ECO 201 Project

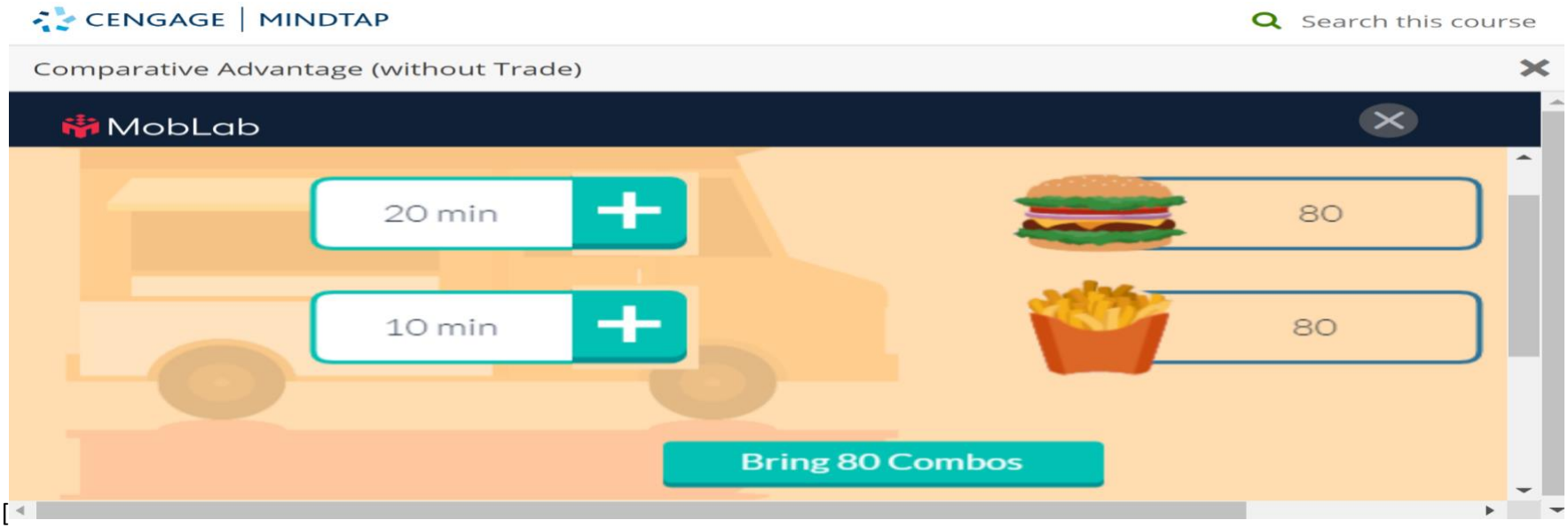
Memo

To: My Business Partner
From: Crystal Meser
Date: March 8, 2022
Re: Microeconomics Simulations

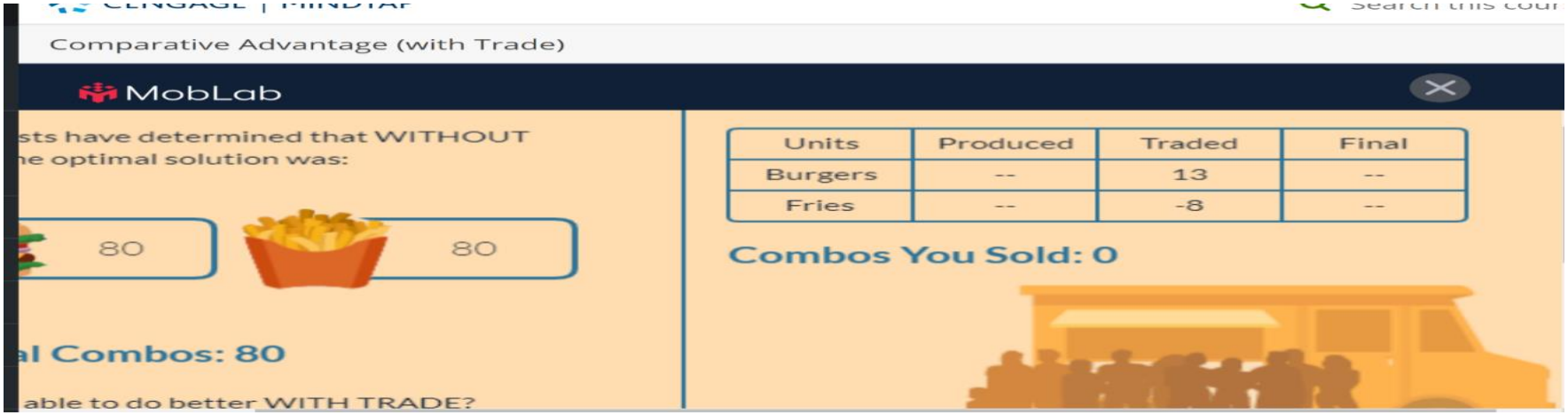
Introduction

This memorandum report identifies and explains key microeconomic principles using a set of simulation games. The outcome of these games illustrate how microeconomic principles can be applied within real-life situations to help us make better business decisions. This report is a summary of the simulations I played and their results, which include the key takeaways and their significance, for your review and reference. It is divided into the following sections:

Comparative Advantage



Production Decisions graph
Figure 1.1



Production and Trade graph
Figure 1.2

Individuals evaluate opportunity costs to make business decisions by looking at what we must give up, to obtain something else. In this case when I was making burgers and fries, I was able to produce fries' way faster than I was able to produce burgers. Without the burgers I couldn't sell a combo meal, which consisted of one burger one fry. I had to give up making fries, so I was able to produce more burgers with my time. This way I was able to sell a full combo meal. You must be able to maximize your resources, so you are able to produce outputs efficiently.

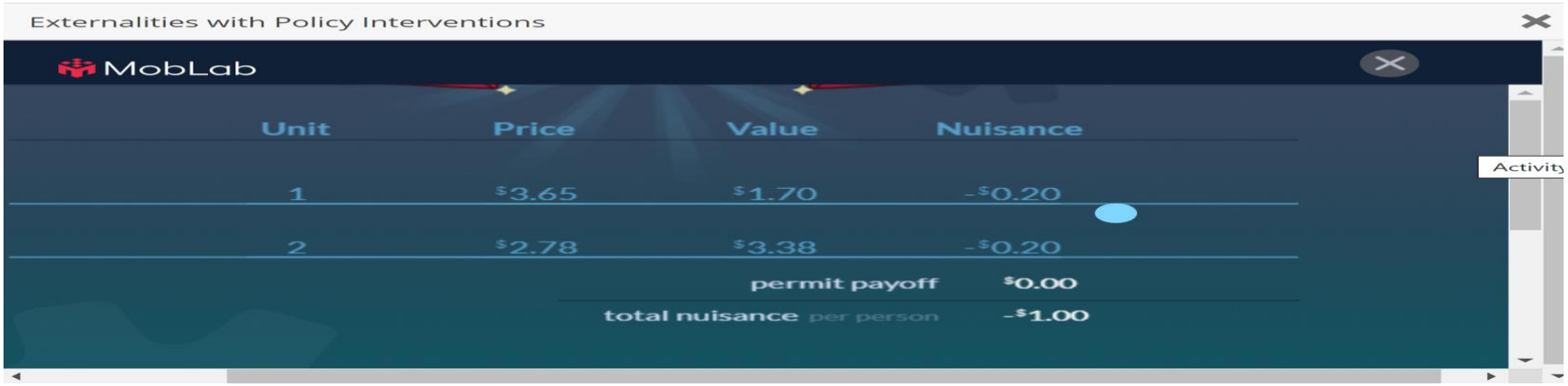
The (PPF) helps us in our decision-making process to see if we are maximizing our resources. If my (PPF) has a nice constant line that means I am fully utilizing my resources efficiently. If my line is curved and bowed outward, this means that I am increasing my opportunity cost of one product and increasing the output for that product. By doing this I am decreasing the output of another product. Any dot that lays below my (PPF) line means that I am using my resources inefficiently. Any dot that lays outside my (PPF) line means that it is impossible to do, because I have an insufficient number of resources to produce that number.

Comparative advantage impacts a firm's decision in trade by determining what your lowest opportunity cost is, or what you can produce more efficiently. If you are more efficient in producing fries than burgers than who you are about to engage in trade with, then you have a comparative advantage in making fries. When engaging in trade you want to trade what you are good at doing. Trade allows people to specialize in what they are good at, so they have a comparative advantage.

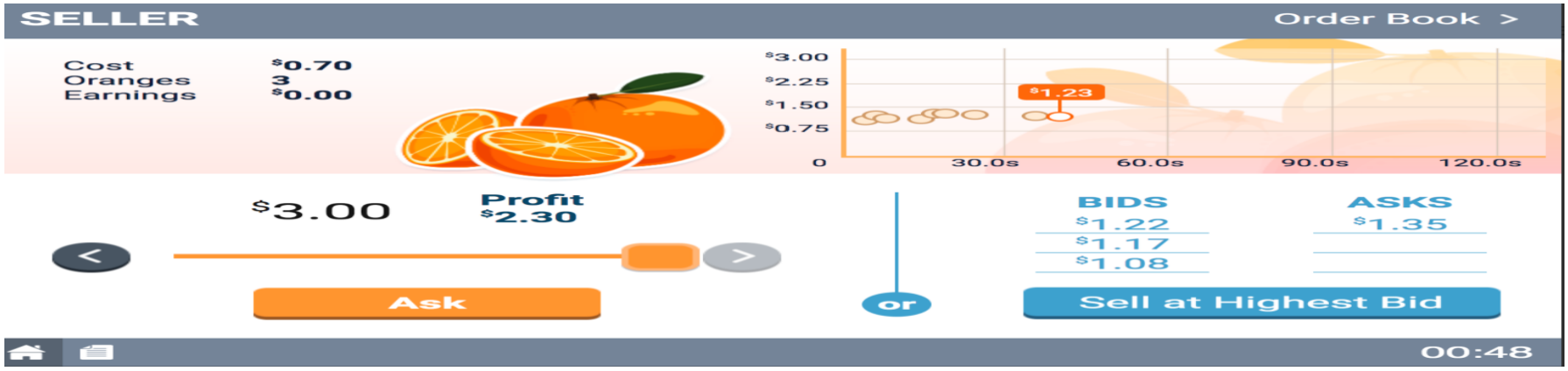
A business decision of trade would cause a change to its PPF, because it would allow the economy to consume outside of its PPF point. We would be allowing more resources in because of trade which would cause a shift outward because we would have more than enough resources available to us. These outputs could be easily produced without giving up the output of any of the goods. A shift inward would mean that there

could be a lack of resources. Examples of an inward shift would be if there is a decrease in the workforce, reduction in raw materials, or world disaster.

Competitive Markets and Externalities



[Supply and Demand chart.]
Figure 2.1



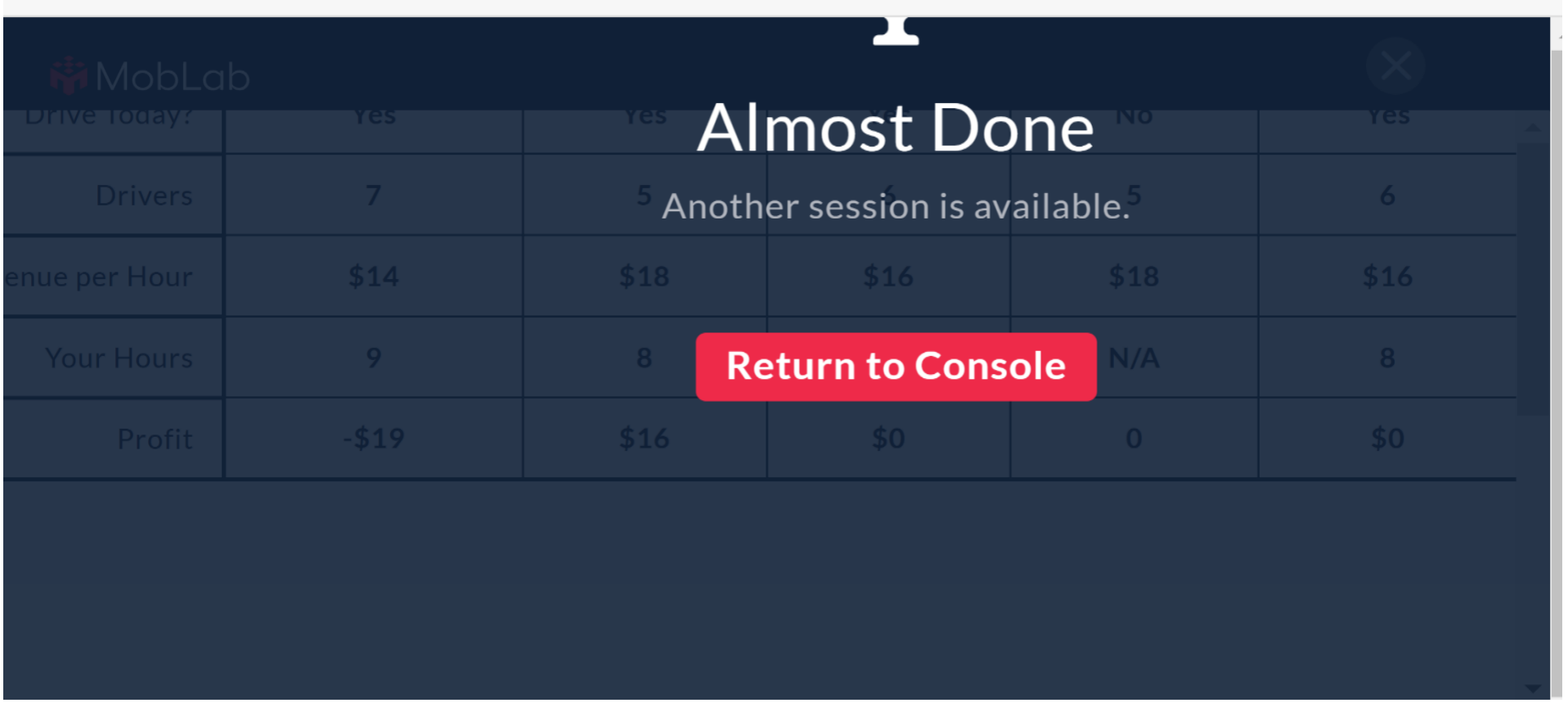
[Outcomes by Market table.]
Figure 2.2

Policies can impact the sales of oranges if they regulate how many orange's people can buy. This would affect the demand for oranges causing less demand and more of a supply. Policies can affect the government market when the government uses tools such as rent controls, wage subsidies, trade permits, and property rights, and taxes. All these tools can impact the prices on goods and services and impact the revenue of businesses. The government can use these tools to correct the externalities that cause market failure.

Some determinants of price elasticity of demand are when we automate machinery, recession lowers wealth, people increase their concern for the environment, economic boom raises wealth, and price of gas-powered cars falls. These are a few examples of demand determinants. Three examples of determinants of demand are: tastes and preferences of the consumers, the price and good of a service, and the income of buyers. On this outcome price elasticity can impact the supply and demand if anything goes beyond or below the equilibrium price. When a demand is inelastic the price and revenue move in the same direction. If the price increases, then the total revenue increases. If the price is unit elastic the total revenue remains constant when the prices change. If the quantity demanded can respond easily to change in price than it is elastic.

This simulation game shows unfortunate results. However, policy market interventions can cause a consumer or producer surplus. The government can place taxes, price floors, and price ceilings on products being sold or bought. Sometimes these things can affect the producer or the consumer, and sometimes the burden of these taxes are shared between both parties. If a buyer's willingness to pay for a new truck is $45,000 and she only must pay $30,000, her consumer surplus is $15,000. This means in her mind she came out $15,000 ahead of what she was planning to spend. So, it's a great deal. A producer can have the same thing. If the producer can sell an orange for more than what he thought, then they to are coming out ahead. An example of this would be I can sell an orange at the lowest cost of $1.00, but I sell it for $5.00 my producer surplus would be $4.00.

Production, Entry, and Exit



[Replace this area with the Aggregate Outcomes chart.]
Figure 3.1

A business owner would enter a market if the price of the good I make exceeds the average total cost of production. I would exit the market if the price of the good I produce is less than the average total cost of my production or quantity. Some factors that business owners would consider before they enter the market is to look at the fixed and variable costs. Companies want to be able to make money when they

enter the market. They also consider social, economic, the saturation of the market, and government policies before they might enter or exit a market.

When it comes to marginal cost, companies need to maximize my profit by choosing a quantity at which the marginal cost equals the price. If marginal revenue is greater than their marginal cost, they would increase their production or quantity. If their marginal revenue is less than their marginal cost, they would decrease their production or quantity. Their company would maximize its profit by producing a quantity at which marginal cost equals my marginal revenue. They would use the formulas: P x Q = total revenue. Also, they would use this formula: total revenue – total cost to maximize their profit.

Fixed costs do not vary with the quantity of output produced, so in the short run my profit might not be as much depending on how many units I can produce, but as time goes on and my production gets more efficient, and I am able to produce more units my fixed costs will decline because the fixed cost is getting spread over a larger number of units that I was able to produce. Long run fixed costs also might need to be decided yet so they are considered not fully fixed. Were as short run fixed costs are considered paid and unrecoverable. Fixed cost really has no effect on short run costs, but the variable costs change with the output created. Examples of variable costs include wages and raw materials. If there is a decrease or increase my short run cost, then this is impacted by my variable cost.

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	Yes	No	Examples include agricultural markets, foreign exchange markets, Internet related services such as software markets.
Monopolistic Competition	Many	Differentiated	Yes	P>MC	Yes	Yes	No	Examples include running shoes, fast food, hair salons, and coffee shops
Monopolies	One	Unique	No	P>MC	No	Yes	No	Examples include Microsoft, Apple iPhones, and Telecommunication companies.
Oligopolies	Few dominant firms	Differentiated or Identical	No	P=MC	No	Yes	No	Examples include email such as Outlook and Gmail, News Networks such as Fox and CNN, Motor companies such as General Motors, and Ford Motor company.

Table 4.1

Some inefficiencies with monopolies are they are a price maker when it comes to the market. Monopolies produce lower quantities of goods and charge prices beyond marginal costs which is an inefficiency of the market. This inefficiency is also known as dead weight loss. Monopolies restrict consumer choices when it comes to buying products. It restricts the consumer's power. It makes it so you can only buy from this one supplier because they own the market, and it has barriers so no one can enter it. This also reduces consumer surplus and reduces economic welfare.

Monopolistic competition inefficiencies are allocating their resources inefficiently which causes their price to be greater than their marginal revenue. They have many sellers in this market. Their products have differentiation but are used in similar ways to the customer. So, they must set their prices around their competitors. They also have free entry to the market along with exit.

Oligopolistic markets set their prices around each other. They need to do this because if Ford Motor company's sells their cars for $50,000 and General Motors sells their cars for $25,000, even though I prefer Ford, I will buy my car from General Motors to save the money. Even though these companies are selling a different brand, the vehicles from both are much alike one another. To the customer brands equal value and quality, but they can easily be substituted with one another. So, in the end if they don't set their prices around each other they will lose market share if one companies raises their prices. If they lower their prices, it will cause all the firms to earn a lower profit.

Firms compete in four different types of market structures. Perfect competition and imperfect competition compete with products that are alike. Examples of firms that have imperfect competition would be oligopolies and monopolies. Oligopolies have three firms or less, and monopolies consist of a single firm that dominates the market. Imperfect competition could have many sellers and producers, and they are selling dissimilar goods and services which makes it so they can abuse their power. Some examples of perfect competition are Walmart and Target. There are many firms that compete with one another. Perfectly competitive firms can sell large quantities by producing the quantity where price is equal to the marginal cost. Monopolistic competition competes with differentiated products. Some examples of these companies would be McDonalds and Burger King. They have many firms that compete in this market structure. They determine profitability by having their marginal revenue equal their marginal cost. They want to maximize the quantity of their output and price. Oligopolies have a small number of firms that compete with one another. Some examples of oligopolies are oil and tennis balls. They maximize their profitability by equating marginal revenues with marginal costs. They set a price and a quantity to maximize their profits. They try not to compete with prices, because they would end up in price wars. Monopolies have only one firm that sells the product. Companies that are an example of a monopoly would include Microsoft, Procter & Gamble, Facebook, Railways, and AT&T are a few examples. There are barriers to entry when it comes to monopolies. They maximize their profits by choosing a price and quantity along its perceived demand curve like monopolistically competitive firms. Monopoly's must also equate the marginal

cost to the marginal revenue figuring out the price of one product and the quantity it must produce. They want to produce the exact quantity that produces profits. Any less would be money that they loss, and any extra quantity would cause an excess in demand which would cause them to decrease their prices.

Conclusions

As you can see Microeconomics has a significant impact on predicting what the outcome of our business could look like. It will help us be able to figure out the right number of quantities to produce and help us see the right price to set the item at. It also can help us see the fluctuation in supply and demand. It will help us to be able to predict a forecast against the trends of not only our competitors, but also the overall trends in the market. It will show us how income, trends, expectations, number of consumers, and prices can affect our supply chain.

Microeconomics also helps us understand how policies can have an impact on our company. We need to be aware how these policies can impact our company and be ready for policies that could change so we have a plan of action in place, so our company doesn't go under. We also need to know how the government's policies and laws effect our business and our customers. This could impact our prices and resources to produce our product.

Microeconomics also helps us understand how to calculate formulas to know how our business is trending. By knowing how to use these formulas to calculate how price, marginal revenue, marginal cost, profit, total revenue all come together to show us results on our business. This will allow us to know what to set our prices at, and how to keep track of supply and demand curve. It also helps us understand what elastic demand and inelastic demand are. We now can set up a demand schedule and graph out the trends of our company. Now that we understand the four different market structures, and how they differ from each other we can finally see who our competition is, and not have to worry about every company out

there in the market. Since our company is an oligopoly, we now can understand how we need to be aware of our competitors pricing moving forward so that we can keep around their price ranges, so we don't lose market share.

When moving forward with our business we should be considering opportunity costs. Things we are giving up doing something else. We should also be calculating the losses or gains on these outcomes. In the future moving ahead we need to make a demand schedule to graph out our company. We need to see where we need to set our prices at, and how much quantity is needed at the right price. This way our company is not overproducing or underproducing. We need to watch the supply curves for demand. If it shifts to the left the good is demanded less. Even though prices are the same, incomes may have dropped. If it shifts to the right a higher quantity is demanded but there is no change in price. This indicates to us that the economy is booming, incomes are rising. This will help us predict future movements for our business. When the supply curve shifts to the left prices are rising and quantities are decreasing. When the supply curve shifts to the right the quantities are higher and the prices are lower. When we graph out our business, we want to focus on the market equilibrium at which intersects between the two. This is where prices are our prices are stable. If we have a shortage in our supply prices will go up, and less will be demanded. If we have an overage of quantity prices will go down, and that will increase the demand.

We also need to keep in mind the ten basic principles of Microeconomics by utilizing these principles it could help us make better choices for our company when making crucial business decisions. Always keep in mind these principles, because it is how the people make decisions along with businesses, and the economy. If we keep these principles in mind and use my advice throughout this paper, we should be able to have a very successful company.

References

Mankiw, N. G. (2021). *Principles of microeconomics* (#9 edition). Cengage.