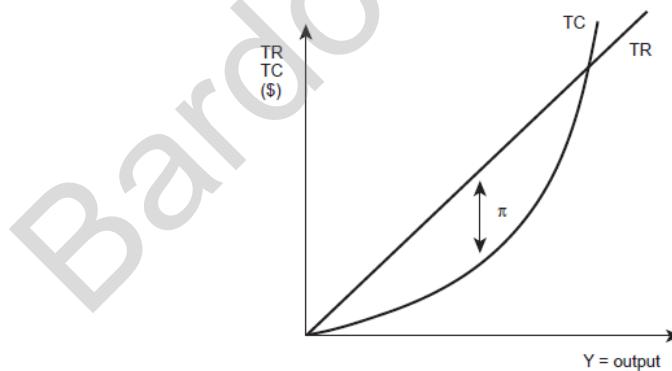


Figure 3.1 Total revenues, total costs, and profits.

Costs and Output

Total Fixed Costs (TFC)

- the total costs of inputs that do not vary with the level of output.

Total Variable Costs (TVC)

- the total costs of inputs that vary with the level of output.

Total Costs (TC)

- is the sum of Total Fixed Costs and Total Variable Costs. $TC = TFC + TVC$

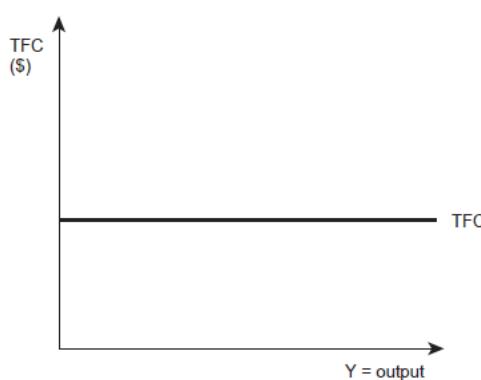


Figure 3.2 Total fixed costs (TFC).

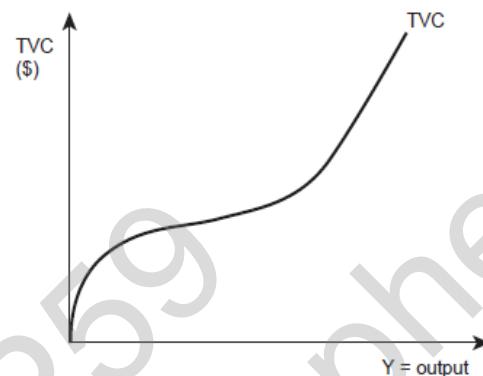


Figure 3.3 Total variable costs (TVC).

Average Fixed Costs (AFC)

- the average cost of the fixed costs per unit of output. $AFC = TFC/Y$.

Average Variable Costs (AVC)

- the average cost of the variable inputs per unit of output. $AVC = TVC/Y$.

Average Total Costs (ATC)

- the average total cost per unit of output. $ATC = TC/Y$.

Marginal Costs (MC)

- the increase in total costs due to the production of one more unit of output. $MC = \Delta TC/\Delta Y$.

Cost curves

MC and AVC curve – MC curve intersects the AVC curve at the minimum point on the AVC curve. At the intersection, MC and AVC are equal.

MP and MC curve – the minimum point of the MC curve is the maximum point of the MP curve

- If $MC > AC$, then AC is increasing
- If $MC < AC$, then AC is decreasing

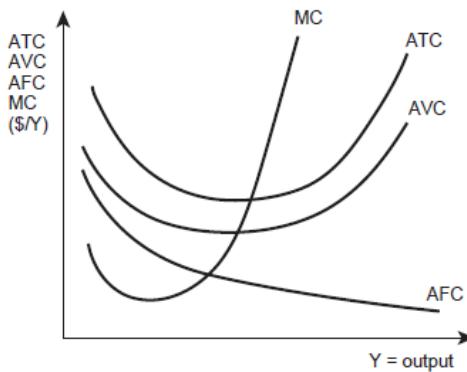


Figure 3.5 Average and marginal costs.

Cost curve example: Vermont dairy farmer

Table 3.2 Vermont dairy farm production costs

$Y = \text{milk}$ (1000 lbs)	$TFC (\$)$	$TVC (\$)$	$TC (\$)$	$ATC (\$/Y)$	$AVC (\$/Y)$	$AFC (\$/Y)$	$MC (\$/Y)$
0	10	0	10	—	—	—	—
1	10	10	20	20	10	10	10
2	10	18	28	14	9	5	8
3	10	23	33	11	7.67	3.33	5
4	10	30	40	10	7.5	2.5	7
5	10	40	50	10	8	2	10
6	10	56	66	11	9.33	1.67	16
7	10	74	84	12	10.6	1.43	18

Profit Maximization

Perfect Competition

- a market or industry with four characteristics: (1) a large number of buyers and sellers, (2) a homogeneous product, (3) freedom of entry and exit, and (4) perfect information
- Under perfect competition, input and output prices are fixed and given
- In a perfectly competitive market, no individual firm can influence the price charged for the industry's product.

Large number of buyers and sellers

- this condition states that there are so many firms selling a product, and so many consumers who purchase it, that each individual firm is so small relative to the market that it cannot affect the price.

Homogeneous Product

- a product that is the same no matter which producer produces it. The producer of a good cannot be identified by the consumer.

Freedom to enter and exit

- an industry means that there are no “barriers to entry.” Any firm can enter or leave the industry without encountering any special government obstacles, or financial limitations.

Perfect Information

- a situation where all buyers and sellers in a market have complete access to technological information and all input and output prices.

MR and MC

Profit maximization using marginal revenue and marginal cost curves

Marginal Revenue (MR) – the addition to total revenue from selling one more unit of output.

$$MR = \Delta TR / \Delta Y$$

- To find the profit-maximizing level of output, the firm sets $MR = MC$, or $P_Y = MC$; at that point $TR > TC$

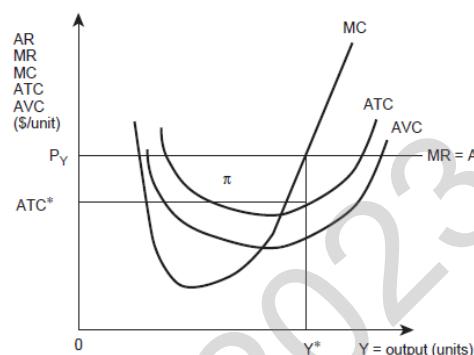


Figure 4.8 Positive economic profits.

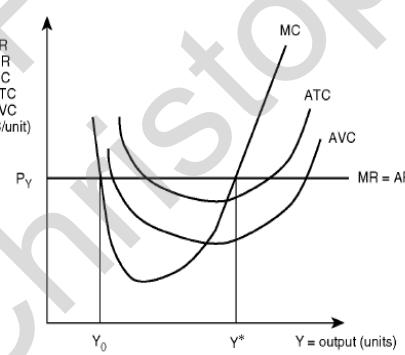


Figure 4.7 The profit-maximizing level of output: marginal revenue and cost.

Break-even point

- level of production at which total revenue (TR) is equal to total cost (TC)
- occurs when $P_Y = MC$ at the minipoint on the ATC. At the break-even point, there are no economic profit or losses

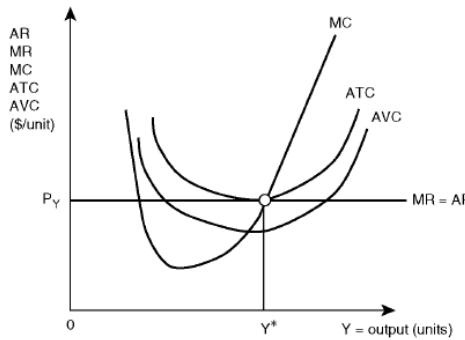


Figure 4.10 The break-even point.

Shutdown Point

- is a level of operations at which a firm experiences no benefit for continuing operations and therefore decides to shut down temporarily (or in some cases permanently).
- the level of output at which marginal revenue (MR) is equal to average variable costs (AVC).
- At any price level above the shutdown point ($P_Y > AVC$), the firm will remain in business.
- This is because the firm can meet all of its variable costs and at least part of its fixed costs.
- At any price level below the shutdown point ($P_Y < AVC$), the firm will shut down. This is because the firm cannot meet its variable costs of production.

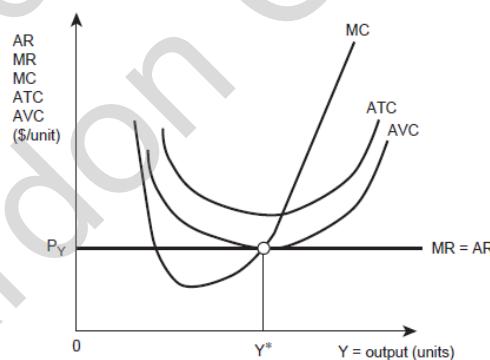


Figure 4.11 The shutdown point.

- a line indicating all combinations of two variable inputs that can be purchased for a given level of expenditure

- Optimal combination of input is where the slope of the isoquant is equal to the slope of the isocost line; the point of tangency of the isoquant and the isocost line

Optimal Output Selection

Production Possibilities Frontier (PPF)

- a curve depicting all possible combinations of two outputs that can be produced using a constant level of inputs.
- it is concave to the origin due to the Law of Diminishing Marginal Returns.
- Technological change results in an outward shift in the production possibilities frontier

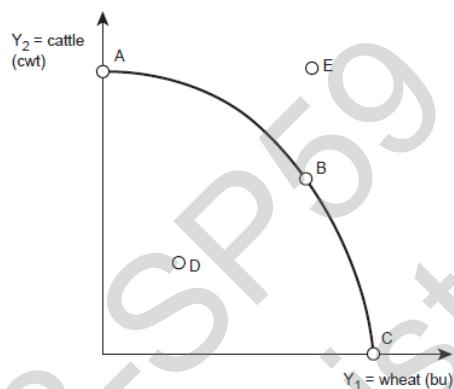


Figure 6.1 Production possibility frontier for a farmer-stockman.

Production Possibilities Frontier (PPF)

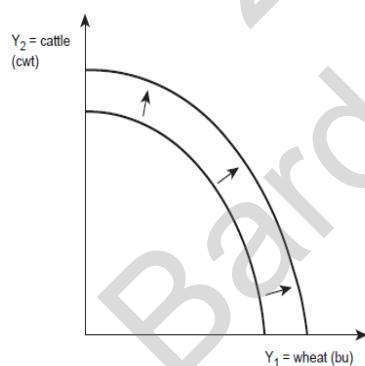


Figure 6.2 The impact of technological change on the production possibility frontier.

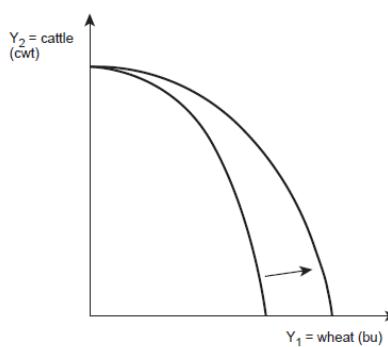


Figure 6.3 Technology change on one output of production possibility frontier.

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Consumer Choices

Rational Behavior

- Economics as a social science assumes that all economic decision making is "rational."
- Individuals do the best that they can, given the constraints they face. Rational behavior is purposeful and consistent.

Utility

- satisfaction derived from consuming a good.

Utils

- hypothetical units of satisfaction derived from consumption of goods or services.

Cardinal Utility vs. Ordinal Utility

Cardinal Utility

- assigns specific, but hypothetical, numerical values to the level of satisfaction gained from the consumption of a good. The unit of measurement is the hypothetical util

Ordinal Utility

- a way of considering consumer satisfaction in which goods are ranked in order of preference: first, second, third, etc.

Marginal Utility (MU) and Total Utility (TU)

Marginal Utility (MU)

- the change in the level of utility when consumption of a good is increased by one unit.
$$MU = \Delta TU / \Delta Y$$

Total Utility (TU)

- the total level of satisfaction derived from consuming a given bundle of goods and services.

Law of Diminishing Marginal Utility

marginal utility declines as more of a good or service is consumed during a given time period.

Table 7.1 Total and marginal utility derived from drinking cold water on a hot day

<i>Y = Quantity Consumed (bottles)</i>	<i>TU = Total Utility (utils)</i>	<i>MU = Marginal Utility (utils/bottle)</i>
0	0	—
1	10	10
2	16	6
3	19	3
4	20	1
5	20	0
6	18	-2

Three assumptions about consumer behavior are:

- preferences are complete
- consumers are consistent
- more is preferred to less (nonsatiation)

Assumption #1. Preferences for goods and services are complete.

- $A > B$ (A is preferred to B)
- $B > A$ (B is preferred to A)
- $A \sim B$ (the consumer is indifferent between A and B)

Assumption #2. Consumers are consistent.

- If $A > B$ and $B > C$, then $A > C$
- “Transitive preferences,” or simply “transitivity,” means that consumers do not change their preferences haphazardly.

Assumption #3. Nonsatiation: More is preferred to less.

- Consumers can never have enough! This assumption states that a consumer will always want more of a good. It states that a consumer will never consume “too much” of a good, and reach the point where marginal utility becomes negative.

Macroeconomics

Sticky prices

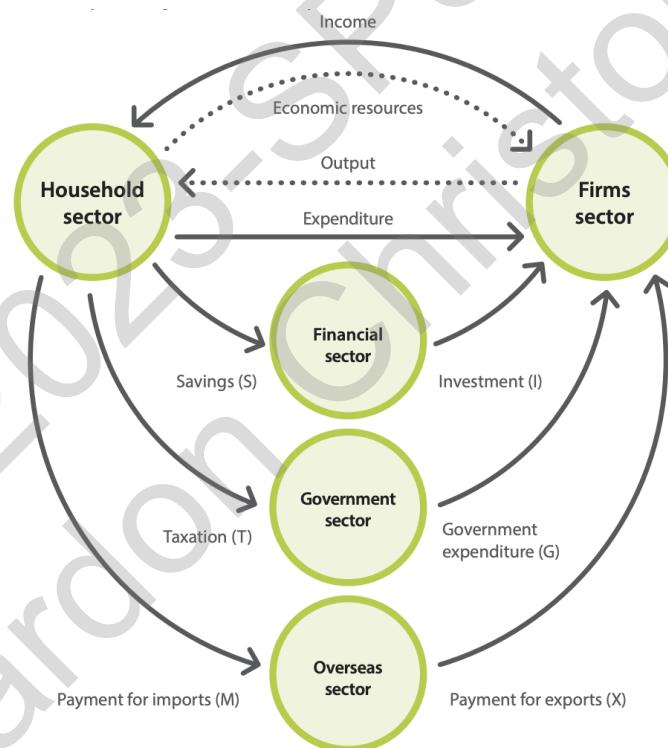
- are prices that do not always adjust rapidly to maintain the equality between quantity supplied and quantity demanded.
- Microeconomists generally conclude that markets work well. Macroeconomists, however, observe that some important prices often seem “sticky.”

Macroeconomics

- involves adding up the economic activity of all households and all businesses in all markets to get the overall demand and supply in the economy
- Whole or aggregate economy

Circular Flow Model with Sectors

- economic model that shows the flow of money through the economy. The most common form of this model shows the circular flow of income between the household sector and the business sector



Circular Flow Model Concepts

- **Economic resources** – goods or services that are used as inputs in production, e.g. land, labour and capital (the machinery, buildings and equipment used to produce goods and services)
- **Expenditure** – the purchase of goods and services
- **Exports (X)** – goods and services produced by Firms in Philippines and sold to other countries
- **Financial sector** – banks and other financial institutions
- **Firms sector** – businesses in the economy

- **Government expenditure (G)** – money the government spends on public goods and services
- **Government sector** – the national, state and local government
- **Household sector** – individuals in the economy
- **Imports (M)** – goods and services produced by businesses in other countries and sold to Australia
- **Income** – money received, e.g. wages, rent and interest
- **Investment (I)** – money the Financial sector lends to Firms to spend on machinery, buildings and equipment
- **Output** – goods or services produced to be sold
- **Overseas sector** – the economic transactions of the economy with the rest of the world, e.g. how resources flow between Philippines and its trading partners
- **Savings (S)** – money saved
- **Taxation (T)** – money paid to the Government

National income accounting

- is a bookkeeping system that a government uses to measure the level of the country's economic activity in a given time period.
- offering insight into how an economy is performing.

Indicators of aggregate output:

1. Gross Domestic Product (GDP)

- is the monetary value of all finished goods and services made within a country during a specific period
- provides an economic snapshot of a country, used to estimate the size of an economy and growth rate

Types of GDP measurements

- **Nominal GDP** – GDP evaluated at current market prices
- **Real GDP** – Real GDP is an inflation-adjusted measure that reflects both the value and the quantity of goods and services produced by an economy in a given year.
- **GDP Growth Rate** – The GDP growth rate compares one quarter of a country's GDP to the previous quarter in order to measure how fast an economy is growing.
- **GDP Per Capita** – GDP per capita is a measurement of the GDP per person in a country's population; it is a useful way to compare GDP data between various countries.

Types of GDP calculations

- The Expenditure Approach
- The Production (Output) Approach
- The Income Approach

The Expenditure Approach

- also known as the spending approach, calculates spending by the different groups that participate in the economy
- can be calculated using the following formula:

$$\text{GDP} = C + G + I + NX$$

- Consumption refers to private consumption expenditures or consumer spending
- Government spending represents government consumption expenditure and gross investment
- Investment refers to private domestic investment or capital expenditures
- Net exports refers to a calculation that involves subtracting total exports from total imports ($NX = \text{Exports} - \text{Imports}$)

$$\text{GDP} = C + G + I + NX$$

Gross private investment	P124
Export	P38
Import	P20
Government purchases	P156
Household consumption	P304

- C is represented by Household Consumption which is P304
- G refers to Government Spending which is P156
- I is gross private investment and is P124
- NX is ($X - M$) equal to P18.
- $\text{GDP} = 304 + 156 + 124 + 18 = 602$

The Production (Output) Approach

- measures the input costs that contribute to economic activity, it estimates the total value of economic output and deducts the cost of intermediate goods that are consumed in the process (like those of materials and services)

The Income Approach

- calculates the income earned by all the factors of production in an economy, including the wages paid to labor, the rent earned by land, the return on capital in the form of interest, and corporate profits

The Income Approach

Interest income	P150
Wages	P67
Business profits	P200
Rental Income	P75

$$NI = W + R + i + PR$$

- Wages (W) is P67
- Rental income (R) is P75.
- Interest income (i) is P150
- Business profits (PR) is P200.
- $NI = P67 + P75 + P150 + P200 = 492$
- $GDP = NI + \text{Indirect Business Taxes} + \text{Depreciation}$
- $GDP = P492 + P74 + P36 = 602$

Gross National Product (GNP)

- an estimate of total value of all the final products and services turned out in a given period by the means of production owned by a country's residents.
- income from overseas investments by a country's residents counts in GNP, and foreign investment within a country's borders does not. This is in contrast to GDP which measures economic output and income based on the location rather than nationality.

GNP Calculation

$$GNP = C + I + G + X + Z$$

- Where C is Consumption, I is investment, G is government, X is net exports, and Z is net income earned by domestic residents from overseas investments minus net income earned by foreign residents from domestic investments.

Gross National Income (GNI)

- is an alternative to gross national product as a measure of wealth. It calculates income instead of output. It can be calculated by adding income from foreign sources to gross domestic product

GNI Calculation

$$GNI = C + I + G + X + [(A) - (B)]$$

Where C is Consumption, I is investment, G is government, X is net exports, A is Income from citizens and businesses earned abroad and B is Income remitted by foreigners living in the country back to their home countries.

GDP vs. GNI vs. GNP

- GDP is the total market value of all finished goods and services produced within a country in a set time period.
- GNI is the total income received by the country from its residents and businesses regardless of whether they are located in the country or abroad.
- GNP includes the income of all of a country's residents and businesses whether it flows back to the country or is spent abroad. It also adds subsidies and taxes from foreign sources.

GDP vs. GNI vs. GNP

Income earned by:	GDP	GNI	GNP
Residents in Country	C+I+G+X	C+I+G+X	C+I+G+X
Foreigners in Country	Includes	Includes If Spent in Country	Excludes All
Residents Out of Country	Excludes	Includes If Remitted Back	Includes All
Foreigners Out of Country	Excludes	Excludes	Excludes

Aggregate Demand

- an economic measure of the total amount of demand for all finished goods and services produced in an economy
 - expressed as the total amount of money spent on those goods and services at a specific price level and point in time
 - consists of all consumer goods, capital goods (factories and equipment), exports, imports, and government spending
 - The equation for aggregate demand adds the amount of consumer spending, private investment, government spending, and the net of exports and imports.
- The formula is shown as follows:

$$AD = C + I + G + Nx$$

Factors That Can Affect Aggregate Demand

- Change in interest rates
- Income and Wealth
- Changes in Inflation Expectations
- Currency Exchange Rate Changes

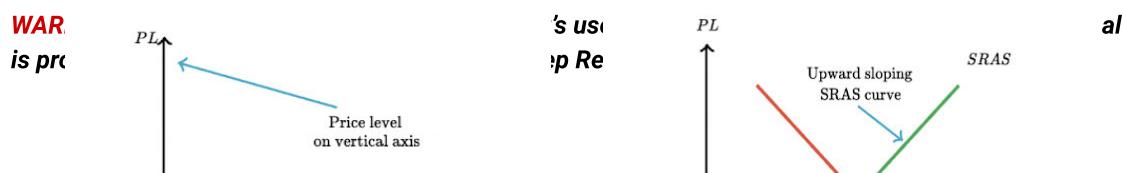
Aggregate Supply

- Total goods produced at a specific price point for a particular period are aggregate supply.
- Short-term changes in aggregate supply are impacted most significantly by increases or decreases in demand.
- Long-term changes in aggregate supply are impacted most significantly by new technology or other changes in an industry.

Factors That Can Affect Aggregate Supply

- changes in the size and quality of labor
- technological innovations
- increase in wages
- increase in production costs
- changes in producer taxes
- subsidies
- changes in inflation

AD-AS Model



Changes in the AD-AS model in the short run

When AD or SRAS curves shift, we call these “shocks”

- Negative shocks decrease output and increase unemployment.
- Positive shocks increase production and reduce unemployment.

Long run aggregate supply (LRAS)

- a theoretical concept and refers to the output that an economy can produce when using all its factors of production, and hence when operating at full employment.

Impact of an ad shock

Demand shock	impact on rGDP	impact on unemployment	impact on price level
↑ AD	↑ rGDP	↓ UR	↑ PL
↓ AD	↓ rGDP	↑ UR	↓ PL

Impact of an SRAS shock

Supply shock	impact on rGDP	impact on unemployment	impact on price level
↑SRAS	↑rGDP	↓ UR	↓ PL
↓SRAS	↓rGDP	↑ UR	↑ PL

Aggregate Expenditures

- aggregate amount that consumers, investors, government, and foreigners wish to spend on the purchase of final goods and services produced in the domestic borders, given the price level.

Consumption Function

- shows the relationship between total consumer expenditures and total disposable income, holding all other determinants of consumption constant.
- The consumption function is represented as:

$$C = A + MD$$

where:

C=consumer spending

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A=autonomous consumption

M=marginal propensity to consume

D=real disposable income

Autonomous consumption

- defined as the expenditures that consumers must make even when they have no disposable income
- the portion of disposable income that is independent of income
- Dissaving, the opposite of saving, refers to spending money beyond one's available income.

Types of income

- **Disposable income** – also known as disposable personal income (DPI), is the amount of money that households have available for spending and saving after income taxes have been accounted for.
- **Discretionary income** – what a household or individual has to invest, save, or spend after taxes and necessities are paid.

Note: Both disposable and discretionary income are similar, except disposable income does not account for necessities.

Marginal propensity to consume

- the proportion of an increase in income that gets spent on consumption.
- varies by income level.
- The marginal propensity to consume is equal to $\Delta C / \Delta Y$,
 - where ΔC is the change in consumption, and ΔY is the change in income.
 - If consumption increases by 80 cents for each additional peso of income, then MPC is equal to $0.8 / 1 = 0.8$.

Marginal propensity to save

- the proportion of an increase in income that gets saved instead of spent on consumption
- varies by income level
- The marginal propensity to save is equal to $\Delta S / \Delta Y$,
 - where ΔC is the change in saving, and ΔY is the change in income.
 - Suppose you receive a P500 bonus with your paycheck. You suddenly have P500 more in income than you did before. If you decide to spend P400 of this marginal increase on a new business suit and save the remaining P100, your marginal propensity to save is 0.2 (P100 change in saving divided by P500 change in income).

MPC and MPS

- The marginal propensity to save (MPS) is the portion of each extra peso of a household's income that's saved.
- MPC is the portion of each extra peso of a household's income that is consumed or spent.
- Consumer behavior concerning saving or spending has a very significant impact on the economy as a whole.

The Multiplier Effect

- refers to the proportional amount of increase, or decrease, in final income that results from an injection, or withdrawal, of spending.
- an increase in spending produces an increase in national income and consumption greater than the initial amount spent
- most basic multiplier used in gauging the multiplier effect is calculated as change in income / change in spending and is used by companies to assess investment efficiency
- money supply multiplier is also another variation of a standard multiplier, using a money multiplier to analyze effects on the money supply

MPC Multiplier

- $MPC = 1 / (1-MPC)$
- If consumers save 20% of new income and spend 80% of new income then their marginal propensity to consume (MPC) is 0.8.
- MPC Multiplier = $1 \div (1-MPC) = 1 \div (1-0.8) = 5$
- Therefore in this example, every new production, peso creates extra spending of P5.

Money supply multiplier

- Money Supply Reserve Multiplier = $1 \div \text{Reserve Requirement Ratio}$
 - Reserve requirements are the amount of funds that a bank holds in reserve to ensure that it is able to meet liabilities in case of sudden withdrawals.
 - For example, when looking at banks with the highest required reserve requirement ratio, which was 10%, their money supply reserve multiplier would be 10 ($1/.10$). This means every one peso of reserves should have P10 in money supply deposits.

Taxes

- involuntary fees levied on individuals or corporations and enforced by a government entity—whether local, regional or national—in order to finance government activities.
- In economics, taxes fall on whomever pays the burden of the tax, whether this is the entity being taxed, such as a business, or the end consumers of the business' goods.

Type of taxes

- Income Tax –a percentage of individual earnings
- Corporate Tax—a percentage of corporate profits taken as tax by the government
- Sales Tax—taxes levied on certain goods and services
- Property Tax—based on the value of land and property assets
- Tariff—taxes on imported goods imposed in the aim of strengthening internal businesses

- Estate tax—rate applied to the fair market value of property in a person's estate at the time of death.

Inflation

- a quantitative measure of the rate at which the average price level of a basket of selected goods and services in an economy increases over some period of time.
- it is the rise in the general level of prices where a unit of currency effectively buys less than it did in prior periods.
- often expressed as a percentage, inflation thus indicates a decrease in the purchasing power of a nation's currency.
- inflation can be contrasted with deflation, which occurs when prices instead decline.

Deflation

- Also called negative inflation. During a deflationary period, prices fall in the same way as they arise in the case of inflation: continuously and in a generalised manner.
- This fall in the prices of goods and services may have different causes, in this case, they would be:
 - Insufficient demand: normally occurs in economic recessions or depressions, in which consumers have less spending capacity, so they demand far fewer goods or services
 - Excess supply: in this case producers are forced to reduce prices, in order to sell their output and not suffer an increase in inventories.

Types of inflation

- Demand-pull inflation
- Cost-push inflation
- Built-in inflation

Demand-pull inflation

- occurs when the overall demand for goods and services in an economy increases more rapidly than the economy's production capacity
- creates a demand-supply gap with higher demand and lower supply, which results in higher prices.

Cost-push inflation

- is a result of the increase in the prices of production process inputs.

Built-in inflation

- is the third cause that links to adaptive expectations. As the price of goods and services rises, labor expects and demands more costs/wages to maintain their cost of living.

Types of inflation index

- Consumer Price Index
- Wholesale Price Index
- Producer Price Index

Consumer Price Index

- measures the average change in prices over time that consumers pay for a basket of goods and services.
- most widely used measure of inflation

$$CPI = \frac{\text{Cost of Market Basket in Given Year}}{\text{Cost of Market Basket in Base Year}} \times 100$$

Wholesale Price Index

- measures and tracks the changes in the price of goods before they reach consumers
- goods that are sold in bulk and traded between entities or businesses (rather than consumers).

Producer Price Index

- measures the average change over time in the prices domestic producers receive for their output.
- a measure of inflation at the wholesale level that is compiled from thousands of indexes measuring producer prices by industry and product category

Inflationary Gap

- a macroeconomic concept that measures the difference between the current level of real GDP and the gross domestic product (GDP) that would exist if an economy was operating at full employment
- Key point to note is that for the gap to be considered inflationary, the current real GDP must be higher than the potential GDP
- Government fiscal policies that can reduce inflationary gap include reductions in government spending, tax increases, bond and securities issues, interest rate increases, and transfer payment reductions.

Deflationary Gap

- difference between the full employment level of output and actual output
- indicative of the high rates of unemployment and underused resources
- Causes of deflationary gap: Fall in aggregate demand (AD) due to fall in exports, investment and consumer spending.

Labor Force Concepts

- **Labor Force**
 - refers to the population 15 years old and over who contribute to the production of goods and services in the country
 - comprises the employed and unemployed.
- **Employed**
 - consists of persons in the labor force who are reported either as at work or with a job or business although not at work. Persons at work are those who did some work, even for an hour during the reference period.
- **Unemployed**

- consists of persons in the labor force who are reported as (1) without work; and (2) currently available for work; and (3) seeking work or not seeking work because of the belief that no work is available, or awaiting results of previous job application, or because of temporary illness or disability, bad weather or waiting for rehire or job recall.
- **Underemployed**
 - refers to the employed persons who express the desire to have additional hours of work in their present job or an additional job, or have a new job with longer working hours.
- **Labor Force Participation Rate (LFPR)**
 - proportion of total labor force to the total household population 15 years and over.
- **Employment Rate**
 - proportion of employed persons to the total labor force.
- **Unemployment Rate**
 - proportion of unemployed persons to the total labor force.
- **Underemployment Rate**
 - proportion of underemployed persons to total employed persons.

Types of Unemployment

- Seasonal Unemployment
- Frictional Unemployment
- Structural Unemployment
- Cyclical Unemployment

Seasonal unemployment

- is the unemployment due to seasonal changes in employment or labor supply.
- can affect farm workers, Christmastime retail workers, and other jobs without year-round production.

Frictional unemployment

- is the brief periods of unemployment experienced by people moving between jobs or into the labor market
- Frictional unemployment differs from other unemployment in three ways:
 - There is an adequate demand for the labor of the frictionally unemployed.
 - The frictionally unemployed have the skills required for existing jobs.
 - The job-search period will be relatively short.

Structural unemployment

- is the unemployment caused by a mismatch between the skills (or location) of job seekers and the requirements (or location) of available jobs.

- the worst for the economy, as workers must learn new skills and develop more training before they can get new employment.
- Periods of structural unemployment tend to be longer than the other varieties.

Cyclical unemployment

- is the unemployment attributable to the lack of job vacancies – i.e., to an inadequate level of aggregate demand
- Usually, the economy will return to a normal level on its own, but in extreme examples (e.g. The great depression), government help is needed to alleviate cyclical unemployment.

Investment

- an asset or item acquired with the goal of generating income or appreciation.
- In an economic sense, an investment is the purchase of goods that are not consumed today but are used in the future to create wealth.
- In finance, an investment is a monetary asset purchased with the idea that the asset will provide income in the future or will later be sold at a higher price for a profit.

Investment Spending

- an attempt to stimulate production by means of capital goods that are either created or acquired
 - **capital goods** – a company's asset, like machines or other equipment, that are used, or needed, to make other goods.

Interest rates

- measures the percentage reward a lender receives for deferring the consumption of resources until a future date
- In a loan structure whatsoever, the interest rate is the difference (in percentage) between money paid back and money got earlier, keeping into account the amount of time that elapsed.
- A real interest rate is adjusted to remove the effects of inflation and gives the real rate of a bond or loan.
- A nominal interest rate refers to the interest rate before taking inflation into account.

Monetary and Fiscal Policy

Monetary policy

- involves using interest rates and other monetary tools to influence the levels of consumer spending and aggregate demand (AD). In particular monetary policy aims to stabilize the economic cycle – keep inflation low and avoid recessions.
 - **Contractionary monetary policy**
 - is when central banks raise interest rates and reduce the money supply to avoid inflation.
 - **Expansionary monetary policy**
 - aims to increase aggregate demand and economic growth in the economy.

- involves cutting interest rates or increasing the money supply to boost economic activity.
- A **liquidity trap** is when monetary policy becomes ineffective due to very low interest rates combined with consumers who prefer to save rather than invest in higher-yielding bonds or other investments.

Fiscal Policy

- involves the government changing the levels of taxation and government spending in order to influence aggregate demand (AD) and the level of economic activity.
 - **Contractionary fiscal policy**
 - involves decreasing AD; government will cut government spending (G) and/or increase taxes; higher taxes will reduce consumer spending (C); this will tend to cause an improvement in the government budget deficit.
 - **budget deficit** - the annual amount the government has to borrow to meet the shortfall between current receipts (tax) and government spending
 - **Expansionary fiscal policy**
 - involves increasing AD; government will increase spending (G) and cut taxes (T); lower taxes will increase consumers spending because they have more disposable income (C); this will tend to worsen the government budget deficit, and the government will need to increase borrowing.

Fiscal Policy

- When the government pursues expansionary fiscal policy (higher spending financed by borrowing) there are two possible effects:
 - Crowding out
 - Crowding in

Crowding out

- higher government spending financed by borrowing leads to a fall in private sector saving. Crowding out will occur when the economy is close to full capacity and limited spare savings. This is for two main reasons:
 - With expansionary fiscal policy, private sector savers buy government bonds and so have fewer savings to fund private sector investment.
 - Also, higher government borrowing tends to push up interest rates and these higher interest rates reduce investment.

Crowding in

- this relates to how higher government spending encourages firms to invest more. This is due to the income effect of higher government spending.
- If the economy is in a recession or below full capacity, expansionary fiscal policy can increase the economic growth rate and create a positive multiplier effect, which leads to greater private sector investment.

- Crowding in is more likely to occur in a recession when the private sector has unused savings. Crowding in may prove to be a temporary effect.

Money and its Demand

Money

- is an economic unit that functions as a generally recognized medium of exchange for transactional purposes in an economy.

Functions of money

- **Unit of Account**
 - Due to its use as a medium of exchange for both buying and selling and its use to assign prices to all kinds of other goods and services, money can be used to keep track of the money gained or lost across multiple transactions and to compare money values of various combinations of different quantities of different goods and services mathematically.
- **Store of Value**
 - Because money's usefulness as a medium of exchange in transactions is inherently future-oriented, it provides a means to store value obtained through current production or trade for use in the future, in the form of other goods and services.
- **Standard of Deferred Payment**
 - To the extent that money is accepted as a general medium of exchange and serves as a useful store of value, it can be used to transfer value for exchange use at different times between people through the tools of credit and debt.

Types of Money

- **Market-determined money**
 - money originates as a feature of the spontaneous order of markets through the practice of barter (or direct exchange), where people trade one good or service directly for another good or service
- **Fiat money**
 - associated with a classification of money that has been authorized for use by a country's government
- **Cryptocurrencies**
 - peer-based money, such as bitcoin. This type of money is electronically based on electronic accounting entries that can be used as a medium of exchange. Mostly used to facilitate international transactions.

Demand for Money

- refers to how much assets individuals wish to hold in the form of money (as opposed to illiquid physical assets.)

- is sometimes referred to as liquidity preference. The demand for money is related to income, interest rates and whether people prefer to hold cash (money) or illiquid assets.

Types of Demand for Money

- **Transaction demand** – money needed to buy goods – this is related to income.
- **Precautionary demand** – money needed for financial emergencies.
- **Asset motive/speculative demand** – when people wish to hold money rather than buy assets/bonds/risky investment.

Money supply

- all the currency and other liquid instruments in a country's economy on the date measured. The money supply roughly includes both cash and deposits that can be used almost as easily as cash.
- an increase in the supply of money typically lowers interest rates, which in turn, generates more investment and puts more money in the hands of consumers, thereby stimulating spending
- printing more money doesn't increase economic output – it only increases the amount of cash circulating in the economy. If more money is printed, consumers are able to demand more goods, but if firms have still the same amount of goods, they will respond by putting up prices. In a simplified model, printing money will just cause inflation.

Agricultural Marketing

Agricultural marketing

- can be defined as a series of services performed in order to move agricultural products from the point of production to the point of consumption.
- more modern definition of marketing is finding out what the customers want and supplying them what they want with a profit. This definition connotes two things:
 - The marketing process has to be consumer-oriented. Production must supply customers with what they want; and
 - Marketing is a commercial process and only sustainable if it provides the marketing participants (e.g., farmers, processors, transporters, traders, etc.) with a profit.

Point of Production

- refers to the place where the product is first sold and where farm level price is established.

Point of consumption

- is the place where marketing ends or where the consumption of the product by the end-users starts. It is the point of last sale where retail prices are established.

Marketing services

- include the activities that change the form of the product (processing), prolong the period of availability of the product (storage), widen the geographic availability of the product (transportation), and transfer the ownership of the product (buying and selling).

Reasons why agricultural marketing is complex and costly:

1. Agricultural products are highly perishable.
2. Agricultural products are highly seasonal and oftentimes, location-specific, since they have different agro-climatic requirements.
3. Bulkiness
4. Heterogeneity
5. Irregular supply
6. Small size of holding and scattered production
7. Product pricing
8. Processing

Types of Market

Assembly markets

- are markets where farmers go to sell their produce to the traders who will then take it to wholesale markets.

Wholesale markets

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- are places where retailers and businesses buy their supplies.

Retail markets

- are markets where consumers buy their supplies.

Types of Utilities for the Product

Form utility

- which alters the physical and chemical characteristics of the product

Time utility

- equated with storage of the product, making its availability in the market longer than its natural harvest period

Place utility

- facilitated through the transport of goods from one market place to another, or from the production area (farm) to the consumption area (market)

Possession utility

- created through the change in ownership during the buying and selling activities of the two trading parties

Four P's of marketing

4 Ps of the Marketing Mix Defined



- **Product** includes use, design, packaging, quality, features, colors & size options.
- **Price** depends on packaging (including sizes), discounts, timing, location, shipping & other offer-related elements.
- **Place** includes retail, digital, phone, chat, fax & multi-channel options.
- **Promotion** consists of content, communications & messaging to persuade audience to buy.

Source: <https://heidicohen.com/four-ps-of-marketing-mix>

1. **Product**
 - refers to a good or service that a company offers to customers.
2. **Price**
 - is the cost consumers pay for a product.
3. **Place**

- refers to where to sell a product and how to deliver the product to the market.

4. Promotion

- includes advertising, public relations, and promotional strategy. The goal of promoting a product is to reveal to consumers why they need it and why they should pay a certain price for it.

Agricultural Marketing System

- Composed of interrelated/interdependent subsystems whose interactions enable the movement of agricultural products from the point of production to the point of consumption.

Subsystems of the Agricultural Marketing System

- Producer subsystem (Production Sector)
- Market channel subsystem (Market Intermediaries)
- Functional subsystem (Marketing Functions)
- Consumer subsystem (Consumption Sector)
- Flow subsystem (Financial, Payment, and Information System Flow)
- Environmental subsystem

Producer subsystem (Production Sector)

- composed of individual and group producers.
 - The **individual** - includes micro-, small-, medium-, or large-scale sole proprietors who grow crop/s or raise animal/s (farmers/growers) or catch/grow fish/es (fishers/growers).
 - The **group producers** - comprises farms that are owned by corporations, cooperatives that manage their farm, and clusters that are composed of farmers grouped to produce the same commodity.
- Producers require factors of production such as land, labor, capital, and entrepreneurship or management skills as they perform production services that transform inputs into single or multiple outputs. Capital is used to purchase material inputs and fixed capital investment as well as pay for the other factors of production while management influences the efficiency of the production process
- The intermediate goals of this subsystem are to achieve a fair price for the product sold at the farm level and to minimize marketing obstacles as producers relate to market intermediaries or consumers as their buyers. Their ultimate goals are to equalize the supply of and demand for the product and to promote a stable price and income among producers.

Market channel subsystem (Market Intermediaries)

- involves market intermediaries who perform marketing services after the point of first sale by the farmer (i.e., point of production). They are categorized into the following:
 - **merchant middlemen** - who buy and sell products;
 - **agent middlemen** - who negotiate between buyers and sellers;
 - **processors and manufacturers** - who transform raw materials into processed or manufactured goods;

- **facilitative organizations** - that provide a conducive marketing environment for both buyers and sellers; and
- **market or trade associations** - that influence the nature of marketing and ultimately the market.
- The intermediate goal of this subsystem is to minimize short-term risk when performing marketing functions while the ultimate goals are to promote a stable supply of the product and obtain maximum long-term profit.

Functional Subsystem

- related to the market channel subsystem as it covers the marketing functions, services, or activities performed by the market intermediaries.
- Marketing functions are classified into the exchange (e.g., buy, sell), physical (e.g., processing, packaging, storage, transportation), and facilitating (e.g., standardization, financing, risk-bearing, market intelligence, demand creation) functions.
- The intermediate goal of this subsystem is to increase efficiency in the conduct of a specific marketing function while the ultimate goal is to obtain a reasonable return to investment for the function/s performed by the market intermediaries.

Consumer subsystem (Consumption Sector)

- composed of buyers grouped into institutional buyers and household consumers.
 - **Institutional buyers** - includes hotels, restaurants, and hospitals while the latter involves household consumers or the final or end users of a product. Institutional buyers still perform some marketing services on or for the product before they sell it to household consumers or the final or end users. For example, fresh/raw agricultural products bought by institutional buyers are cooked and sold to customers.
 - **Household consumers** - simply consumed by a final or end user
- The intermediate goal of this subsystem is to pay a reasonable price for the product bought while the ultimate goal is to attain consumer satisfaction at the least possible cost.

Flow subsystem (Financial, Payment, and Information System Flow)

- considers the flow of goods and services, financial products/services and information, and market information in the system. Any bottlenecks in the flow of goods and services are identified to ensure an unhampered movement/offering of goods/services.
- The intermediate goal of this subsystem is to facilitate the flow of products and services and financial and market information while the ultimate goal is to earn a maximum long-term profit.

Environmental subsystem

- subsystem pertains to the various external factors that affect one or more subsystems. It includes economic, technological, physical, climatic, socio-cultural, legal, and political factors.

- The intermediate goal of this subsystem is to facilitate good market performance while the ultimate goal is to minimize market imperfection.
 - **Economic factors** – e.g., foreign exchange rate, interest rate, foreign direct investment, government expenditure
 - **Technological factors** – e.g., high yielding/drought-tolerant/disease-resistant variety, superior breed/hybrid, improved cultural management practice
 - **Physical factors** – e.g., soil pH, texture, and nutrient content; topography
 - **Climatic factors** – e.g. El Niño, La Niña, typhoon, extreme drop in temperature (frost occurrence)
 - **Socio-cultural factors** – e.g., culture, ethnicity, religion, tradition, event
 - **Legal factors** – e.g., taxation law, labor law, environmental law, trade agreement
 - **Political factors** – e.g., election, priority of current administration.

Characteristics of an Efficient Agricultural Marketing System

1. Producers and intermediaries supply the right kind, form, and amount of product
2. Producers and intermediaries earn maximum net returns for resources used
3. Consumers' wants or needs are satisfied at the least possible cost
4. Price reflects the supply and demand situation in the market

Marketing concepts

Production concept

- basic idea of this concept is that businesses will want to produce widely cheap products in maximum volumes to maximize profitability and scale. Businesses assume that consumers are primarily interested in product availability and low prices while customer's needs might not be fully addressed.

Product concept

- consumers favor quality products that are reasonably priced

Selling concept

- consumers will not buy enough of the company's products unless they are stimulated through substantial selling and promotional effort.

Marketing concept

- this concept focuses on the needs and wants of target marketing as well as delivering value better than its competition

Societal marketing concept

- it is a marketing concept that believes in giving back to society by producing better products that preserves or enhances the consumer's and society's well-being.

Marketing approaches

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- Commodity Approach
- Functional Approach
- Institutional Approach
- Market Structure, Conduct and Performance Approach

Commodity Approach

- refers to the study of the product in detail. It involves the examination of the marketing system.
- includes the study of the resources and conditions of supply of the commodity; nature and the extent of the demand for it; consumer behavior in relation to the product and its prices.

Functional Approach

- this approach comprises of the study of various activities or functions performed in the process of marketing of goods and services.

Functions of Agricultural Marketing

1. Exchange functions

- these mainly include functions related to buying and selling.
 - **Buying function** - is largely one of seeking the sources of supply, assembling of products and activities which are associated with the purchase of goods, raw materials, etc.
 - **Selling function** - is the process which stimulates demand or desire, finds the buyer, advises the buyer, and negotiates with him to bring about a transfer of title.

2. Physical functions

- These functions relate to the physical handling of agriculture produce either in moving it from one place to another or in storing it over a period of time.
 - **Storage function** - is primarily concerned with making goods available at the desired time
 - **Transportation function** - is primarily concerned with making goods available at the proper place
 - **Processing function** - includes all those essentially manufacturing activities that change the basic form of the product

3. Facilitative/Facilitating functions

- as the very name of these functions implies, it involves neither transfer of title to goods nor handling of the product but help in the smooth discharge of the above functions.
 - **Standardization function** - the establishment and maintenance of uniform measurements, both of quality and quantity
 - **Financing function** - the use of money to carry on the various aspects of marketing
 - **Demand creation** is a facilitating function that could be incredibly challenging to perform, especially for new products and when trying to enter a new market. Advertisements and promotional

programs or campaigns are some of the strategies implemented to create demand for a product.

- **Risk bearing function** – the acceptance of the possible loss in the marketing of product. These risks can be classified into two broad classifications: physical risks and market risks.
- - **Physical risks** – occur from destruction or deterioration of the product
 - **Market risks** – occur because of the changes in value of a product as it is marketed
- **Market intelligence function** - is the job of collecting, interpreting and disseminating the large variety of data necessary to the smooth operation of the marketing processes.
 - **Marketing plan** – is a road map for the marketing activities of a farmer, or an organization for a specified future period of time

Institutional Approach

- study the various agencies and business structures that perform the marketing processes. This approach attempts to answer the question of “who” or the human element receives primary emphasis.
- considers the nature and character of the various middlemen and related agencies and also the arrangement and organization of the marketing activities.

Middlemen

- are those individuals or business concerns who specialize in performing the various marketing functions involved in the purchase and sale of goods as they are moved from producers to consumers

Types of Middlemen

1. Merchant middlemen

- take title to, and therefore own the products they handle. They buy and sell for their own gain.

Types of merchant middlemen:

1. **Contract buyers or contractors** - They provide material inputs to farmers or animal raisers and in return, the farmers or raisers agree on selling their produce to the contract buyers or contractors. In crops, there are cases where some pre-harvest and post-harvest services are done by the contractors. The risks involved in these services are shouldered by the contractors. As such, the price offered by contractors could be lower than the prevailing market price of the commodity. The contract price is determined by estimating the total value of production by multiplying the possible production and expected future price at the end of the cropping or growing cycle. Sharing arrangements are used instead of a contract price if such price cannot be easily estimated.

2. **Grain millers** - They buy grains such as palay from farmers and middlemen and then perform milling. Milled rice is then sold to other middlemen until it reaches the household consumers. Some rice millers provide cash advances, sacks, and storage facilities to farmers so that the former is ensured of contractual arrangement with the latter.
3. **Wholesalers** - They buy directly from farmers and then sell to other types of wholesalers, retailers, and institutional buyers. In the case of rice, wholesalers buy from millers.
 - a. **Assembler-wholesalers** - operate in major production areas and can “assemble” or “consolidate” the produce of farmers. In the marketing system of mangoes, consolidators buy from mango farmers or growers and sell to processors and other wholesalers (Abraham et al., 2004), a kind of assembler-wholesaler, have logistical assets that allow them to transport goods from the major production areas to demand centers. They sometimes intercept farmers who are on their way to sell their produce at trading posts. This practice known as harang allows the viajeros to buy from the farmers before they sell at a trading post.
 - b. **Financier-wholesalers** - have capital that can be extended as a credit to farmers and other middlemen. By this, the borrowers are obliged to sell their goods to the financial wholesalers (i.e., lenders).
- c. **Wholesaler-retailers** - are typically situated in public markets and own a stall. They sell to other wholesalers, retailers, and institutional buyers on a wholesale basis and household consumers on a retail basis.
4. **Retailers** - They buy goods from wholesalers and wholesaler-retailers and sell a small volume of goods to household consumers and some institutional buyers. Supermarkets and sari-sari stores are some examples of retailers.

2. Agent middlemen

- act only as representatives of their clients. They do not take title to, and therefore do not own, the products they handle.

Types of Agent Middlemen

1. **Commission agents or canvassers** - perform physical handling of goods but operate without capital. They keep a network of contacts. Examples of their transactions are negotiations with rice millers for provincial traders, municipal corn traders for farmers, tomato assembler-wholesalers for growers, and banana wholesalers for farmers.
2. **Brokers** - They have less discretionary power in price negotiations and do not have physical control over goods. An example of where brokering takes place is in fish ports where brokers are engaged in negotiations, often through whispering or bulungan system, between sellers and buyers.

Market Structure, Conduct and Performance Approach

- it is a framework for explaining how markets behave and the differences between them. This approach suggests that the market structure determines the market conduct, which then sets the performance of the market.
- predicts that the number of sellers and buyers determines the behavior of economic agents.

Market structure

- refers the organizational characteristics that establish interrelationships between the buyers and sellers of a particular market.
- Its elements include the number and size distribution of buyers and sellers, the degree of product differentiation, the ease of entry of new firms into an industry, vertical integration and cost structure.
- These characteristics influence the nature of competition and pricing within that market.

Market conduct

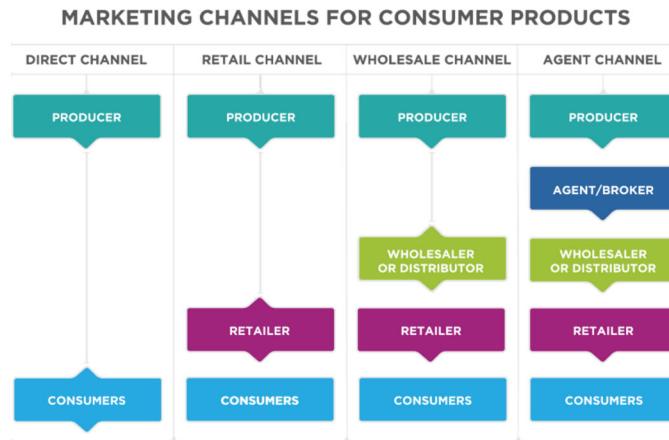
- looks at the patterns of behavior which enterprises follow in adapting and adjusting to markets in which they buy and sell, in particular methods employed to determine prices, sales promotion, and coordination policies and the extent of predatory and exclusionary tactics directed against established rivals and potential entrants.

Market performance

- represents the economic results of structure and conduct, in particular the relationship between distributive margins and in costs of marketing services.

Marketing Channel

- a succession of individuals or institutions that are involved in handling agricultural products as they move from the farmgate until they reach the final consumers.



Factors Affecting the Choice of Marketing Channels (Producer's Point of View)

1. Nature of the product

- Perishability
- Unit value
- Newness of the product

2. Nature of the market

- Distance
- Consumer's buying habits
- Size of total or average sales volume
- Concentration of purchases
- Seasonality of sales

Marketing channel

- **Contract buyers** – contracts between the buyer and producer are already set even before the product is harvested
- **Local buyers or viajeros** – traders who purchase different commodities in small volume from many farmers in the community, assemble, sort, and grade them, and in some cases, perform other functions before re-selling the accumulated volume in larger central markets.
- **Commission agents or brokers** – serve as selling agents for the farmer in exchange for a commission or percentage of the sales price.
- **Wholesalers** – traders who buy in bulk from the farmers or from the assemblers or viajeros and then sell to other wholesalers or retailers in large market centers.
- **Retailers** – intermediaries who normally buy from wholesalers although those with more available cash and have access to farmers can procure directly from the farm.

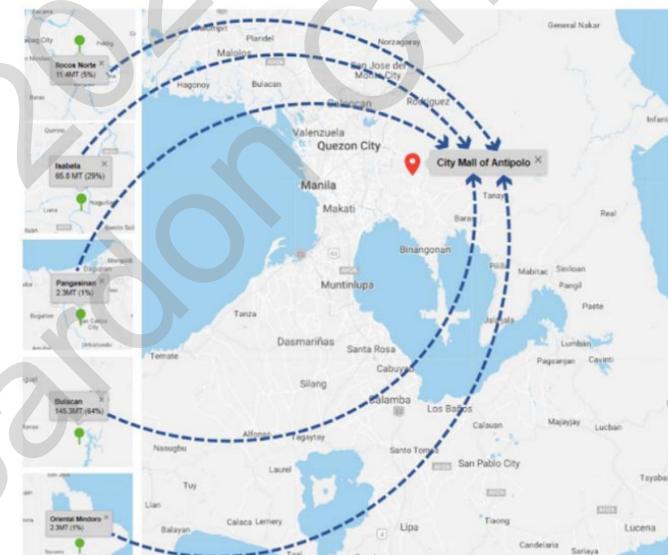
- **Cooperatives or farmers' associations** – intermediaries operate on a pooling basis since farmers with small volume of production bring their produce to the cooperative for sale to larger market areas.
- **Market cluster** – a group of producers who undertake a common marketing plan for a particular product for identified and committed market.

Product/Commodity Flow

- It is a flow chart that shows the volume of goods transferred from one market participant to another in a marketing channel/s or chain/s.
- It starts from the point of production (i.e., producers) to the point of consumption (i.e., final or end users).
- The percentages of volume traded by each participant relative to the total marketable surplus at the farm level (i.e., the difference between total production and the sum of post-harvest losses, home consumption, and in-kind payments for factors of production) are also reflected on the product or commodity flow.

Geographical Flow

- It is a flow chart that shows the volume of goods transferred from the point of production to various demand areas.
- It uses maps to show the routes in which a product flows from sources to destinations.
- It also contains the volume of goods traded and follows the same principles in drawing a product or commodity flow and expressing the volume traded for processed goods.



Market Integration

- refers to the expansion of some firms by consolidating production and marketing activities under single or unified management.

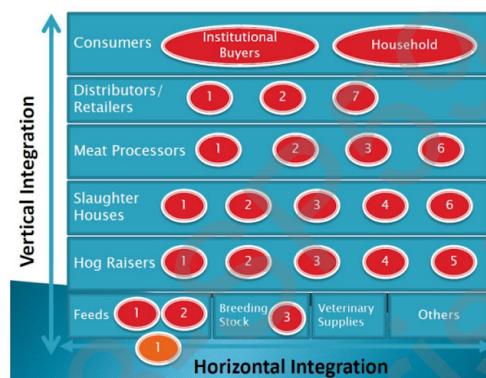
Types of Market Integration

1. Horizontal integration

- two or more firms in the same stage of production, including marketing, in an industry merge or combine. This results in increased economies of scale and better market power.

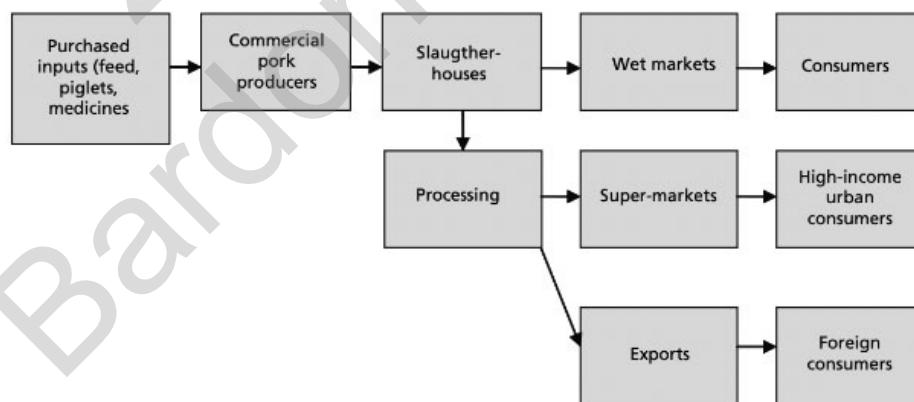
2. Vertical integration

- a firm buys or merges with another firm in the same industry but at another stage of production or marketing.
- This ensures the availability of raw materials/inputs, as well as a reduction in production costs, for the next stage/s of the production process.



Supply Chain

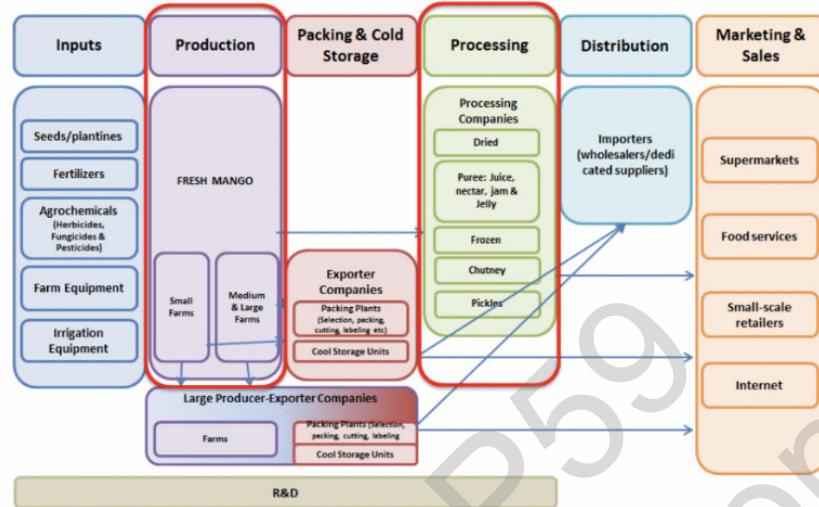
- It refers to “a network of independent organizations working together to control, manage, and improve the flow of inputs or materials, products, and information from suppliers to consumers” (Lantican, 2010).



Value Chain

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- It refers to the activities performed by an individual or firm which add value to the product or service produced and should be efficiently implemented to achieve competitive advantage over competitors.



Price Determination in Agriculture

Price

- is the amount of money, good, or service which is required for the trading of goods or services to occur.
- guides producers or sellers on what and how much to produce or sell and influences consumers on what and how much to purchase
- It has temporal and spatial dimensions as prices depend on the time and place of sale or purchase.

Agricultural prices are more volatile than non-agricultural prices

This is because of the following factors:

1. biological nature of agricultural production and products
2. existence of time lags
3. nature of agricultural demand
4. involvement of more middlemen in the agriculture sector vis-à-vis other sectors of the economy
5. domestic agricultural prices are influenced not only by domestic production and consumption but also by agricultural imports and exports.

Price Discovery

- involves the process of buyers and sellers arriving at a transaction price for a given quality and quantity of a product at a given time and place.

Types of Negotiations

1. Individual negotiations

- refers to bargaining between individual sellers, who want to sell at the highest possible price, and buyers, who want to buy at the lowest possible price.
- The market participant who has (more) market information (e.g., supply and demand situation, price information) has bargaining power over the other participant.
- In a pure or absolute monopoly market, the single seller enjoys monopoly power in an individual negotiation, while in the case of a monopsony, the single buyer dictates the price and other terms in the negotiation.
- This method of price discovery can be very costly due to the costs associated with getting market information and looking for a market participant to bargain with

2. Collective bargaining

- involves the formation of groups or associations for better market or bargaining power.
- practice by groups of producers who want to buy material inputs at a discounted price since they purchase in bulk or when they sell outputs to a buyer and command a selling price agreeable to the group.
- used by groups of buyers when they purchase so they can achieve their goal of paying the lowest possible price for products bought. Collective bargaining becomes effective when the bargaining association has complete control over price (i.e., price maker), buyers are few to facilitate bargaining, and inelastic demand for the product.

Pricing Strategies

1. Cost-plus pricing

- a mark-up is added to the unit cost of production to determine the selling price of the product

2. Break-even pricing

- a pricing strategy whereby the selling price is set to break-even on the costs of producing and marketing the product

3. Demand-based pricing

- presence of price discrimination; the selling price of the product is adjusted depending on the type of customers, place and time of sale

4. Competition-based pricing

- the selling price of the product is set based on the competitors' price

5. Price discount

- a price reduction offered to regular customers or buyers purchasing in multiple units or above a specified peso amount

6. Psychological pricing

- a strategy that encourages purchases based on emotional response rather than on economically rational responses.
- a. **Odd pricing** - is the strategy of setting prices at odd amounts slightly below an even or whole-peso amount
- b. **Multiple-unit pricing** - is a strategy that sets a single price for two or more units
- c. **Price lining** - is a retail marketing technique where products and services of the same category are grouped in the different price range based on their functions and quality.

7. Economy pricing

- offers customers a “no frills” low price. The cost of marketing and production are kept at a minimum.
- Generic brands of food and medicine are priced with economy pricing.

8. Penetration pricing

- marks products and services artificially low to gain a market share. After the company reaches a certain base of customers, it raises the price to a profitable price point. This pricing strategy is used for new products.

9. Price skimming

- places a high price on a product because the company has a big competitive advantage

10. Premium pricing

- sets a high price to project an aura of quality and status or places a high price on unique items. Many buyers believe that a high price is equivalent to high quality for certain products.

Marketing costs

- are payments for services performed and other costs incurred while the product is being moved along the marketing chain.
- Postharvest and product preparation costs:
 - **Grading** - inspecting or judging products and assigning them quality grades
 - **Standardization** - is the process of making the quality specifications of each grade uniform among buyers and sellers and from place to place, and from time to time.
- **Processing cost** - very common way of adding value to agricultural products. Value addition can benefit the farmers and farmers' group through:
 - increased profit margin to offset transport costs from the rural areas to the market centers
 - increased shelf-life of the product, and

- provision of family employment.
- **Packaging cost** - an activity that can add value to an agricultural product and enhance the attractiveness of the produce. This activity places the product to any container in which it is offered for sale and on which, label information (if any) is conveyed. For agricultural products which are usually more sensitive to physical damage and highly perishable, packaging plays important functional roles such as providing convenience, protection, and oftentimes storage.
- **Handling cost** - As the product moves from one participant in the marketing chain to another, it will have to be packed and unpacked, loaded and unloaded, and stored and taken out again
- **Transport cost** - A farmer may opt to hire a vehicle or use his own vehicle to transport his farm produce. The choice of a marketing channel to pursue is highly dependent upon the cost of transporting the product from the farm to the target market which is a function of distance and quality of roads. Since the farmer has the option to bring the product to the market, or to sell through the market intermediaries, he/she must be able to assess which among his/her available outlets will generate more profit
- **Storage cost** - Some farmers store their farm products to extend the availability of their produce over a longer period of time and to take advantage of a higher ex-store price in order to increase their farm income.
- **Product losses** - are losses incurred by both the farmer and the trader while handling the product from the farm until they reach the target market
 - **Quality losses** occur when part of the marketable products has to be sold at a lower price than the rest may be because of bruises incurred during transit
 - **Quantity losses** may come in the form of weight reduction due to loss in moisture content
- Capital cost
- Market fees and toll fees

Marketing Margin

- refers to the difference between prices at different levels in the marketing chain or simply put, it is the difference between what the consumer pays and what the farmer receives for his/her produce.

Types of Marketing Margins

1. **Absolute constant margin**
 - is expressed in pesos and remains constant regardless of the volume sold.
It is computed by deducting the buying price from the selling price.
2. **Percentage margin**

- is computed by dividing the absolute constant margin by the selling price and multiplied by 100.

Note: There is also the concept of percentage mark-up. This is different from percentage margin in the sense that it is computed by dividing the absolute margin by the buying price.

How to calculate margin?

- For example, you sell mango for P200 per kilo. Each kilo of mango costs you P150. Compute for the absolute cost margin.
 - Buying price - P150
 - Selling price - P200
 - Absolute cost margin = $P200 - P150 = P50$
- For example, you sell mangoes for P200 per kilo. Each kilo of mango costs you P150. Compute for percentage margin.
 - Buying price - P150
 - Selling price - P200
 - Absolute cost margin = $P200 - P150 = P50$
 - Percentage margin = $(P50/P200) \times 100 = 25\%$

How to calculate markup?

- Using the mango example, you sell each kilo of mango for P200. The mango costs you P150. First, absolute cost margin.
 - Buying price - P150
 - Selling price - P200
 - Absolute cost margin = $P200 - P150 = P50$
 - Percentage markup = $(P50/P150) \times 100 = 33\%$
- The markup is 33%. That means you sold a kilo of mango for 33% more than the amount you paid for it.

How to convert markup to margin and margin to markup?

- Margin to markup conversion
- To convert margin into markup, use the following formula:
 - $\text{Markup} = [\text{Margin} / (1 - \text{Margin})] \times 100$
 - Let's say you want a 30% margin and want to know how much your markup should be. You would do:
 - $\text{Markup} = [0.30 / (1 - .30)] \times 100$
 - $\text{Markup} = 43\%$
- Markup to margin conversion
- Now, to convert markup to margin, use this formula:
 - $\text{Margin} = [\text{Markup} / (1 + \text{Markup})] \times 100$
 - Say you want a markup of 50% and would like to know how much your margin is. You would do:
 - $\text{Margin} = [0.50 / (1 + 0.50)] \times 100$

- Margin = 33%

Reasons for High Marketing Margins

- High demand for marketing services by buyers
- High marketing costs incurred by intermediaries
- Over profiteering of market intermediaries

Breakdown of the consumer's peso

- is a simple tool that the farmer or any market participant can use to determine who among them in the market chain is reaping the most benefits.

The formula for computing each share is as follows:

- $\text{Farmer's share} = \frac{\text{Farm price}}{\text{Final retail price}} \times 100$
- $\text{Middleman's share} = \frac{\text{Middleman's margin}}{\text{Final retail price}} \times 100$

Breakdown of the consumer's peso

- Suppose the farm price of tomatoes is P10 per kilogram while the final retail price is P50 per kilogram. Find the farmer's share of the consumer's peso.

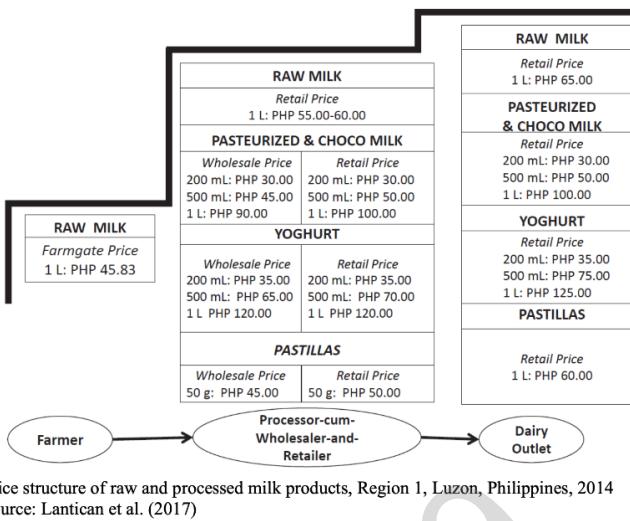
$$\text{Farmer's share} = \frac{10}{50} \times 100 = 20\%$$

- Suppose the first middleman sold the tomatoes he bought from the farmers at P30. Find the middleman's share of the consumer's peso.

$$\text{Middleman's share} = \frac{30-10}{50} \times 100 = 40\%$$

Price ladder

- It is a visual presentation of the increasing prices of products from the point of production to the point of consumption.
- With marketing channels at the bottom, the price ladder starts from the raw or fresh form of the product and ends at its final form (e.g., same, semi-processed, or processed form).
- Like a ladder, the prices also rise or progress as value is added on the product through marketing services, functions, or activities (e.g., sorting and grading, storage, processing, transportation).



Marketing efficiency

- is the ratio of market output (satisfaction) to marketing input (cost of resources). An increase in this ratio represents improved efficiency and a decrease denotes reduced efficiency. A reduction in the cost for the same level of satisfaction or an increase in the satisfaction at a given cost results in the improvement in efficiency.
- may be broadly defined as the effectiveness or competence with which a market structure performs its designated function.
- has the following three components; 1) The effectiveness with which a marketing service is performed; 2) The cost at which the service is performed; and 3)The effect of this cost and the method of performing the service on production and consumption.

Types of marketing efficiency

1. Technical or Physical or Operational Efficiency

- This aspect of the efficiency pertains to the cost of performing a function.
- Efficiency is said to have increased when cost of performing a function for each unit of output is reduced.
- This can be brought about either by reducing physical losses or through change in the technology of the function, storage, transportation, handling, and processing.
- A change in the technique may result either in the reduction of per unit cost or the increase in the output for a given level of cost.

2. Pricing or Allocative Efficiency

- means that the system is able to allocate farm products either over time, across the space or among the traders, processors and consumers (at a point of time) in such a way that no other allocation would make producers and consumers better off.

- refers to the structural characteristics of the marketing system, where the sellers are able to get the true value of their produce and the consumers receive true worth of their money.

2023-SP59
Bardon Christopher

Farm Management

Definition of Management

Management

- the fundamental integrating and operating mechanism underlying organized efforts." (Dalton E. Mc Farland)
- the process by which a co-operative group directs action towards common goals."(Joseph Massie)
- .a distinct process consisting of planning, organizing, actuating and controlling performed to determine and accomplish the objectives by the use of people and resources." (George R. Terry)

In simpler terms, Heimann identified management to refer to three distinct things:

1. As a group of managers
2. As a process
3. As a discipline

Nature of Management

1. Management is an economic resource.

- Just like land, labor and capital, management is also an essential economic resource required in production

2. Management is a process.

- Management is a continuous process, function, or activity that can only be concluded by the achievement of set objectives

3. Management is a group activity.

- Management opportunities are created when common objectives are set to be achieved by a group.

4. Management is dynamic and not static.

- With the rapid transformation of the world, the principles of management are adaptable to suit different social situations and changes.

5. Management is both a science and an art.

- Management is a science with an organized body of knowledge consisting of well-defined concepts, principles, techniques which have wide applications.
- The applications of these concepts, principles, and techniques required the specialized knowledge and skillset of a manager.
- Since such knowledge and skills are a manager's personal possession, management is also viewed as an art.

Scope of Management

- Financial Management
- Personnel Management
- Purchasing Management
- Production Management

- Maintenance Management
- Transport Management
- Distribution Management
- Office Management
- Development Management

Functions of Management

Henri Fayol classified managerial functions into five broad categories:

1. Planning
2. Organizing
3. Directing
4. Staffing
5. Controlling

Farm management

- is defined as “a science and process by which scarce resources are allocated and situations are manipulated by the farm manager in trying, with less than full information, to achieve specified objectives.

Functions of farm management

1. Diagnosis
2. Planning
3. Implementation
4. Monitoring
5. Evaluation

Categories

There are two categories of management important in the farm:

1. Strategic Management

- is the art and science of formulating, implementing, and evaluating strategic decisions and actions across functions in an integrative fashion. Strategic decisions are long-run decisions which are made or changed infrequently.

2. Tactical Management

- consists of taking short-run actions that keep the business moving along that course until the destination is reached. Tactical decisions are short-run decisions that are involved with the details necessary to implement the master farm plan and are made more often.

Farm Records

- are written statements or collection of facts and figures on a subject for a definite purpose. They may include data on money, or dates and events, or quantities of farm produce.

Importance of farm record keeping

- provide financial and physical information that can be helpful in decision-making

- it helps the farmer increase his efficiency by providing the basis for the efficient use of available resources
- it provides data for planning and budgeting
- it furnishes information on what and how much the farmer owns and owes
- it helps in evaluating the profitability of various enterprises
- it provides facts for direct financial aid and for preparing reports required by the government or financial institutions
- it shows where money comes from and where it is spent.

Types of farm records

- Financial records are records of income and expenses arising from the farm operations.
- Physical records kept in a farm are simply those that show where the materials and other resources used by various enterprises can be found. Physical records usually include farm maps, crop records, livestock records (e.g., feed records, production records, etc.)

Farm Inventory

- a detailed list of all farm properties or assets with values assigned to each of them

Bookkeeping

- Defined as the systematic recording of the financial transactions of an enterprise. There are two types of bookkeeping system based on the manner by which transactions are recorded: the single entry, and the double entry bookkeeping systems.

1. Single entry bookkeeping

- refers to the entry of transactions in only one account.

2. Double entry bookkeeping

- is the standard system of bookkeeping practiced in commercial farm enterprises.
- each transaction is recorded in such a way that the sum of debit is always equal to credit.
- this system recognizes that for each transaction, there is both a source and a destination.

Cash and accrual accounting

- **Cash accounting**

- records transactions only when cash is either received or expended. The accounting period when actual transaction was made (e.g., sale of product, purchase of assets, and use of farm inputs) is not recognized.

- **Accrual accounting**

- involves a more detailed treatment of transactions, in such a way as to maintain the balance in the fundamental accounting equation (Assets = Liabilities + Equity) at any given period in the accounting cycle.

- provides a more accurate estimate of profit at a given period, compared with cash accounting

KEY OUTPUTS FROM AN ACCOUNTING SYSTEM

- transaction journal
- general ledger
- balance sheet
- income statement

1. Transaction Journal

- is a record of all financial transactions of the farm business.
- indicates the date, amount, and description of each of the farm transactions, and is organized based on how the transaction affects the fundamental accounting equation, i.e., in terms of debits and credits.

Date	Accounts	Debits	Credits
1-15-X3	Utilities Expense Accounts Payable	1,000	1,000
	Received bill for utility costs incurred		
1-17-X3	Accounts Receivable Service Revenue	8,000	8,000
	Provided services to customers on account		
1-18-X3	Accounts Payable Cash	500	500
	Paid half of the amount due on the utility bill received on January 15		

2. General ledger

- entries in the transaction journal are summarized in the general ledger.
- contains a page for each and every account in use by the farm business. The summary of each type of farm account (e.g., cash, bank deposits, account payable, account receivable) is kept in a specific account ledger.

ACCOUNT: Cash				
Date	Description	Debit	Credit	Balance
Jan 1, 20X3	Journal Page 1	25,000.00		25,000.00
Jan 1, 20X3	Journal Page 1		2,000.00	23,000.00
Jan 4, 20X3	Journal Page 1	4,000.00		27,000.00
Jan 8, 20X3	Journal Page 2		500.00	26,500.00

3. Balance Sheet

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- shows the assets that are available for use by the farm business and how they are financed.
- a systematic organization of everything owned and owed by the farm business or an individual farmer at a given point in time.
- The term, “balance” in a balance sheet originates from the condition that throughout the accounting cycle, the ledger should be in balance, and total assets must exactly equal total liabilities plus equity, making the bottom-line values on both sides of a balance sheet equal to each other.

Parts of Balance Sheet

A. Assets

- is anything physical or any right belonging to the farm business that has money value at a given point in time
 - a. **Current assets** - have a shorter useful life
 - b. **Fixed assets** - those with longer life span

B. Liabilities

- are amounts owned by a debtor to his creditors.
- a. **Current liabilities** - those obligations that would be paid back within a short period of time. As a general rule, those that have to be paid out of current assets within one year are classified as current liabilities
- b. **Long-term liabilities** - liabilities that will not be due for a comparatively long time. These are debts whose maturity dates are beyond one year.

C. Equity

- refers to the owner's equity in the business.
- is the residual claim against assets of the business after total liabilities are deducted.

4. Income Statement

- or profit and loss statement is a financial statement that summarizes the revenues and expenses of the farm business enterprises, and computes the profit of the farm business during an accounting period.

Farm Budgeting

Types of farm budgets

1. Enterprise budget

- an organization of revenues, costs, and profit for a single enterprise of a farm business.
- used to assess the expected profitability of a given enterprise.

ITEM	UNIT	QUAN-TITY	UNIT PRICE (P)	AMOUNT (P)
Revenue				
Sale of finisher hogs (50 heads at 80kg/hd)	kg	4,000.0	70.00	280,000.00
Sale of animal manure	bag	50.0	50.00	2,500.00
Total revenue				282,500.00
Operating Costs				
Weanlings	hd	50.0	1,800.00	90,000.00
Feeds: Starter	kg	921.5	16.00	14,744.00
Grower	kg	3,145.0	14.44	45,413.80
Finisher	kg	2,450.0	12.44	30,478.00
Biologics: Vitamin B-complex	ml	1,500.0	10.00	15,000.00
Dewormer	ml	1,500.0	20.00	30,000.00
Medicine	hd	50.0	56.38	2,819.00
Hired labor (caretaker)	hd	50.0	115.20	5,760.00
Hauling and transport	hd	50.0	30.00	1,500.00
Hired labor for weighing animals	hd	50.0	5.00	250.00
Repair and maintenance	cycle	1.0	12,000.00	12,000.00
Interest	cycle	1.0	1,500.00	1,500.00
Total operating cost				249,464.80
Ownership or Fixed Costs				
Building depreciation	cycle	1.0	742.50	742.50
Machinery depreciation	cycle	1.0	659.25	659.25
Land charge	cycle	1.0	3,000.00	3,000.00
Miscellaneous overhead	cycle	1.0	500.00	500.00
Total ownership or fixed cost				4,901.75
Total cost				254,366.55
Profit (return to management)				28,138.45
Gross margin				33,035.20

2. Partial budget

- prepared to aid farm managers in making decisions related to small farm changes by comparing costs and benefit of alternatives faced by a farm business
- summarizes the partial changes in costs and revenues brought about by changes in farm operation, production system, resource use, or prices

GAINS		LOSSES	
Added Returns (A)	Value	Added Cost (B)	Value
Total added return	-	Total added cost	-
Reduced Costs (A)		Reduced Returns (B)	
Total reduced cost	-	Total reduced return	-
Sub-Total (A)	-	Sub-Total (B)	-
Net change in profit (A-B) =			
Non-economic factors:			

3. Cash flow budget

- a planning tool that can be used to project the cash position of any farm business prior to their actual operation.

ITEM	AMOUNT (P)			
	Qtr 1	Qtr 2	Qtr 3	Qtr 4
1. Beginning balance	10,000	5,000	10,000	15,000
Cash inflow:				
2. Cash product sales	35,000	40,000	43,000	46,000
3. Capital sales	0	10,000	0	0
4. Miscellaneous cash income	0	2,000	2,000	2,000
5. Total cash inflow	45,000	57,000	55,000	63,000
Cash outflow:				
6. Cash farm/operating expenses	20,000	22,000	25,000	28,000
7. Capital purchase	25,000	15,000	5,000	0
8. Miscellaneous cash expenses	15,000	10,000	10,000	10,000
9. Total cash outflow	60,000	47,000	40,000	38,000
10. Cash balance (line 5 - line 9)	-15,000	10,000	15,000	25,000
11. Borrowed funds needed	20,000	0	0	0
12. Loan repayments (principal and interest)	0	0	0	22,000
13. Ending cash balance (line 10 + line 11 - line 12)	5,000	10,000	15,000	3,000
Summary of Debt Outstanding				
14. Current	20,000	20,000	20,000	0
15. Non-current				
16. Total debt outstanding	20,000	20,000	20,000	0

4. Break-even budget

- an extension of the partial budgeting analysis that aims to estimate the quantity of a particular production variable (like yield, price, or quantity of a specific input) that makes the net gains equal to zero.

Common Methods of Asset Valuation

1. Original cost

- assumed in accounting that everything purchased is worth what is paid for it

2. Normal market value

- estimated average selling price of the property over a period of years.
- used for assets whose values appreciate over time such as land

3. Present market value

- price appropriate for the property if sold at the time the inventory is taken
- used for home grown feeds, crops and livestock set aside from home consumption.

4. Original cost minus depreciation

- method is commonly used to determine inventory values of properties that are used for several years, or for items purchased for use over a considerable time and for which there is no ready market for resale.

5. Replacement cost minus depreciation

- based on the assumption that present costs are much more significant than past costs in determining future productive capabilities.

- In this type of valuation, the property's value is equal to what it will cost the owner to replace it less depreciation

6. Income capitalization

- based on the theory that the purchase of an asset is in reality the purchase of future income, and the value of the asset under this method is contingent upon the expected amount of this income

7. Net selling price

- This is used for items that are held primarily for sale
- The value is computed by deducting the cost of marketing the product from the market price

8. Reproduction value

- refers to the cost to reproduce the assets at present prices and under present methods of valuation.

Depreciation of assets

- defined as a slow using up of a long-lived asset's serviceability. Hence, the value of an asset diminishes due to depreciation.
- the amount charged against the value of a property as a result of wear and tear in the normal course of the business.

Calculating Depreciation

Straight Line Method

- the simplest to use and works well for items that are constantly used.
- The determination of the annual depreciation involves a simple formula where the acquisition cost minus the salvage value is divided by the estimated life span of the property.
- Salvage value is also sometimes called junk value or scrap value. The formula in estimating annual depreciation using the straight line method is:

$$\text{Annual depreciation (P/year)} = \frac{\text{Acquisition cost (P)} - \text{salvage value (P)}}{\text{Life span (in years)}}$$

- For example, if a property was bought for P12,000 and was estimated to last for 10 years, then the yearly depreciation charge will be P1,200 assuming that there is no junk or salvage value for the property after its serviceable life.
- If there is a junk value for the property after its usefulness has expired, then it is subtracted from the acquisition cost. The difference is divided by the estimated life span. Suppose the property can be sold at a junk or salvage value of P2,000, then the depreciation charge per year will be:
 - Annual depreciation (P/year) = $\frac{P12,000 - P2,000}{10}$ = P1,000

Declining Balance Method

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- This is a way of charging depreciation which tends to conform to the decline in resale value. However, instead of having the property assessed, a fixed percentage is charged per year for depreciation. A constant percentage is charged against the diminishing balance of the property. In formula,
 - Annual depreciation = book value x depreciation rate
 - Hence, in absolute terms, the depreciation charge gets smaller than the preceding year.
 - For example, if we take the P12,000 property and it has been decided that the depreciation charge will be 20 percent per year. In the first year, the depreciation charge will be $P12,000 \times .20 = P2,400$; in the second year, $P9,600 \times .20 = P1,920$; and in the third year $P7,680 \times .20 = P1,536$.

Sum-of-the-year's digit Method

- If it is desired that depreciation expense must be distributed such that more is charged during the early years of use than in later periods, then this method is recommended. This method avoids an undistributed balance at the end of the life span of the property. The formula is:

Annual depreciation (P/year)

$$= \text{Acquisition cost} - \text{salvage value} \times \frac{\text{Remaining years of life span}}{\text{Sum-of-the-year's digit of life span}}$$

- Using the previous example,
- Acquisition cost = P12,000
- Anticipated salvage value = P2,000
- Expected life span = 10 years
- Sum-of-the-year's digits = $10 + 9 + 8 + 7 + 6 + 5 + \dots + 1 = 55$
- Depreciation charge for the first year = $(P12,000 - P2,000) \times 10/55 = P10,000 \times 10/55 = P1818.18$
- For the second year, depreciation will be = $P10,000 \times 9/55 = P1,636.36$

Liquidity vs. Solvency

Liquidity

- is the ability of the farm to generate the amount of cash needed to fully pay its debts due within a 12-month period without disrupting normal operations.

Solvency

- is the ability of the farm to generate cash beyond a one-year period to meet current and future financial obligations

International Economics

International economics

- is a field of study that assesses the implications of international trade, international investment, and international borrowing and lending. There are two broad subfields within the discipline: international trade and international finance

International trade

- is the exchange of goods and services between countries.

International finance

- is the study of monetary interactions that transpire between two or more countries.

Reasons for Trade

- differences in technology
- differences in resource endowments
- differences in demand
- presence of economies of scale
- presence of government policies

Benefits of Trade

- Increased variety of goods
- Lower costs through economies of scale
- Increased competition
- Enhanced flow of ideas

Trade policy

- a government policy that directly influences the quantity of goods and services that a country imports or exports

Trade Barriers

- laws and regulations to restrict the flow of goods and services across international borders.

Why trade barriers are used?

- Protecting Domestic Employment
- Protecting Consumers
- Protecting Infant Industries
- National Security
- Retaliation

The major obstacles to international trade are:

- Natural barriers
- Tariff barriers
- Nontariff barriers

Tariff is a tax on imports of a good.

Ad valorem tariffs

- are assessed as a percentage of the value of the imported good.

Specific tariffs

- a fixed fee levied on one unit of an imported good is referred to as a specific tariff. This tariff can vary according to the type of goods imported.

Average tariffs

- can be measured as a simple average across product categories or can be weighted by the level of imports.

Import Quota

- a trade restriction that sets a physical limit on the quantity of a good that can be imported during a given time period.
- A common practice to administer an import quota is for the government to require an import license. The license specifies the total volume of imports allowed.

Tariff-Rate Quota

- displays both tariff-like and quota-like characteristics
- a tariff-rate quota is a two-tier tariff
- has two components: a
 - quota that defines the maximum volume of imports
 - charges the within-quota tariff, and an over-quota tariff.
- This device allows a specified number of goods to be imported at one tariff rate (the within-quota rate), whereas any imports above this level face a higher tariff rate (the over-quota rate).
 - **Over-quota tariff rate**
 - often set high enough to prohibit the importation of the product into the domestic market.

Export quota

- used to restrain trade;
- its main purpose is to moderate the intensity of international competition, allowing less efficient domestic producers to participate in markets that would otherwise have been lost to foreign producers that sell a superior product at a lower price

Domestic content requirements

- these requirements stipulate the minimum percentage of a product's total value that must be produced domestically if the product is to qualify for zero tariff rates
- effect of content requirements is to pressure both domestic and foreign firms that sell products in the home country to use domestic inputs (workers) in the production of those products.

Embargo

- a ban imposed on the export or the import of a good.

- the government can protect domestic firms by imposing embargoes to decrease the quantity of imports.
- when this happens, domestic residents will buy more domestic goods.
- forms, but the most common are tariffs, subsidies, and quotas. These strategies attempt to correct any inefficiency in the international market.

Two types of subsidies

Domestic production subsidy

- granted to producers of import-competing goods

Export subsidy

- which goes to producers of goods that are to be sold overseas.
- most common product groups where export subsidies are applied are agricultural and dairy products.

Trade liberalization

- is the removal or reduction of restrictions or barriers on the free exchange of goods between nations.
- These barriers include tariffs, such as duties and surcharges, and nontariff barriers, such as licensing rules and quotas.
- Economists often view the easing or eradication of these restrictions as steps to promote free trade

Free Trade Agreement (FTA)

- an agreement between two or more economies to remove or reduce barriers to trade with the objective of increasing the cross-border movement of goods and services between the economies.

Globalization

- refers to the increased integration of economies through an increase in flows of goods and services, capital and labour across international borders

Free Trade Vs. Protectionism

Free trade

- is the simpler of the two theories: a laissez-faire approach, with no restrictions on trade.
- The main idea is that supply and demand factors, operating on a global scale, will ensure that production happens efficiently.
- Therefore, nothing needs to be done to protect or promote trade and growth because market forces will do so automatically.

Protectionism

- holds that regulation of international trade is important to ensure that markets function properly.
- Advocates of this theory believe that market inefficiencies may hamper the benefits of international trade, and they aim to guide the market accordingly.
- Protectionism exists in many different forms, but the most common are tariffs, subsidies, and quotas. These strategies attempt to correct any inefficiency in the international market.

Terms of Trade

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- refer to the number of units of imports that can be obtained with one unit of exports
- expressed as the ratio of the price of exports to the price of imports.

$$\text{Terms of trade} = \frac{\text{Price of exports}}{\text{Price of imports}}$$

The terms of trade can be expressed as an index.

$$\text{Terms of trade index} = \frac{\text{Price index of exports}}{\text{Price index of imports}} \times 100$$

Factors Affecting the Terms of Trade

Demand Factors

- When the demand for exports rises, the price will rise which will lead to a rise in the terms of trade. Conversely, a decrease in the demand for exports will lead to a fall in the price resulting in a fall in the terms of trade.
- When the demand for imports falls, the price will fall which will lead to a rise in the terms of trade. Conversely, an increase in the demand for imports will lead to a rise in the price resulting in a fall in the terms of trade.

Supply Factors

- When the supply of exports falls, the price will rise which will lead to a rise in the terms of trade. Conversely, an increase in the supply of exports will lead to a fall in the price resulting in a fall in the terms of trade.
- When the supply of imports rises, the price will fall which will lead to a rise in the terms of trade. Conversely, a decrease in the supply of imports will lead to a rise in the price resulting in a fall in the terms of trade.

Exchange Rate Factor

- When the exchange rate rises, the price of imports in domestic currency will fall which will lead to a rise in the terms of trade. Conversely, a fall in the exchange rate will lead to a rise in the price of imports in domestic currency resulting in a fall in the terms of trade.

Dumping

- recognized as a form of international price discrimination.
- occurs when foreign buyers charge lower prices than domestic buyers for an identical product, after allowing for transportation costs and tariff duties.
- Selling in foreign markets at a price below the cost of production is also considered dumping

Forms of Dumping

Sporadic dumping (distress dumping)

- occurs when a firm disposes of excess inventories on foreign markets by selling abroad at lower prices than at home

Predatory dumping

- occurs when a producer temporarily reduces the prices charged abroad to drive foreign competitors out of business

Persistent dumping

- occurs when a country consistently sells products at a lower price in the foreign market compared to the local prices

Reverse dumping

- occurs when a country charge a higher price in the foreign market and a lower price in the local market

Comparative Advantage

- the superior productive capacity of one individual, or nation, or region, or industry, relative to all others, based on opportunity cost.
- suggests that countries will engage in trade with one another, exporting the goods that they have a relative advantage in.

Limitations of Comparative Advantage

- Trade Barriers
- Product Differentiation
- Transport Costs
- Constant Opportunity Costs of Production
- Perfect Mobility of Resources within Each Country

Sources of Comparative Advantage

- Differences in Factor Endowments
- Economies of Scale

Example of Output of two goods

Country	Textiles	Books
UK	1	4
India	2	3
Total	3	7

Specialization

- is a method of production whereby an entity focuses on the production of a limited scope of goods to gain a greater degree of efficiency.
- involves focusing on one product or a limited scope of products so as to become more efficient.

Output after specialization

Country	Textiles	Books
UK	0	8
India	4	0
Total	4	8

Absolute Advantage

- lower costs of production for a specific good or service than another entity that produces the same good or service.

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World price

- the price of a good that prevails in the world market for that good

Closed economy vs. Open economy

Closed economy

- an economy that does not interact with other economies in the world

Open economy

- an economy that interacts freely with other economies around the world

Exports

- goods and services that are produced domestically and sold abroad

Imports

- goods and services that are produced abroad and sold domestically

Net exports

- the value of a nation's exports minus the value of its imports, also called the trade balance

Trade surplus

- an excess of exports over imports

Trade deficit

- an excess of imports over exports

Balance of Payments

- is a record of a country's transactions with the rest of the world. It shows the receipts from trade. It consists of the current, capital and financial account
 - **Current accounts** – record of all payments for trade in goods and services plus income flow
 - **Capital accounts** – records the flow of goods and services in and out of a country
 - **Financial accounts** – record of all transactions for financial investment

Net foreign investment

- the purchase of foreign assets by domestic residents minus the purchase of domestic assets by foreigners
- measures an imbalance between the amount of foreign assets bought by domestic residents and the amount of domestic assets bought by foreigners.

Factors affecting the balance of payments

- **The rate of consumer spending on imports.** For example, during an economic boom, there will be increased spending and this will cause a deficit on the current account.
- **International competitiveness.** If a country experiences higher inflation than its competitors, exports will be less competitive leading to lower demand.
- **Exchange rate.** If the exchange rate is overvalued, it makes exports relatively more expensive leading to a deterioration in the current account.
- **Structure of economy.** Deindustrialization can harm the export sector.

Total currency flow

- is the current account balance minus the capital and financial account balance excluding the change in reserve assets.
 - When the total currency flow is positive, the balance of payments is in surplus and that occurs when money inflows exceed money outflows.
 - When the total currency flow is negative, the balance of payments is in deficit and that occurs when money outflows exceed money inflows.

Saving, investment, and their relationship to the international flows

- The economy's gross domestic product (Y) is divided among four components: consumption (C), investment (I), government purchases (G), and net exports (NX). We write this as:
$$Y = C + I + G + NX$$
- Recall that national saving is the income of the nation that is left after paying for current consumption and government purchases. National saving (S) equals $Y - C - G$. If we rearrange the above equation to reflect this fact, we obtain:
$$Y - C - G = I + NX \text{ or } S = I + NX$$
- Because net exports (NX) also equal net foreign investment (NFI), we can write this equation as:
$$S = I + NFI$$
- This equation shows that a nation's saving must equal its domestic investment plus its net foreign investment.

Exchange rate

- the rate at which one currency trades against another on the foreign exchange market
 - **Nominal exchange rate** – the rate at which a person can trade the currency of one country for the currency of another
 - **Real exchange rate** – the rate at which a person can trade the goods and services of one country for the goods and services of another

Types of Exchange Rates

Floating exchange rate

- When the value of the currency is determined by market forces – supply and demand for currency

Fixed exchange rate

- where the government seeks to keep the value of a currency at a certain level compared to other currencies.

Appreciation vs Depreciation

Appreciation

- an increase in the value of a currency as measured by the amount of foreign currency it can buy

Depreciation

- a decrease in the value of a currency as measured by the amount of foreign currency it can buy

Purchasing-power parity

- a theory of exchange rates whereby unit of any given currency should be able to buy the same quantity of goods in all countries

Capital flight

- a large and sudden reduction in the demand for assets located in a country.

Agriculture Related Laws

Department of Agriculture (DA)

- the government agency responsible for the promotion of agricultural development by providing the policy framework, public investments, and support services needed for domestic and export-oriented business enterprises.

History

As the country's 17th President, President Ferdinand Romualdez Marcos, Jr. made the unprecedented decision of designating himself as the concurrent head of the Department of Agriculture amidst the looming global food crisis. In his inaugural message on June 30, the President noted that the country's agriculture sector "cries for urgent attention" after years of neglect and misdirection.

His plan of action for the short-term is to increase the yield of the country's main staple and provide support to those in need of government assistance. Over the long-term, he is pushing for multi-year planning focused on the restructuring of the food value chain from research to development to retail. With the support of the DA family, the Department under Marcos' leadership will work fast and efficiently to surmount the numerous challenges that threaten the country's food supply and stymied the growth of the farm sector for decades.

First Philippine Republic, American Regime

The Department of Agriculture and Manufacturing was formed 11 days after the proclamation of the Philippine Independence on June 12, 1898. The Department was one of the first agencies that President Emilio Aguinaldo formed.

The Department was then headed by three directors, Jose Alejandrino (1898-1899), Graciano Gonzaga, and Leon Ma. Guerrero, during the latter part of 1899.

In 1901 during the American colonial period, the Department was renamed Insular Bureau of Agriculture under the Department of Interior and was headed by Americans, Frank Lamson-Scribner (1902), W.C. Welborn (1904), and Dr. George Nesom (1907).

In 1910, the Bureau, under the supervision of the Department of Public Instruction, was headed by Frederick Taylor (1911-1914) and Harry Edwards (1914-1916).

In 1917, the Department of Agriculture and Natural Resources (DANR) took over the functions of the bureau and was led by Secretaries Galicano Apacible (1917-1921), Rafael Corpuz (1921-1923), and Silvestre Apostol (1923-1928).

During the administration of Secretary Rafael Alunan, Sr. (1928-1932), the DANR became the Department of Agriculture and Commerce. The Bureau of Agriculture was split into two bureaus, the Plant Industry and the Animal Industry.

The following year, the Fish and Game Administration and the Fiber Inspection Service were established under the leadership of Secretary Vicente Singson Encarnacion (1933-1934).

From 1934-1938, Eulogio Rodriguez, Sr. was appointed Secretary who was replaced by Secretary Benigno S. Aquino, Sr. until 1941. During Aquino's term, the Fish and Game Administration was restructured and the Division of Soil Survey was created.

With the outbreak of World War II in the Pacific, President Manuel Quezon re-appointed Secretary Rafael Alunan, Sr. (1941-1942) as Secretary of Agriculture and Commerce.

Postwar Period

After the country's Liberation from the Japanese on July 4, 1945, the government rebuilt the country and reconstituted the agencies including the Department of Agriculture and Commerce (DAC). With the resumption of the Commonwealth Government, President Sergio Osmeña reappointed Vicente Singson Encarnacion as Secretary of the DAC. Thereafter, Mariano Garchitorena (1946-1948) was appointed by President Manuel Roxas.

In 1947, the Department was named again as the Department of Agriculture and Natural Resources (DANR). In September 1948, President Elpidio Quirino appointed Placido L. Mapa as its Secretary.

Two years later (1950), Vice President Fernando Lopez served concurrently as the DANR chief. During his term, the Bureau of Agricultural Extension (now Agricultural Training Institute) was established, along with the organization of the 4-H Clubs and Rural Improvement Clubs (RICs) nationwide.

In 1953, President Quirino reappointed Placido L. Mapa to lead the Department. Under his tenure, the Rice Economic Board was set up, making the rice industry the first commodity to benefit from an integrated national planning.

Salvador Araneta (1953-1955) was later named as Secretary and three major agencies under the DANR were created, namely: Agricultural Tenancy Commission, precursor of the Department of Agrarian Reform; Philippine Tobacco Administration, forerunner of the National Tobacco Administration; and Philippine Coconut Administration (now known as Philippine Coconut Authority).

During the latter part of his term, President Magsaysay appointed Juan G. Rodriguez (1955-1960) as DANR chief, whose term was highlighted by several milestones: the Philippines became a member of the United Nations Food and Agriculture Organization (FAO); launch of the National Rice and Corn Production Program; and creation of the Rice and Corn Coordinating Council, forerunner of the National Agricultural and Fishery Council (NAFC).

DA Moved to Quezon City

On September 14, 1959, the DANR offices moved from Manila (at Agrifina Circle) to Quezon City (along Elliptical Road in Diliman).

When Cesar Fortich became the DANR chief in 1961, the Abaca Development Board (forerunner of the Fiber Development Authority) was created. Jose Locsin, then concurrent Chairman of the National Economic Council, succeeded Fortich from September to December 1961.

In 1962, President Diosdado Macapagal appointed Benjamin M. Gozon as Secretary. During his term, two agencies were created: the Bureau of Agricultural Economics (forerunner of the Bureau of Agricultural Statistics); and the National Rice and Corn Administration or RCA (now known as the National Food Authority).

The following year, President Macapagal appointed RCA Administrator Jose Y. Feliciano as concurrent Secretary of Agriculture. Feliciano launched the Agricultural Marketing News Service that provided farmers and consumers prices of selected commodities regularly.

In 1965, President Ferdinand Marcos named Vice Pres. Lopez as Secretary, serving for the second time in a concurrent capacity. Considered as the “rice czar,” he successfully implemented a production program that enabled the Philippines to export rice for the first time in 1968.

During the early years of Martial Law, in May 1974, President Marcos reorganized and split the DANR into two agencies: Department of Agriculture (DA); and Department of Natural Resources (DNR). Arturo R. Tanco, Jr. was named DA Secretary.

DA Renamed as Ministry of Agriculture

Four years later, government departments were transformed into ministries with the country's shift to parliamentary form of government.

With Tanco remaining at the helm of the Ministry of Agriculture (MA), the Masagana 99 rice production program was launched which made the country self-sufficient and a rice exporter. A similar program on corn also made the country self-sufficient in white corn. In June 1978, the MA established 12 regional offices nationwide.

Six years later, in June 1984, the agency was renamed Ministry of Agriculture and Food (MAF). The Bureau of Fisheries and Aquatic Resources was transferred from the Ministry of Natural Resources.

In 1984, under a parliamentary government, Assemblyman Salvador H. Escudero III – former Director of the Bureau of Animal Industry and MAF Deputy Minister – served as MAF Minister. Escudero implemented the Intensive Rice Production Program (IRPP), an import-substitution program, expanded government's animal dispersal program, particularly the Bakahang Barangay (cattle raising at village level) and Pagbababuyan (swine raising).

People Power, Renamed to DA

On February 1986, as a result of the ‘EDSA People Power Revolution,’ Corazon C. Aquino was catapulted as President. She named Ramon V. Mitra, Jr. as MAF Minister who implemented policy and institutional reforms that freed the agriculture markets, enabling farmers to enjoy higher farmgate prices.

In 1987, MAF Deputy Minister Carlos G. Dominguez was appointed to replace Mitra who opted to run for Representative of the second district of Palawan.

On January 30, 1987, President Aquino signed and issued Executive Order No. 116, which renamed and reorganized the MAF into the Department of Agriculture.

Under DA, Dominguez introduced reforms in the rural credit system and established the Comprehensive Agricultural Loan Fund (CALF). In 1988, he also launched the Livelihood Enhancement for Agricultural Development (LEAD) program to speed up farmers' organizations access to financing, management expertise, and marketing. Agriculture and Fishery Councils (AFCs) were set up at the sectoral, regional, provincial and municipal levels to provide inputs on major programs and policy decisions and help plan and monitor DA projects. Senen C. Bacani, appointed in January 1990, implemented the Rice Action Program (RAP) and Corn Production Enhancement Program (CPEP).

President Aquino appointed Senen Bacani as Secretary in 1990-1991. His leadership enabled the private sector to take the lead in further developing fresh fruits business in the resource-rich Mindanao.

In 1992, President Fidel V. Ramos named Roberto S. Sebastian as DA chief who introduced the Key Production Approach (KPA) which became the basis of the Medium-Term Agricultural Development Plan (MTADP).

In 1996, President Ramos appointed Dr. Salvador H. Escudero III as DA Secretary, for the second time. During his two-year tenure, he launched the Gintong Ani food production and security program.

Dar's First Stint

In July 1998, President Joseph Ejercito Estrada designated William D. Dar as Acting DA Secretary who introduced the Estrada administration's 10-point agenda in agriculture and fisheries under the Agrikulturang Makamasa program.

In March 1999, President Estrada named former Senate President Edgardo J. Angara as DA Secretary who authored the Agriculture and Fisheries Modernization Act of 1997 or AFMA (Republic Act No. 8435). He put into motion the law's vision of modernizing the country's agriculture and fisheries sector.

Domingo F. Panganiban continued the implementation of AFMA as the government's comprehensive framework and platform for rural development when he assumed office in January 2001.

A month later, he was replaced by Leonardo Q. Montemayor who implemented the AFMA with special emphasis on its social equity aspect. He launched the Ginintuang Masaganang Ani Countrywide Assistance for Rural Employment and Services (GMA-CARES).

Secretary Luis P. Lorenzo Jr., took the helm at the Department in December 2002 and spearheaded the launching of the Roll-On, Roll-Off (RORO) transport program. The hybridization programs of the Department were intensified and interventions were focused on the Mindanao regions.

Secretary Arthur C. Yap, appointed on August 23, 2004, continued to uphold the vision of agricultural modernization. During his first term, he unveiled the GMA Goal 1 (develop two million hectares of new lands for agribusiness to contribute two million to

the 10 million jobs targeted by 2010) and GMA Goal 2 (make food plentiful while keeping the price of “wage goods” at low prices).

During Panganiban’s second term as Secretary, a total of 203,000 hectares of idle lands and 313,000 jobs were developed under Goal 1 and 10 Huwarang Palengke (outstanding markets) were identified under Goal 2.

When Yap returned to the DA in October, 2006, he implemented various projects and policies towards the attainment of food security and self-sufficiency. Upon Secretary Yap’s decision to run as Representative of the 3rd District of Bohol, Secretary Bernie Fondevilla took over in March 2010.

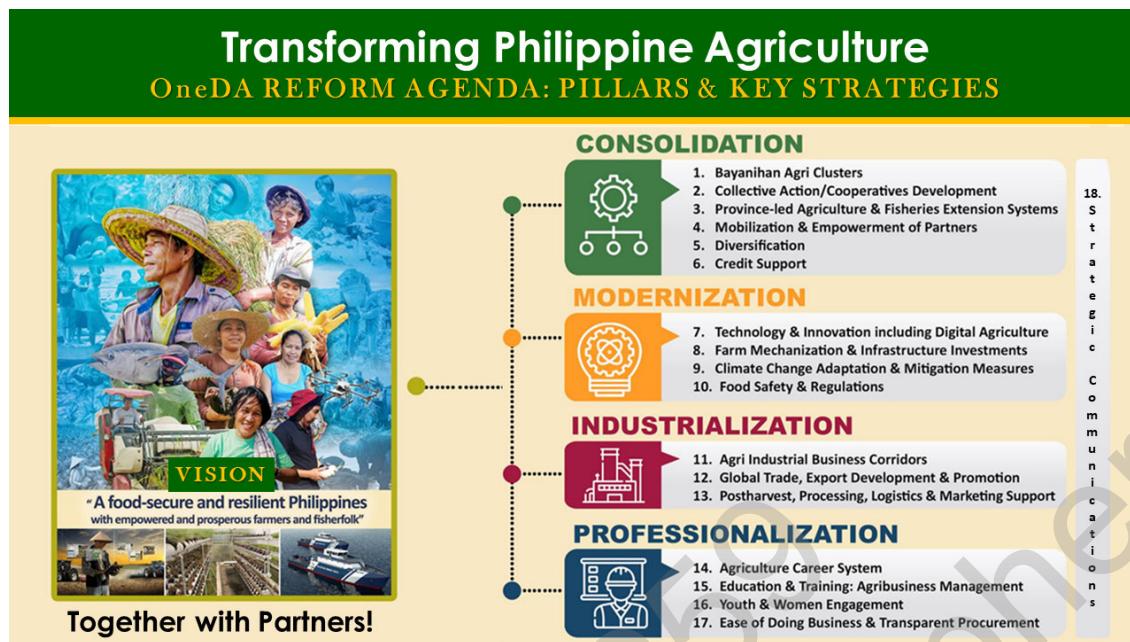
On June 30, 2010, President Benigno S. Aquino III appointed two-term congressman of Quezon and civil engineer by profession Proceso J. Alcala as Secretary. One of the principal authors of Republic Act 10068, or the Organic Agriculture Act of 2010, he also aimed to achieve self-sufficiency in rice during his term.

Emmanuel F. Piñol was appointed by President Rodrigo Duterte on July 1, 2016. He vowed to bring agriculture and fisheries program to basic by addressing food production and poverty. Under his watch, efforts were geared towards production and trade of staple food commodities to ensure food sufficiency and security; and high-value crops to generate jobs and foreign earnings.

Dr. William D. Dar was called again to serve government as the Secretary of Agriculture on August 5, 2019, under the administration of President Rodrigo Roa Duterte. Upon his assumption to office, Dar introduced the “New Thinking for Agriculture” which is anchored on the vision: A food-secure Philippines with prosperous farmers and fisherfolk. The vision has over-arching twin goals of increasing productivity and making farmers and fishers prosperous or his term’s battlecry, “Masaganang Ani at Mataas na Kita”. With President Duterte’s marching order to arrest the anemic growth of the agriculture sector, which has barely grown in the past decade, at a rate of 1.1% annually, Dar targets the agriculture to grow at least 2%, from August 2019 to July 2020; and increase up to 2.5-3% in 2021; and 3-4% in 2022.

Source: <https://www.da.gov.ph/history/>

The One DA Reform Agenda: Eighteen (18) Key Strategies



1. Bayanihan Agri Clusters (BACs)

- farm clustering and consolidation, which will be known as “Bayanihan Agri Clusters” (BAC), involves the integration of government interventions—such as provision of loans, farm mechanization, free seeds and fertilizers, and market support—to organized farmer/fisher groups
- aims to empower stakeholders to reduce production costs, gain more benefits from the agriculture value chain, and direct interventions to achieve economies of scale.

2. Collective Action / Cooperatives Development

- Collective action involves organizing farmers/fishers into cooperatives or business entities to become viable blocks or units of production enjoying higher efficiencies in operations and improved profits
- Linkages between organized farmers/fishers and major players in the food industry must be established to gain a steady market for their produce
- The “big brother-small brother” arrangement between major agribusiness firms and organized agriculture smallholders will also facilitate transfer of technologies.

3. Province-led Agriculture and Fisheries Extension Systems (PAFES)

- To strengthen the collaboration between DA, local government units, academe, and private sector, the Provincial Agricultural and Fisheries Extension Systems (PAFES) will be institutionalized to bring extension services to the grassroots level amid the challenges of devolution.
- With PAFES, the province serves as an extension hub that synchronizes agricultural plans and programs as well as orchestrate the activities of the various stakeholders.

- DA will co-plan, co-invest, co-implement, and co-monitor priority projects in the provinces, particularly as they embark on commodity specializations to maximize comparative advantage.

4. Mobilization and Empowerment of Partners

- The DA will pursue a policy of active participation and partnership with the private sector in establishing more agri-based industries in the countryside and developing markets for agriculture products.
- In particular, the DA will continuously court partnerships with local government units and individual provinces.

5. Diversification

- Farmers, particularly those involved in the production of rice, corn, and coconut, will be encouraged and supported to diversify into other commodities such as vegetables and other high-value seasonal crops to boost their incomes.

6. Credit Support

- DA's agricultural credit policy framework will now focus on promoting active participation of the banking sector and government financial institutions in the rural financial system.

7. Technology and Innovation including Digital Agriculture

- Digital technology and innovations, such as e-Kadiwa and the use of data analytics, will be leveraged throughout the food value chain and logistics, starting with the efficient distribution of inputs to farmers enrolled in the Registry System for Basic Sectors in Agriculture (RSBSA).
- The automated system will improve farm productivity and cut waste by using analytics to facilitate data-driven farming practices for small farmers.
- Crop production will be monitored using digital databases to strengthen the digitization of farming and agribusiness activities in the country and pave the way for "Agriculture 4.0".

8. Farm Mechanization and Infrastructure Investments

- Vital rural infrastructure such as farm-to-market roads, irrigation systems, postharvest facilities, storage, tolling, processing, and marketing facilities, in partnership with the private sector and concerned agencies and LGUs will be aligned and planned out according to their impact on supply, markets, and climate change.
- The private sector and LGUs will also be engaged in the creation of food hubs and establishment of efficient transport and logistics systems.

9. Climate Change Adaptation and Mitigation Measures

- The DA will aggressively pursue and institutionalize regional and provincial climate risk and vulnerability assessments to inform proactive measures during typhoon season and other natural disasters.

- Regional Field Offices (RFOs) will be deployed and strengthened for early warning advisories and disaster risk management activities.

10. Food Safety and Regulations

- The DA will focus funding and activities in mitigating the effects of plant and animal diseases by improving laboratory and research facilities, building up traceability systems, and unifying sanitary and phytosanitary control measures against plant and animal epidemics.

11. Agri-Industrial Business Corridors (ABCs)

- The DA will pursue the establishment of Agri Industrial Business Corridors (ABCs) with Fisheries Management Areas and trading posts to provide smallholder farmers and fisherfolk access to resources, including state-of-the-art production technology, hatcheries and nurseries, capital, and value-adding facilities.

12. Global Trade, Export Development, and Promotion

- To strengthen the competitiveness of provinces and regions in the production of specific crops, the value chain will be the center of program and project rollouts.
- From mechanizing farm practices, developing processing facilities, and incubating export-oriented businesses in agri-industrial business corridors, smallholders will be given the chance to hold up their end of the value chain as suppliers of raw material to be processed into export products.
- The DA will rally provinces and regions into championing their own high-value crops with vast export potential. More than ever, the DA will safeguard existing international cooperation to open up avenues for global trade expansion.

13. Postharvest, Processing, Logistics, and Marketing Support

- DA will harmonize local production schedules and supply chain activities in its supervision of supply, importation, and price stability of key agricultural goods.
- Kadiwa and e-Kadiwa will level up through increased partnerships with LGUs and intensified procurement and marketing of farmers' produce.
- An improved national agriculture logistics system will be developed to speed up and reduce transport and distribution costs from production to consumption areas, including export destinations.

14. Agricultural Career System

- As Higher Education Institutions (HEIs) and agricultural state colleges and universities (SUCs) are challenged to produce the next generation of farmers and agripreneurs, the DA will actively form partnerships and linkages for internships and promote agriculture as a viable formative and professional track, especially in rural areas.
- The DA will play an advisory role in strengthening curricula in the agricultural sciences and integrating these in the dynamism of university systems and the project of nation-building.

- It will enhance the capacity of the sector to absorb agriculture and agribusiness graduates through a merit and incentive system. It will stabilize its own manpower capacity to attract the brightest and most talented agriculture graduates through competitive compensation packages and upward career mobility.

15. Education and Training: Agribusiness Management

- Education and trainings will be conducted with focus on helping farmers learn and improve their knowledge and skills in entrepreneurship and farm business management.
- Coupled with agri-industrialization, agripreneurship will serve as core strategy to modernize the country's agriculture sector, create employment and income opportunities and uplift millions of smallholder farmers.
- A system for certifying agribusiness managers will be instituted to formalize leadership roles in various farmers' organizations

16. Youth and Women Engagement

- Information dissemination on long-term agricultural programs, practices, and learning platforms will target the engagement of youth and women.
- As the active population of farmers and fishers enter senior citizenship, the DA will aid in the transition of the largest and most competitive agri-enterprises into the management of a younger crop of leaders, scientists, and researchers.

17. Ease of Doing Business and Transparent Procurement

- The DA will continue to pursue "internal cleansing," and strengthen and synchronize efforts to institute a more transparent, technology-driven procurement system.
- DA will also aid agripreneurs, especially medium and small Micro, small and medium enterprises (MSMEs), in reducing the cost and effort of complying with the regulatory burdens of doing business.

18. Strategic Communications

- The DA will pursue comprehensive and proactive communications strategies for the agri-fishery sector and to strengthen awareness among stakeholders, partners, and the public. This will involve the integration of the Department's key information, education and communications responsibilities employing both traditional offline as well as modern online channel

Bureaus

1. Agricultural Training Institute (ATI)

- is the extension and training arm of the Philippine Department of Agriculture, mandated to train agricultural extension workers and their beneficiaries and lead in the delivery of e-extension services for agriculture and fisheries

- By virtue of Executive Order No. 116, series 1987, the ATI was created to be responsible for the training of all agricultural extension workers and other AF clients; ensure that trainings address the real needs of the agricultural sector, and that research results are then communicated to the farmers through the appropriate training and extension activities.
- 2. Bureau of Agricultural Research (BAR)**
- mandated to lead and coordinate the national agriculture and fisheries research and development (R&D) in the count
 - was created by virtue of Executive Order 116 signed in 1987 under the Freedom Constitution. Under this EO, the government addressed the lack of coordination and integration of agriculture research and development among the existing bureaus, councils, and agencies by creating BAR under the Research, Training, and Extension Group.
 - BAR's specific mandate to coordinate agricultural research was affirmed by EO 292, otherwise known as the Administrative Code of 1987. BAR's specific mandate is to: "(1) ensure that all agricultural research is coordinated and undertaken for maximum utility to agriculture (Section 22)."
- 3. Bureau of Agricultural and Fisheries Engineering (BAFE)**
- mandated to monitor the implementation of the National Agricultural and Fisheries Modernization Plan of the Department of Agriculture.
 - was created by virtue of Strengthening the DA Agricultural and Fishery Engineering Groups, pursuant to Section 24 of the Republic Act No. 10601 also known as "Agricultural and Fisheries Mechanization (AFMech) Law"
 - it shall plan, implement, and evaluate the development of agricultural mechanization and infrastructure in the agriculture sector.
- 4. Bureau of Agriculture and Fisheries Standards (BAFS)**
- major duties include formulating and enforcing standards of quality in the processing, preservation, packaging, labeling, importation, exportation, distribution and advertising of fresh, primary and secondary-processed agricultural and fisheries products.
 - provides assistance in establishing scientific basis for food safety, trade standards and codes of practice, and harmonizes them with internationally-accepted standards and practices. BAFS also serves as the National Technical and Administrative Secretariat to the National Organic Agriculture Board (NOAB).
- 5. Bureau of Fisheries and Aquatic Resources (BFAR)**
- government agency responsible for the development, improvement, management and conservation of the country's fisheries and aquatic resources
- 6. Bureau of Plant Industry (BPI)**

- it is the main agency of the Department of Agriculture which sets the directions for the accelerated development of modern crop technologies and proper packaging and dissemination to the end-users that would increase their farm productivity and ultimately improve the living standards of the farmers

7. Bureau of Animal Industry (BAI)

- promotes the development of the livestock industry and investigates the causes of dangerous communicable diseases from animals so their spread could be prevented.

8. Bureau of Soils and Water Management (BSWM)

- mandate is to ensure effective soil, land, and water resources utilization by undertaking projects and research on soil conservation, irrigation, rainmaking, and other related activities.

Attached agencies

1. Agricultural Credit Policy Council (ACPC)

- helps government develop and implement strategies and policies that increase and sustain the flow of credit to agriculture and fisheries, improve the viability of farmers and fisherfolk, and support agriculture modernization, food security and poverty alleviation

2. Fertilizer and Pesticide Authority

- mandated to assure the agricultural sector of adequate supplies of fertilizer and pesticide at reasonable prices, rationalizing the manufacture and marketing of fertilizer, protecting the public from the risks inherent in the use of pesticides, and educating the agricultural sector in the use of these inputs

3. National Meat Inspection Service

- a specialized regulatory agency in the Department of Agriculture that is the country's sole national controlling and competent authority on all matters pertaining to meat inspection and hygiene both for locally produced and imported meat

4. Philippine Carabao Center (PCC)

- mandated to conserve, propagate and promote the carabao or native buffalo as a source of milk and meat as well as draft animal power and hide to benefit the rural farmers

5. Philippine Center for Postharvest Development and Mechanization (PhilMech)

- mandated to generate, extend and commercialize appropriate and problem-oriented agriculture and fishery postharvest and mechanization technologies.

6. Philippine Council for Agriculture and Fisheries (PCAF)

- created out of the consolidation of two councils the National Agricultural and Fishery Council (NAFC) and the Livestock Development Council (LDC) pursuant to EO 366, Series of 2004; strengthened functions related to coordination and monitoring of agricultural and fisheries modernization processes, and development of public-private partnerships as advisory special bodies to the DA

7. Philippine Fiber Industry Development Authority (PhilFIDA)

- mandated to promote the growth and development of the natural fiber industry through research and development; production support; extension support, education and training services; fiber utilization and technology; and standards implementation and trade regulation

8. Philippine Rubber Research Institute (PRRI)

- mandated to strengthen the research and development on rubber and other aspects of the industry, in order to increase rubber production and improve the quality of life of people

Attached corporations

1. National Dairy Authority (NDA)

- mandated to ensure the accelerated development of the Philippine dairy industry through policy direction and program implementation

2. National Food Authority (NFA)

- mandated to maintain sufficient rice buffer stocks to be sourced solely from local farmers

3. National Tobacco Administration (NTA)

- mandated to improve the economic and living conditions and raise the quality of life of the tobacco farmers including those who depend upon the industry for their livelihood; and promote the balanced and integrated growth and development of the tobacco industry to help make agriculture a solid base for industrialization

4. Philippine Coconut Authority (PCA)

- tasked to develop the coconut industry to its full potential in line with the new vision of a united, globally competitive and efficient coconut industry; mandated to promote the rapid integrated development and growth of the coconut and other palm oil industry in all its aspects and to ensure that the coconut farmers become direct participants in, and beneficiaries of, such development and growth.

5. Philippine Crop Insurance Corporation (PCIC)

- mandated to provide insurance protection to farmers against losses arising from natural calamities, plant diseases and pest infestations of their palay and corn crops as well as other crops.

6. Philippine Fisheries Development Authority (PFDA)

- created to promote the development of the fishing industry through the provision of post-harvest infrastructure facilities and essential services that improve efficiency in the handling and distribution of fish and fishery products and enhance their quality.

7. Philippine Rice Research Institute (PhilRice)

- mandated to help develop high-yielding and cost-reducing technologies so farmers can produce enough rice for all Filipinos

8. Sugar Regulatory Administration (SRA)

- mandated to promote the growth & development of the sugar industry through greater participation of the private sector and to improve the working conditions of the laborers.

Laws

Republic Act No. 6657

- Comprehensive Agrarian Reform Law of 1988
- an act instituting a comprehensive agrarian reform program to promote social justice and industrialization, providing the mechanism for its implementation, and for other purposes
- was signed by President Corazon Aquino in response to peasants' call for equitable access to land
- The Comprehensive Agrarian Reform Program covers the following lands: (1) all alienable and disposable lands of the public domain devoted to or suitable for agriculture; (2) all lands of the public domain exceeding the total area of five hectares and below to be retained by the landowner; (3) all government-owned lands that are devoted to or suitable for agriculture; and (4) all private lands devoted to or suitable for agriculture, regardless of the agricultural products raised or can be raised on these lands.

Republic Act No. 3844

- This Act shall be known as the "Agricultural Land Reform Code."
- An act to ordain the agricultural land reform code and to institute land reforms in the Philippines, including the abolition of tenancy and the channelling of capital into industry, provide for the necessary implementing agencies, appropriate funds therefor and for other purposes.

Republic Act No. 8435

- This Act shall be known as the "Agriculture and Fisheries Modernization Act of 1997."
- An act prescribing urgent related measures to modernize the agriculture and fisheries sectors of the country in order to enhance their profitability, and prepare said sectors for the challenges of globalization through an adequate, focused and rational delivery of necessary support services, appropriating funds therefor and for other purposes.

- The law has broad provisions covering: production and marketing support services; human resource development; research development and extension; rural non-farm employment; trade and fiscal incentives and general provisions.

Republic Act No. 8435

- In general, AFMA aims to transform agriculture and fisheries sectors to technology-based, advanced and competitive industry; ensure that small farmers and fisherfolk have equal access to assets, resources and services; guarantee food security; encourage farmers and fisherfolk groups to bond together for more bargaining power; strengthens people's organizations; cooperatives and non government organizations by enhancing their participation in decision-making; pursue an aggressive market-driven approach to make the products more competitive in the market; stimulate further processing of agricultural products and make it more marketable; and implement policies that will invite more investors to establish business in the country.

Republic Act No. 7394

- This Act shall be known as the "Consumer Act of the Philippines."
- aims to protect consumers against hazards to health and safety, protect consumers against deceptive, unfair and unconscionable sales acts and practices, provide information and education to facilitate sound choice and the proper exercise of rights by the consumers, provide adequate rights and means of redress, and involve consumer representatives in the formulation of social and economic policies.

Republic Act No. 8175

- This act shall be known as the "Revised Charter of the Philippine Crop Insurance Corporation Act of 1995."
- An act further amending Presidential Decree No. 1467, as amended, otherwise known as the charter of the Philippine Crop Insurance Corporation (PCIC), in order to make the crop insurance system more stable and more beneficial to the farmers covered thereby and for the national economy
- Presidential Decree No. 1467 – creating the "Philippine Crop Insurance Corporation" prescribing its powers and activities, providing for its capitalization and for the required government premium subsidy, and for other purposes

Republic Act No. 7900

- This Act shall be known as the "High-Value Crops Development Act of 1995."
- an act to promote the production, processing, marketing and distribution of high-valued crops, providing funds therefor, and for other purposes.

Republic Act No. 3601

- The Act provides for the establishment of a National Irrigation Administration as a body corporate.

Republic Act No. 7308

- This Act shall be known as the Seed Industry Development Act of 1992.
- An Act to Promote and Develop the Seed Industry in the Philippines and Create a National Seed Industry Council and for Other Purposes

Republic Act No. 7607

- This Act shall be known as the “Magna Carta of Small Farmers.”
- An Act Providing a Magna Carta of Small Farmers
- recognize the right of small farmers and farmworkers, as well as cooperatives and independent farmers’ organizations, to participate in the planning, organization, management and implementation of agricultural programs and projects especially through the *bayanihan* spirit.

Republic Act No. 8550

- This Act shall be known as “The Philippine Fisheries Code of 1998.”
- An act providing for the development, management and conservation of the fisheries and aquatic resources, integrating all laws pertinent thereto, and for other purposes.

Republic Act No. 10068

- This Act shall be known as the “Organic Agriculture Act of 2010”.
- An act providing for the development and promotion of organic agriculture in the Philippines and for other purposes

Republic Act No. 10845

- This Act shall be known as the “Anti-Agricultural Smuggling Act of 2016”.
- An act declaring large-scale agricultural smuggling as economic sabotage, prescribing penalties therefor and for other purposes

Republic Act No. 10816

- This Act shall be known as the “Farm Tourism Development Act of 2016”.
- An act providing for the development and promotion of farm tourism in the Philippines

Republic Act No. 10659

- This Act shall be known as the “Sugarcane Industry Development Act of 2015”.
- An act promoting and supporting the competitiveness of the sugarcane industry and for other purposes

Republic Act No. 10089

- This Act shall be known as the “Philippine Rubber Research Institute Act of 2010”.
- An act creating the Philippine Rubber Research Institute to develop the Philippine rubber industry and for other purposes

Republic Act No. 10000

- This Act shall be known as the "Agri-Agra Reform Credit Act of 2009".
- An act providing for an agriculture and agrarian reform credit and financing system through banking institutions

Republic Act No. 9296

- This Act shall be known as “The Meat Inspection Code of the Philippines.”
- An act strengthening the meat inspection system in the country, ordaining for this purpose a “Meat Inspection Code of the Philippines” and for other purposes

Republic Act No. 8178

- This Act shall be known as the “Agricultural Tarification Act.”
- An act replacing quantitative import restrictions on agricultural products, except rice, with tariffs, creating the Agricultural Competitiveness Enhancement Fund, and for other purposes

Republic Act No. 10601

- This Act shall be known as the “Agricultural and Fisheries Mechanization (AFMech) Law”.
- An act promoting agricultural and fisheries mechanization development in the country

Republic Act No. 11203

- Rice Tarification Law (RTL)
- An Act Liberalizing the Importation, Exportation and Trading of Rice, Lifting for the Purpose the Quantitative Import Restriction on Rice, and For Other Purposes
- It will remove the previously placed quota on rice imports, permitting traders to import a near-unlimited quantity of rice.
- allowing more competitors to enter the rice market, the law will lower the price of rice by increasing supply
- The taxes will go to a Rice Competitiveness Enhancement Fund (RCEF), which will allocate the revenue to programs for mass irrigation, rice storage, and research initiatives.