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| **EP1110 - Microeconomics** |

**Unit 2: Demand and Supply**

**Learning Objectives:**

*By the end of this unit, you should be able to:*

1. Explain the concept of *demand*.
2. Explain the concept of *supply*.
3. Explain the term *market*.
4. Explain the concept of (price and quantity) *equilibrium*.
5. Explain the causes and effects of a change in demand.
6. Explain the causes and effects of a change in supply.
7. Explain why demand and supply determine price and the quantity traded and not the reverse.

 **Learning Materials:**

* Read Chapter 2 - Principles of Microeconomics

**Overview of this Unit**

In this unit, we will study one of the most important concepts in economics ***supply and demand*.**  Remember in Unit 1 I asked you to dig out all of the money from your purse, pocket or wallet? You were asked to consider the thing(s) that you would buy with the money. You are not alone! Not only do *you* consider what you would like to buy, but everyone in the economy does the same thing. Our collective wants are known as demand in economics. As you can appreciate, our demand for a certain item is affected by its cost as well as a host of other non-price factors such as our income levels and current fads.

From a producer's perspective, the same factors that affect demand will affect how much they are willing to supply. In our market economy, suppliers will always attempt to at least meet the needs of consumers especially considering that they can make more money by supplying more products in times of high demand.

Together, the interaction of supply and demand creates the **market** from which prices are established and regulated.

**Unit 2 - Topic 1:  The Concept of Demand**

**Demand**

In Canada, we live in a consumer economy – we want a lot of things! Collectively these ‘wants’ create a “demand” for products and services that are made and available to purchase in our economy.  In economic theory, however, simply wanting something does not strictly constitute demand. ***Economic Demand*** refers to not only the desire, but also the ability to buy a product or service over a range of prices.  As well, in order to measure demand, economists like to keep things relatively simple by holding all other factors constant over various price points – this is referred to as **ceteris paribus**.

**The Concept of Demand**

So, with all other things being equal, how would you predict demand would be affected by price changes? Let’s say you (and many others) want to buy a car and that you can get financing for it (desire and ability).  If the car was priced at $10,000 when you and others like you were in the market for a car, how many could the dealership sell?  What if the price of that same car suddenly jumped to $15,000, $20,000 or $25,000?  Do you feel that your desire and ability would drop as the price increased?  How about if the price dropped from $10,000 to $5,000 – would it become easier and more tempting to buy?  This is an illustration of a basic concept in demand – as the price for a given product increases – demand for that product will drop, all other things being equal.  As the price for a given product decreases – demand for that product will rise, all other things being equal.

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| **Remember:** | |
| https://d2l.cna.nl.ca/content/F13/EC1110_F13/images/point.gif?_&d2lSessionVal=2BaJfatXOVWqkRrEIV1o4JWeh | When describing the concept of demand, all things remaining the same:   |  |  | | --- | --- | | https://d2l.cna.nl.ca/content/F13/EC1110_F13/images/bullet.gif?_&d2lSessionVal=2BaJfatXOVWqkRrEIV1o4JWeh | The higher the price, the lower the quantity demanded. | | https://d2l.cna.nl.ca/content/F13/EC1110_F13/images/bullet.gif?_&d2lSessionVal=2BaJfatXOVWqkRrEIV1o4JWeh | The lower the price, the higher the quantity demanded. | |

**Unit 2 - Topic 2:  The Demand Schedule and the Demand Curve**

The basic concept of demand changes over a range of prices is demonstrated using the ***Demand Schedule*** and the ***Demand Curve***.

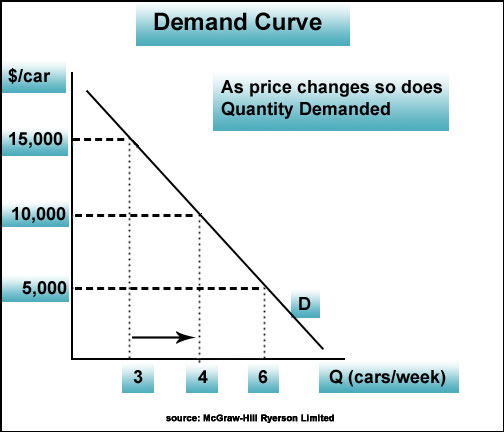
**The Demand Schedule**

The ***Demand Schedule***is a table that shows the various quantities demanded per period of time at different prices. It assumes that all other factors that might influence demand do not change. In our example of buying a car, the demand schedule for all potential buyers (you being one) could look like this:

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| **Demand Schedule: Number of Cars Demanded per Week** |
| |  |  | | --- | --- | | **Car Price (in Dollars)** | **Quantity Demanded** | | 5 000 | 6 | | 10 000 | 4 | | 15 000 | 3 | | ***Source:****McGraw-Hill Ryerson. 2004.* | | |

**The Demand Curve**

The ***Demand Curve*** is a downward sloping graph that shows the various quantities demanded per period of time over an array of possible prices. It assumes that all other factors that might influence demand do not change. In our example of buying a car, the demand curve for all potential buyers (you being one) could look like this:



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| **Unit 2 - Topic 3:  Why does Demand Increase with Lower Prices?** |
| Intuitively we know that lower prices often lead to higher demand. Unfortunately, intuition is not sufficient in economics. Economists have asked this question for many years and have developed some theories. Together these support the basic concept of the ***Law of Demand***.  **The Income Effect**  As prices drop, we can buy more things for any given income. If you make $30,000 per year and suddenly prices for all the things you want to buy are cut in half, you could buy twice as much (your**real** income goes up). Simply put; your ability to buy things has been doubled. This is known as the***Income effect***.  **The Substitution Effect**  Let’s say that you are looking at a couple of cars. One is much fancier than the other, but it is also much more expensive. Now assume that the price of the ‘lower priced’, less fancy model goes from $10,000 to $15,000. If the other, fancier car’s price remains unchanged, don’t you feel that your preference may shift to the more luxurious car as the price of the other increases? This is a demonstration of what economists call the ***substitution effect***.  It states that people will tend to substitute one product for another as a result of their relative price changes. |
| **Unit 2 - Topic 4:  The Supply Schedule and Supply Curve** |
| **Supply**  As oil prices creep up, oil companies are enticed to produce more oil in an attempt to cash in on thehigher prices. Higher prices for any product are an incentive for their producers to supply more. In Economics, ***supply*** is defined as the quantities that producers are willing and able to sell per period of time at different prices. Higher prices will lead to higher supplies, and lower prices will result in fewer products being delivered to the market.  **Supply Schedule**  Similar to the demand schedule, we can demonstrate this principle by developing a table showing the various quantities supplied per period of time at different prices over a time period.  If we go back to our example of your car purchase, suppliers will be less inclined to supply cars at a lower price than they would at a higher price (all other things being equal) as we can see below:     |  | | --- | | **Supply Schedule: Number of Cars Demanded per Week** | | |  |  |  | | --- | --- | --- | | **Car Price (in Dollars)** | **Quantity Supplied** | **Quantity Demanded** | | 5 000 | 1 | 6 | | 10 000 | 4 | 4 | | 15 000 | 6 | 3 | | ***Source:****McGraw-Hill Ryerson. 2004.* | | | |     **Supply Curve**  The ***supply curve***is a graphic representation of the supply schedule. Note that the resultant supply curve is upward sloping indicating more is supplied as prices increase, all things being equal.  https://d2l.cna.nl.ca/content/F13/EC1110_F13/images/supplycurve.jpg?_&d2lSessionVal=JDWI98kGomKwG8YmeuiyTxdWK |

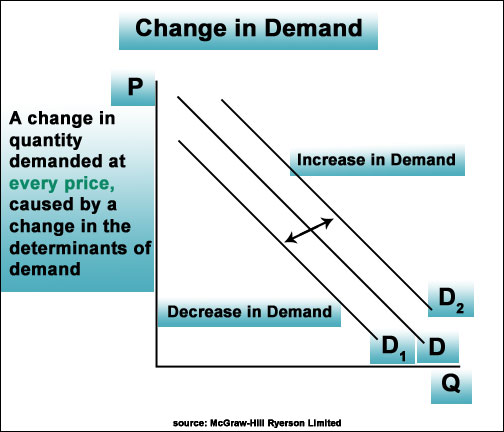
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| **Unit 2 - Topic 5:  The Market** |
| Suppliers and buyers do not operate in isolation from one another. Supply and demand constantly interact in what we know as the **market**. The market is the place in which buyers and sellers can come together to create mutually beneficial exchanges.  When suppliers and buyers meet, the laws of supply and demand work together to create the price. The price at which quantity demanded equals quantity supplied, and at which there is neither a shortage nor a surplus, is known as the **equilibrium price** (Illustrated on the table below in blue).   |  | | --- | | **Market Supply and Demand: Number of Cars per Week** | | |  |  |  | | --- | --- | --- | | **Car Price (in Dollars)** | **Quantity Supplied** | **Quantity Demanded** | | 5 000 | 1 | 6 | | ***10 000*** | ***4*** | ***4*** | | 15 000 | 6 | 3 | | ***Source:****McGraw-Hill Ryerson. 2004.* | | | |     https://d2l.cna.nl.ca/content/F13/EC1110_F13/images/marketequil.jpg?_&d2lSessionVal=JDWI98kGomKwG8YmeuiyTxdWK |
| **Unit 2 - Topic 6: Shortages and Surpluses** |
| *What if the market is not in equilibrium?*Equilibrium in the market does not happen immediately.  Oftentimes, demand will exceed supply pressuring prices up, or supply may exceed demand pressuring prices down. We have learned that price changes affect both the amount of supplies and the amount demanded so equilibrium will eventually be reached. However, in the interim, there will be surpluses when quantity supplied exceeds quantity demanded or shortages when quantity demanded exceeds quantity supplied.  **Shortages**  Graphically, we can see shortages illustrated below.  In the example of a market shortage, note at Price P2 suppliers will supply Qs (a relatively small amount) and buyers will demand Qd (a relatively large amount). Basically, people want to buy more than is available. The effect of this will be to force prices up to reduce demand  – to the equilibrium P1.  https://d2l.cna.nl.ca/content/F13/EC1110_F13/images/marketshort.jpg?_&d2lSessionVal=JDWI98kGomKwG8YmeuiyTxdWK  **Surpluses**  Graphically, we can see surpluses illustrated below. In this example of a market surplus, note at Price P2 suppliers will supply Qs (a relatively large quantity) and buyers will demand Qd (a relatively small quantity). Basically, people are not as willing to buy as much at high prices, while suppliers would like to cash in on the high prices by supplying a lot. The effect of this will be to force prices down to get rid of the surplus– to the equilibrium P1.  https://d2l.cna.nl.ca/content/F13/EC1110_F13/images/marketsurplus.jpg?_&d2lSessionVal=JDWI98kGomKwG8YmeuiyTxdWK |

**Unit 2 - Topic 7: Changes in Demand**

So far, we have discussed the changes in demand and in supply that occur because of price changes – all other things being equal. However, once equilibrium has been reached, that is, the quantity supplied equals the quantity demanded, what non-price factors can influence demand?

There are a number of contributing factors as listed in the table below:

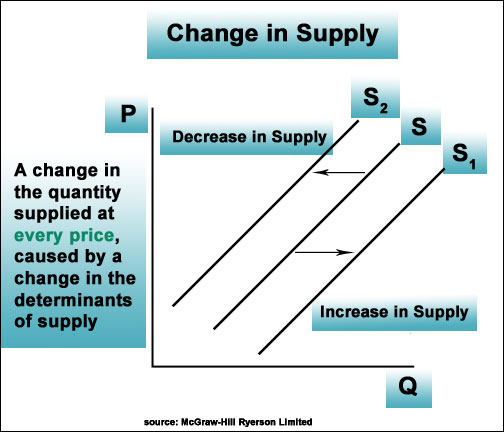
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| **Factors that can Influence Demand** | |
| One | **Consumer Preferences:**  If tastes change, demand changes. A few years ago it was revealed that oat bran helps prevent certain types of cancer.  With this revelation, the demand for oat bran sky rocketed. |
| Two | **Expectations of Future Prices, Income, and Availability:**  If prices are expected to rise, consumers buy more. Housing sales have been brisk as consumers get the jump on low interest mortgages while they last. People expect interest rates to go up, so they are buying now while the rates are low. |
| Three | **If Income is Expected to Rise, Consumers Buy More:**  If you expect your ability to pay for goods to go up, you may buy a new car now, since you expect your raise to cover the additional expense. There is a direct relationship between income and demand.   1. Generally higher income increases the demand for certain products. Products for which demand increases as income increases such as Cadillacs and steak are known as **Normal products.** 2. Some products suffer a decline in demand as people’s income goes up.   These tend to consist of lower value, lower quality products such as small inexpensive cars, apartments and hamburger meat. These products are known in economics as **Inferior products**. 3. Some products can easily be substituted for other similar products – Coke and Pepsi, Corn Flakes and Rice Cereal, Ham and Bacon. If the price of one goes up relative to the substitute, then the demand for the substitute will rise.  These types of products are known as **Substitute products**. 4. Yet other products tend to be sold together – Skis and Ski boots; Gas, Pick-up trucks and Travel Trailers. The price of one product directly affects the demand for the other. These types of products are known as**Complementary products**. |
| Four | **If Goods are Expected to become Scarce, Consumers will Buy More Now:**  Projected shortages often result in people hoarding. You’ll see this happen in a hardware store prior to a storm – people stock up on supplies because they feel that they may become scarce in the event of the storm. |
| Five | **Population Size, Income, and Age Distribution:**  Young people will tend to buy more CD’s than older people. Older People will tend to buy more medical supplies. Regardless of price changes for these respective goods demand will change because the age group is changing. |



**Unit 2 - Topic 8: Changes in Supply**

As with demand, supply can also be affected by non-price factors. Once equilibrium has been reached, what non-price factors can influence supply? There are several possible influences:

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| **Factors that can Influence Supply** | |
| One | **The Prices of Productive Resources:**  Remember that productive resources include land, labour, capital and enterprise. If the price of a productive resource increases, firms will supply less simply because the cost of production increases so less money is made on each unit produced.  This effectively discourages production, thereby reducing supply. |
| Two | **Business Taxes:**  Like the cost of productive resources, business taxes are an expense for the firm that adversely affects the bottom line of the business so that less money is made on each unit produced. This effectively discourages production, thereby reducing supply. |
| Three | **Technology:**  An improvement in technology leads to a fall in the cost of production and an increase in the amount of product supplied. |
| Four | **Prices of Substitutes in Production:**  An increase in the price of one product will cause a drop in the supply of products that are substitutes in production. |
| Five | **Future Expectation of Suppliers:**  Lower expected future prices will lead to an increase in supply. |
| Six | **Number of Suppliers:**  A decrease in the number of suppliers will reduce market supply. |



**Unit 2 - Summary**

This unit covered one of the most important subjects in economics – The theory of demand and supply. We learned that the price of a product is determined by the market interaction of demand and the supply. The downward sloping demand curve and the upward sloping supply curve represent the range of demand and supply over various price points. Because of this, we say that movement along the demand and supply curve is a function of the price.

The price of the product, however, is not always the most important factor that affects consumer spending. At times, incomes, prices of related products and so on may have more significance. These non price factors cause a shift in the demand curve rather than movement along the demand curve.