



ECO 201 Project

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Comparative Advantage

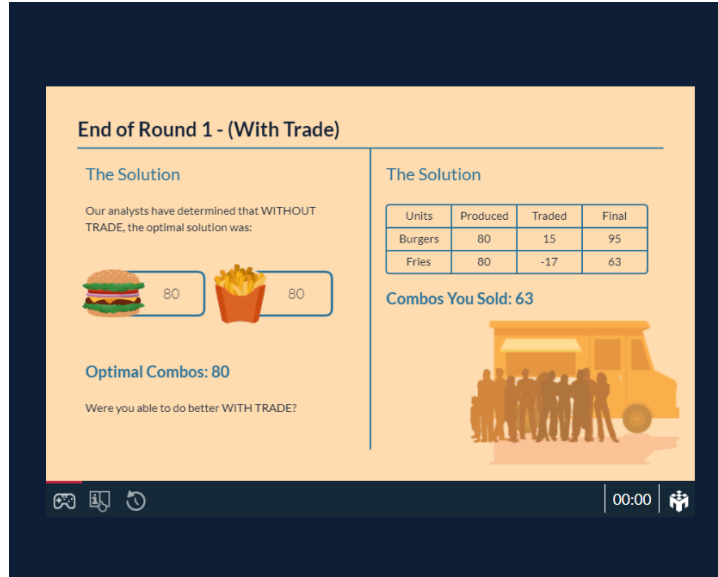


Figure 1.1

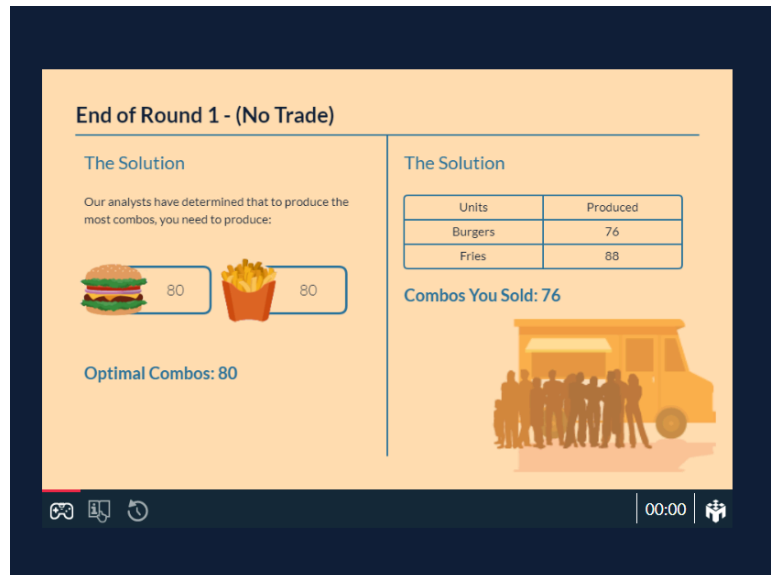


Figure 1.2



Opportunity costs are the possibility of profits that an individual, company, or investor chooses to give up when making a decision. Opportunity costs are difficult to overlook because they are invisible. Making better-informed decisions about investments requires understanding the potential losses that could occur from selecting one option over another. (Fernando, 2022). The gain that could have been realized if a different course of action had been chosen is known as the opportunity cost. The costs and benefits of every option must be carefully considered and contrasted with one another in order to calculate opportunity costs accurately. Opportunity costs are essential, and taking them into account can help me make better decisions for my business and myself. Opportunity cost is an organizational expense that is reported externally and isn't accounted for in accounting profit. It is utilized in strategic planning. Opportunity cost can be observed in choices such as deciding to establish a new plant in New York instead of Ohio, postponing updating company equipment, or going with the most expensive product packaging option.

The idea behind comparative advantage is that resources should be allocated to areas where their presence will have the most significant effects. It alludes to our ability to produce things more quickly than others. It speaks of the capacity to create something using fewer materials. Let's say we're trying to decide what to make for dinner. Let's say I'm not a great chef, but you are. You can cook a better steak than I do. You can call this your comparative advantage.

A graph curve known as the production possibility frontier (PPF) shows the possible quantities of two items that may be produced if they both use the same finite resources (Bloomenthal, 2022). Furthermore, PPF is quite essential in the field of economics. For example, it could indicate that the economy of a nation has reached its highest level of efficiency. Economists and businesses use the PPF to simulate different production scenarios by varying different resource parameters. Companies can use the PPF to determine which products to create or to learn how various factors affect productivity.



Economists can use it to study financial effectiveness and growth by figuring out how much of a single good a country can produce without producing another.



Competitive Markets and Externalities



Figure 2.1



Figure 2.2



The government may implement market-based or command and control (CAC) measures when an externality results in an economic failure and inefficient resource allocation. (Mankiw et al., 2021). In contrast, CAC policies directly control behavior, while market-based solutions encourage private decision-makers to handle the issue on their own. Certain acts may be discouraged or encouraged by CAC techniques, depending on the type of externality. The EPA may impose restrictions on the amount of pollutants that companies are allowed to emit into the atmosphere under the government's CAC strategy. This guideline requires companies to conduct themselves in a way that meets specific standards. Exchangeable pollution permits and corrective taxes and subsidies are two examples of market-based policies. One strategy to make sure commercial leaders are conscious of the society expenses they must take into account in addition to the adverse externality is the application of corrective taxes. The capacity of the Agency for Environmental Protection to impose fees on companies for each unit of pollution they produce serves as one example of this. In the international battle against pollution, polluters have a negotiation chip because pollution licenses are tradable between companies. The EPA may bargain with a different business to purchase back the 200 tons of dispersed pollution that remain after determining that a corporation can release no more than 500 tonnes of pollution annually, even when it only emits 300 tons. Both companies profit from the agreement, which also keeps them in compliance with the Environmental Protection Agency's mandatory fixed amount of emissions.

The supply and demand balance is affected whenever the government uses any of its authorities to intervene in the market because price changes follow. Companies are more inclined to lower the prices for which they market their goods when the government offers them financial support, which increases the demand for those goods. On the other hand, taxes imposed by the government on produced goods lower customers' purchasing power, which results in an imbalance that is then balanced by supply



and demand in the market. When supply and demand are out of balance, prices typically increase and vice versa.

The simulation game shows how the equilibrium between supply and demand in the market is impacted by government intervention. Its interference causes the costs of all the units in the game to decrease, which creates a scenario where the units' values either stay the same or rise. As a result, it lowers the cost while reducing the number of annoyances per person. Therefore, we can say that the supply curve for the unit goes to the right or up; equilibrium demand likewise increases when the government steps in to reduce the cost of an item, increasing customers' purchasing power and shifting the supply-demand balance. Equilibrium prices either stay the same or go down.

Taxation by the government has the potential to create surpluses for both producers and consumers. More significant than the amount of taxes paid directly or indirectly is the degree to which taxes reduce consumer and producer surplus. For instance, if a \$1000 per gallon milk tax is implemented, there is no more tax revenue generated because legal milk production has ceased. However, the implementation of this tax causes an erosion of profit for both producers and consumers, which has a substantial adverse economic impact. (Mankiw et al., 2021). Taxes also reduce the amount of commerce overall, which lowers earnings. There is a comparable decrease in consumer surplus when consumer prices rise. Supplier price reductions result in a proportional drop in producer profit or surplus. Additional government intervention in the form of import taxes, price ceilings, and regulations results in surpluses for producers and consumers.



Production, Entry, and Exit

Round	1	2	3	4	5
Drive Today?	Yes	Yes	No	Yes	Yes
Drivers	7	7	4	5	7
Revenue per Hour	\$14	\$14	\$21	\$18	\$14
YourHours	7	7	N/A	9	8
Profit	-\$15	-\$15	0	\$17	-\$16

End of Game | 10 | 00:00

Figure 3.1

Playing the simulation and testing my ability to predict events accurately and earn more money as a driver was entertaining. The daily set fee and the quantity of other drivers on that specific day were the primary factors in my decision to drive. Driving on a day when the hourly wage is expected to be low would not be worthwhile because there would be an excessive number of vehicles on the road. Put another way, the predetermined pricing would result in a loss of revenue if there were more than five drivers.

One of the most significant considerations for a business owner to consider when deciding whether to enter or exit an industry is how competitive it is. The simulation shows how the number of rivals offering the same services or goods as you could have a significant influence on your profits—the more vendors there are, the less money you could make. Furthermore, the number of prospective clients is also crucial. If you have no one to sell to, you cannot profit. As a result, the ratio of buyers versus



sellers in any given market is essential since it determines the general dynamics of supply and demand in that specific market. (Fernando, 2022). If the marginal cost is less than the mean price at that quantity and matches the product's value, it makes sense to enter the market. Conversely, my company would withdraw from the market if it believes that producing a product will result in a loss of revenue relative to its costs. Put another way, if the product's price is less than the median total cost of manufacturing, the business is losing money.

Marginal cost determines the ideal output level for the most significant profit. (Mankiw et al., 2021). The product's marginal cost of production is zero at this price. If I were running a business, I would look into sales patterns to figure out the amount that needs to be produced in order to pay for overhead. In order to do this, I have to determine how many workers I'll need, figure out how much equipment and room I'll need to replicate a particular output, and consider a number of approaches to streamline production. In order for my business to be profitable, these systems must operate flawlessly.

Fixed expenses negatively impact short-term earnings since a more significant number of goods must be sold to break even. After fixed expenses are deducted, the profit on each extra unit sold increases. In the long run, fixed costs are more advantageous in production decisions because they frequently have a smaller profit margin at higher production volumes. Early on in its existence, a business might, for example, spend money on inexpensive manufacturing machinery in an effort to make enough money (profits) to pay its bills until it can establish itself. Once they have sufficient savings, they will purchase newer, more expensive machinery, which will initially cost more but, because of its productivity and dependability, save them money over time. Long-term profits will increase as a result of this method's improved production efficiency, which more than offsets the higher initial cost of the more expensive equipment. However, short-term earnings may decrease.



Market Structures

Market Structure	Number of Firms	Type of Product Sold	Price Taker?	Price Formula	Freedom of Entry?	Short-run Profit?	Long-run Profit?	Industry Examples
Perfect Competition	Infinite	Identical	Yes	$P=MC$	Yes	No	No	Industrial Goods and Farming
Monopolistic Competition	Many	Differentiated	No	$P>MC$	Yes	Yes	No	Fast food and clothing companies
Monopolies	One	Unique	No	$P>MC$	Yes	Yes	No	National defense and electric companies
Oligopolies	Few dominant firms	Differentiated or Identical	No	$P>MC$	No	Yes	Yes	The gas industry and Airlines

Table 4.1

In monopolistic markets, when there are many sellers but few substitutes due to price, quality, and availability, we have imperfect or monopoly competition. In the monopoly game, one corporation takes the prices paid by its rivals as a given and ignores how its pricing decisions affect its competitors. (Mankiw, 2021). Monopolies retain their replacement capacity, unlike perfectly competitive markets. Industry models often make use of monopoly competition models. Restaurants, breakfast cereals, clothing, footwear, and urban service sectors are examples of monopoly-like market systems. Since monopolies don't have to compete with other producers on the market, they can never become inefficient. Consider Facebook as an example. It is a monopoly as the dominant social media platform since no other services can compete on a level playing field. Due to the inevitable deadweight loss, it



might also become ineffective. Because of the high pricing and little production, this has occurred.

"Because a monopoly charges a price above marginal expense, not everyone who appreciates the commodity more than its cost buys it."

There are two ways in which monopolistic competition might be ineffectual:

- If a company fails to create units that customers value more than the cost of production, it will charge a price that is more than its marginal cost.
- < UNK > Many businesses out there aren't using all of their manufacturing capacity since they have some spare capacity. As a result, output falls short of maximum power in monopolistic competition.

To a large extent, oligopolistic markets are characterized by the same essential characteristics. For starters, a few firms exert disproportionate market dominance. Only a few stores make up most of the industry's retail establishments. The second distinguishing aspect of an oligopolistic market is the higher barriers to entry. (Mankiw, 2021). It's challenging to enter a well-established market due to the high startup costs and reduced competitive advantage you'll have compared to well-established businesses. A distinguishing aspect of oligopolistic marketplaces is their interconnectedness. When one firm is affected by the price or promotional strategies of another, it is an example of interdependence. In oligopolistic markets, companies often do not decrease costs to gain a competitive edge.

When setting prices, oligopolists have to weigh the influence on production against the impact on pricing. When the price is greater than the marginal cost, the production effect of selling only one more gallon will enhance earnings. Water companies are raising output to boost total sales without sacrificing profit margins in response to the price changes. If the influence on output exceeds the effect on the price, the owner will increase production. If the impact on output is less than the price, the owner will not expand production.



Companies that operate in an oligopolistic fashion may be distinguished from monopolies by several key characteristics. Low levels of competition and considerable entrance obstacles characterize oligopolies. In contrast, monopolistic competition has many small enterprises offering similar or identical goods and services and unlimited entry and exit from the market. One definition of an oligopolistic market is one in which a small number of firms have a dominant influence. Few firms exert undue influence in their industry, and those that do frequently work together for their benefit at the expense of consumers. The hotel business is an excellent example of monopolistic competition. There is much rivalry amongst these businesses, but they each have something unique to offer that makes them stand out.

The following five conditions define a market as perfect competition. To begin, the market is saturated with companies offering essentially the same service or product. Second, the companies are helpless as price takers because they cannot set prices. Third, since there are so many companies, no one has a dominant position in the market. As a fourth point, shoppers have full access to data on the market of products and their pricing. There are no hurdles to getting into or out of the market, which brings us to our fifth point. All companies eventually reach average earnings, and as a result, economic profits eventually fall to zero. The fast food sector is a good model of a market with perfect competition.

When companies offer comparable but not identical products or services, the market is said to have a monopolistic structure. All enterprises in this sector have relatively weak market power, and all market players share this weakness. There are few restrictions on who may enter or leave the market, and the actions of individual businesses have little impact on the actions of their competitors. Economic profit is zero in the long term. The hotel business is a typical monopolistic competition market.

Three key factors characterize an oligopoly market. In the first market, only a few groups of companies have a decisive influence. As a second point, companies' goods or services are similar but are



significantly distinguished thanks to branding and marketing. Third, there are exit and entrance restrictions in the market. The actions of industry leaders profoundly influence competitors' choices. When enterprises work together to establish prices at which $MR > MC$, they may realize economic gains, but in the event of a price war, they may see no gain. The telecommunications business is an excellent example of an oligopoly market.

There is just one company operating in a monopoly market. Company X is the only provider of Product Y. It is difficult for new companies to enter the market, giving the dominant one significant competition. By pricing its offerings at a level where $MC > MR$, the company ensures that it will have long-term financial success. When the government licenses a monopoly to produce and sell a product, it locks out all other competitors for 17 years under patent protection. Therefore, the company may increase its prices and reap substantial economic benefits. Governments provide market protection to incentivize innovation and introduce new items to consumers.

Conclusions

Microeconomics applies a set of basic concepts to foretell how individuals will act in certain situations, especially those involving economic or monetary transactions. These norms consider utility amplification, opportunity costs, and the rule of market interest. Moreover, corporations and other organizations may benefit from microeconomics.

We'd form a fantastic team, and I'm optimistic about our company's prospects if you'd take the time to study all this microeconomics material and better grasp its importance.



References

Bloomenthal, A. (2022). *Production Possibility Frontier (PPF): Purpose and Use in Economics*.

Investopedia. <https://www.investopedia.com/terms/p/productionpossibilityfrontier.asp>

Fernando. (2022). *Opportunity Cost: Definition, Formula, and Examples*. Investopedia.

<https://www.investopedia.com/terms/o/opportunitycost.asp>

Mankiw, N. G. (2021). *Principles of Economics* (9th edition). Cengage Learning, Inc.

Mankiw, N. G., Mason, O. H., & Learning, S.-W. C. (2021). *Textbook commentaries project*.