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| **EP1110 - Microeconomics** |

**Unit 3: Demand and Supply: An Elaboration**  
**Learning Objectives:**

1. Explain the effects on equilibrium price and quantity traded of simultaneous changes in supply and demand.
2. Explain why markets don't always work well.
3. Understand why price ceilings cause shortages.
4. Understand that price floors cause surpluses.
5. Ask some interesting what if questions concerning the shape of demand and supply curves.

**Learning Materials:**

* Chapter 3 - Principles of Microeconomics

**Overview of this Unit**

In the last unit we introduced you to the theory of supply and demand.  In this unit we will look more deeply at the interaction of supply and demand in the free market and the role the government plays in moderating the violent swings in price that could occur as supply and demand conditions change.   Unfortunately, despite the benefits of a free marketplace, price volatility often creates challenges for consumers and suppliers alike.

In this unit we will look at three basic ways that government may get involved in the free market to protect either consumers (buyers) or producers (suppliers) from the vagaries of the free market. First we look at government imposed price limits known as price ceilings - these are designed to help consumers from overly high prices. Next we look at government imposed price guarantees known as price floors - these help ensure producers make at least a fair return on their investment. Last we look at Minimum wage legislation which government puts in place to ensure workers make a 'living wage". Each of these controls has implications - positive and negative on the free market.

A classic example of market instability occurs quite often with the price of gas at the pumps. The volatility of the oil market means prices are always in flux. In Newfoundland and Labrador - and in the rest of Canada as well, this leads to problems for consumers - gas prices were always going up! If there is one thing that consumers dislike more than rising prices it is prices that rise erratically. To help resolve this volatility problem the provincial government began regulating gas prices. In this unit we will apply the theory that we have learned to explore the issue and impact of government involvement in the market.

**Unit 3 - Topic 1:  Simultaneous Change in Supply and Demand**

The market system is a very responsive system.   Anticipating the movement of the market can be quite challenging even if you can anticipate the direction of the change to take advantage of it, other market forces may come into play that erase the value of your actions.

Take for example if you were to anticipate that employers will value your knowledge of Economics - because students with this knowledge are in demand in the current job market. Remembering from our last unit, this anticipation in future demand by all students of economics means that there will be a shift in the supply curve - more students will be supplied at any given price. The anticipation in demand means there is a rush to supply!

Unfortunately, as more economists are supplied, the demand will be met - forcing down demand for the very area in which people are anxious to fill.  This also forces down the price and effectively lowers  wage offerings.  As prices and demand drop, fewer people enter the economics field. Eventually, a shortage will result and we'll be back to where we started.  These wild fluctuations in supply, price and demand are not appreciated by anybody in the market - especially students!

From this simple example you can see that the market system is very responsive possibly too responsive in some cases.

In summary:

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| A simultaneous **increase** in demand and supply causes an **increase** in equilibrium quantity and an indeterminate change in price |
| A simultaneous **decrease** in demand and supply causes a **decrease** in equilibrium quantity and an indeterminate change in price |

**Unit 3 - Topic 2:  Price Controls - Price Ceilings**

Sometimes government finds it in the best interest of the public to directly influence the market so as to effectively manage price or manage supply. Markets do not always produce equitable results because resources and products are allocated according to demand and supply. Put more simply; the market does not allocate on the basis of who should or should not get things!

Government's job is to ensure that supplies and prices are equitable - especially in the near term.  The tools government has at its disposal to do this include Price Controls in the form of Price Ceilings and Price Floors as well as minimum wage legislation.  These are the common examples that we see every day - we will now examine how and why each of these forms of government imposed market regulation work and why sometimes they may not.

**Price Control using Price Ceilings**

Price ceilings are laws created by government that effectively set a maximum price that can be charged for a product or service. In Newfoundland and Labrador, the provincial government sets the maximum price for gasoline through the Petroleum Pricing Commission (PPC). ([www.pub.nf.ca](http://www.pub.nf.ca/))

If we hypothetically say that the maximum allowable price set by the PPC is $1.00/litre this will shield consumers from market gas prices above this amount. If the market price for gas is $.90 a litre the ceiling will have no effect. However, if the market price rose to $1.05 - then the market price has moved higher than oil suppliers can legally charge. Consumers would be happy with the price cap but oil suppliers would be upset that they would be forced to sell the product at a $.05 loss per litre.

Why would Consumers be happy? From a consumer's point of view they would feel as if they are getting a deal and they, in turn, would be inclined to demand/buy more gas at the lower than market price.

Why would oil suppliers be upset? Put yourself in the shoes of the oil companies: in a free market they could get $.05 more a litre. ($1.05 / litre at market versus $1.00 maximum regulated ). Oil companies would not be too happy at this lost potential revenue. In fact, they would be inclined to make less gas available in the market.

Two of these factors combine to help create a shortage in the market - this would be bad for consumers who may have trouble finding any gas at all for the artificially low price.

Another popular type of government imposed restriction on market prices is rent control. This imposition of price ceilings is most popular within large cities where rental properties are in short supply. Limited quantities of available housing tend to force prices up often out of the reach of less fortunate members of society. Rent Controls, a form of price ceiling, help to keep rental prices down.

However, as we have seen with oil price regulation, rent control laws tend to result in apartment shortages as landlords attempt to find more profitable options for their buildings.

***Alternatives to Price Ceilings***

Many economists argue against Price Ceiling citing the rationale outlined above. They have suggested other alternatives to government regulation:

* Let the market operate unhindered - The standard argument by capitalists is that the market should be allowed to operate without any interference from government. Although the market allows economic objectives to be reached it is not necessarily so good at achieving social objectives.
* Use a First-come First-served system (FCFS) of distribution of the available product - Government needs not only to be concerned with those who can get to the product or service first: it must ensure that everybody has a fair opportunity to avail of limited quantities of supplies.
* Let producers decide who they want to sell to - If producers were allowed to choose whom they want to sell to society's needs will in all likelihood not be met.
* Ration the supply so that each potential buyer gets a limited quantity of product. - Rationing ensures everybody gets some product but still does not adequately meet the needs of everybody.

**Unit 3 - Topic 3:  Price Controls - Price Floors**

A similar, but opposite approach used by government to regulate prices is the imposition of Price Floors.  When governments impose price floors they effectively set a minimum price for a product.   Again in Newfoundland and Labrador price floors exist for many locally produced products such asMilk and Eggs.

If we hypothetically say that the minimum allowable price set by the Egg Marketing Board is $2.50/dozen yet at the same time in the free market equilibrium price is at $2.00/dozen.

From a consumer's point of view, they would be unhappy with the artificially high price of eggs and thereby they would be inclined to demand/buy fewer eggs.

Putting yourself in the shoes of egg farmers they would be a most happy lot in a free market they would get $0.50 less a dozen than they are getting in the controlled market. ($2.00 / dozen at market but $2.50 / dozen minimum regulated).  The higher price would help egg farmers compete and this would help to shore up the industry.  Egg farmers would see this as an opportunity to make extra money and they in turn would be inclined to make more eggs available to the market.

 Two of these factors combine to help create a surplus of eggs in the market which somebody has to do something about.  That somebody would be government and they (we the taxpayer) would be forced to buy up the excess!

***Alternatives to Price Floors***

Like price ceilings, price floors tend not to work well in the long term because of the laws of economics.   Economists argue that the surplus that results from the imposition of the price ceiling creates significant problems in and of itself.   Several solutions have been proposed to rid the government of the excess supply:

Store the surplus product, if possible, for later use

1. Pay companies not to produce the product - Sometimes in western Canada, farmers are paid not to produce certain crops.  This has the effect of restricting the supply and thereby securing market prices.
2. Convert the surplus product, if possible, into other products that could be sold. - in Prince Edward Island Dairy Farmers are encouraged to produce "industrial" milk which is milk destined for reprocessing into milk related products such as cheese.
3. Sell the excess supply to other countries who are willing to buy it - In Newfoundland and Labrador, excess capelin are sold to Japanese buyers preventing a glut of local product coming to the market..
4. Give the excess supply away in the form of aid or foreign aid. - Every year hundreds of tonnes of excess Canadian wheat is shipped abroad as part of our food aid program.
5. Destroy the excess.  This is not a particularly prudent option because of the perception of waste.  Sadly, destruction of oversupply is all too common in the farming and fishing industries.

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| **Unit 3 - Topic 4: Does Minimum Wage Legislation Cause Unemployment?** |
| The minimum labour wage is a form of price floor that government has created to achieve social objectives rather than economic ones.   The Minimum wage is designed to ensure that all workers make a "reasonable' amount of money for their efforts.  At the time of this writing (July 2010) the minimum wage in Newfoundland and Labrador is 10.00 an hour.  Organizations that advocate workers rights such as unions, often argue that a higher minimum wage should be put in place.  They correctly argue that $10.00 an hour still impoverishes a person earning the minimum wage ($10.00 x 40 hours per week x 52 weeks a year = $20,800 annual salary).  But will a higher minimum wage have negative consequences? The answer is yes, and the economic explanation for this helps explain why better minimum wage legislation is often a political hot potato!  Minimum wages only affect the low end of the job market and anyone earning above the minimum is not affected by it.  The low end of the job market is relatively easy to enter because of minimum skill requirements.  As minimum wages go up more and more people will be drawn into the labour market.   At the same time, as employers are forced to pay more to each worker they are less willing to hire these workers.  The glut of workers is met with decreased demand - this results in pressure to decrease wage rates and unfortunately increased unemployment.  Although a higher minimum wage is a noble social cause it may result in greater unemployment which would defeat the purpose of the initiative. |

**Unit 3 - Summary**

In this unit, we discussed the effects on equilibrium price and quantity traded and simultaneous changes in supply and demand.   These simultaneous changes demonstrated that operation of the market system.   Although the market system works well, there are problems that government tries to resolve.   Price ceilings are imposed to create a maximum price for a given product.  Unfortunately this measure can causes shortages if the ceiling is below the market equilibrium price for the product.  Price floors are yet another tool that government uses to set price minimums.  Price floors can result in surpluses if the equilibrium price for the given product falls below the price floor.