

Walker Workbook: TOPIC II - S&D

1. What is the difference between "demand" and "quantity demanded?"

Demand is a relationship that describes the quantity demanded at each possible price. Quantity demanded is a specific quantity that the consumer is willing to purchase at a given price.

2. When deriving the demand for a product, what is changing? What is being held constant -- ceteris paribus?

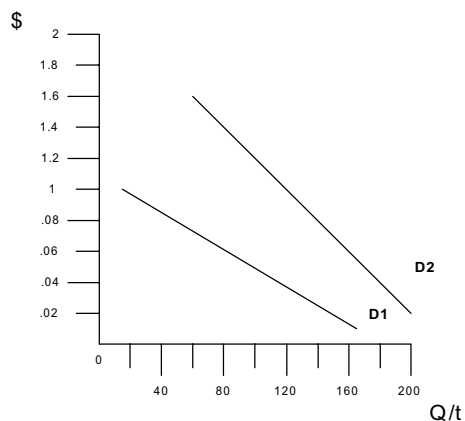
In deriving a demand curve - one is varying the price then determining the quantity demanded at each price - holding constant factors such as: (1) prices of other goods, (2) income, (3) preferences, (4) nonprice opportunity costs related to purchasing the good, and the number of potential buyers.

3. What is the difference between "a change in demand" and a change in "quantity demanded?"

A change in quantity demand is caused by a change in the price of the good. A change in demand implies the relationship between price and quantity demanded has changed (the demand curve shifts).

4. What is meant by an increase in demand? Be very specific. As part of your answer, use the concept of limit prices. Discuss "an increase in demand" using a graph that characterizes your demand for soda.

An increase in demand occurs when the quantity demanded increases at each possible price. Alternatively, this change can be viewed as an increase in the set of limit prices - that is, at any given quantity, the maximum amount consumers are willing to pay for that quantity increases.

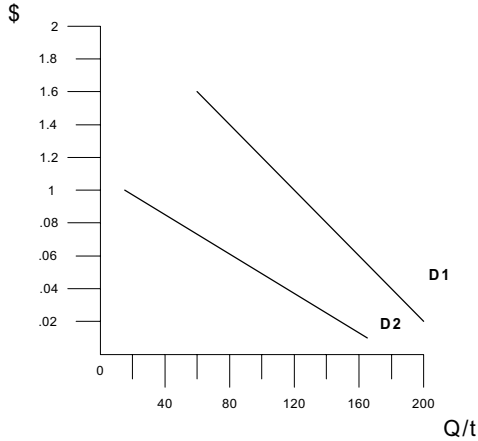


At every price, Qd has increased.

At every Qd, the limit price has increased.

5. What is meant by a decrease in demand? Be very specific. As part of your answer, use the concept of limit prices. Discuss "a decrease in demand" using a graph that characterizes your demand for gasoline.

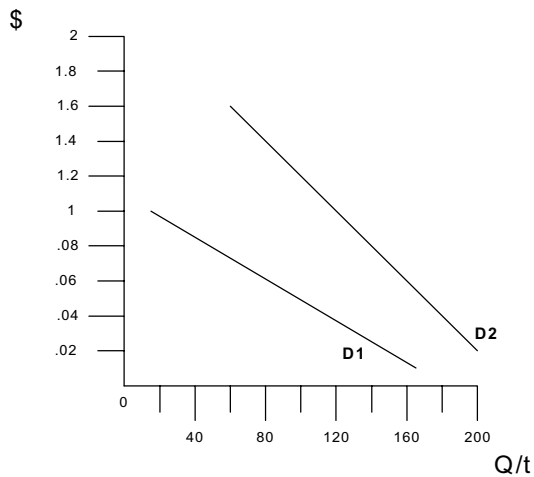
A decrease in demand occurs when the quantity demanded decreases at each possible price. Alternatively, this change can be viewed as a decrease in the set of limit prices - that is, at any given quantity, the maximum amount consumers are willing to pay for that quantity decreases.



At every price, Qd has decreased.
At every Qd, the limit price has decreased.

6. If the demand for soda increases, does quantity demanded also increase? Show this graphically.

If the demand for soda increase, yes, the quantity demanded increases at each possible price.



Note that at each possible price,
the Qd has increased.

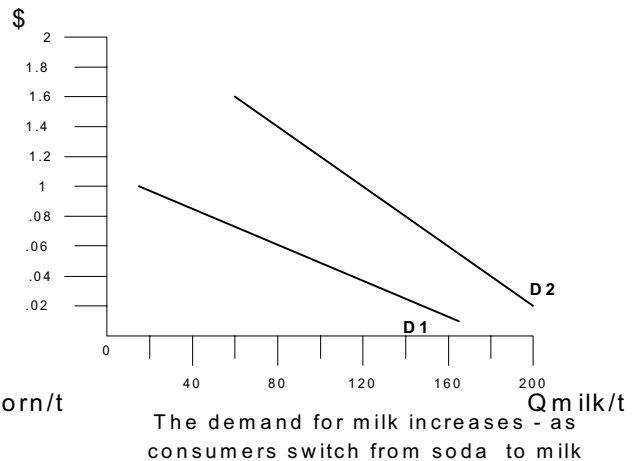
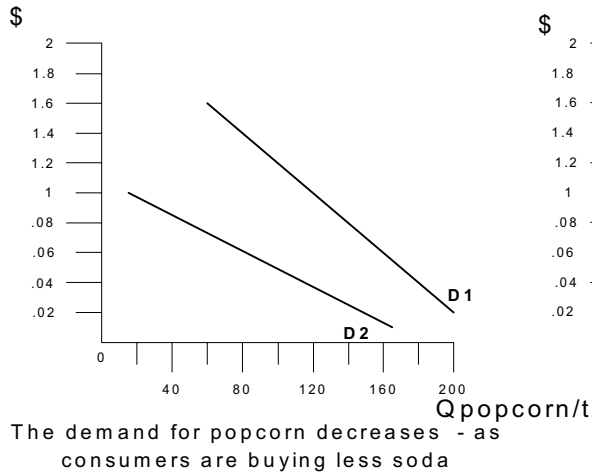
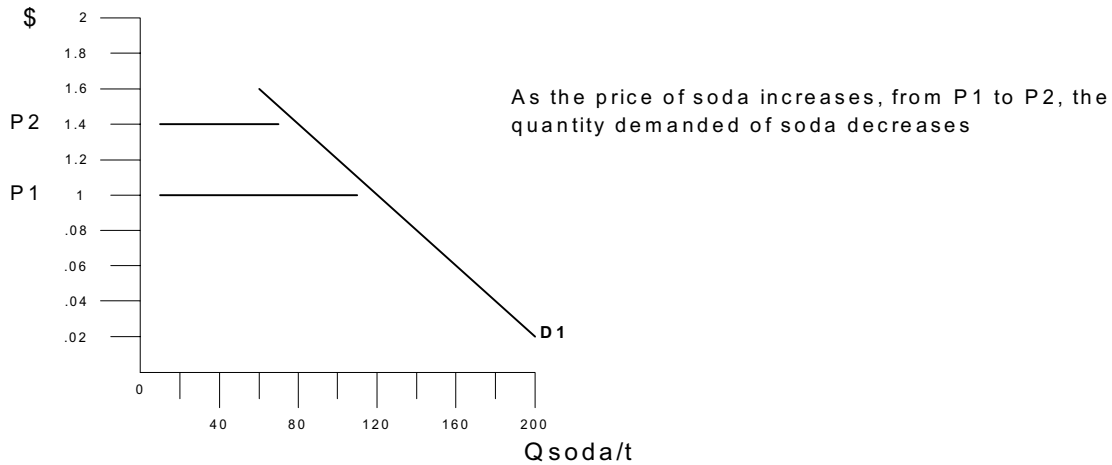
7. What is meant by the "time dimension" when one is describing the demand for a good?

The time dimension relates to the period of time over which the demand relationship is being defined. For example, the demand for soda per week, the demand for electricity per month, the annual demand for autos.

8. Holding demand constant, what is the only thing that can cause a change in "quantity demanded?" What are the things that cause a "change in demand?"

A change in price of the good itself leads to a change in quantity demanded. The things that change demand are changes in other relevant factors such as income, preferences, price of other goods, etc.

9. Assume sodas and popcorn are complements. Assume sodas and milk are substitutes. Assume manufacturers of soda face a cost of production increase that results in their increasing the price of soda. On three different graphs (one for sodas, one for popcorn, and one for milk) show a "before price increase graph." Then, on each graph, show what happens when the price of soda increases.



10. What is the difference between "supply" and "quantity supplied?"

Supply is a relationship that describes the quantity supplied at each possible price. Quantity supplied is a specific quantity that sellers are willing to offer for sell at a given price.

11. When deriving the supply for a product, what is changing? What is being held constant -- ceteris paribus?

In deriving a supply curve - one is varying the price (determining the quantity supplied at each price) - holding constant factors such as: (1) the number of sellers, the cost of production, etc.

12. What is the difference between "a change in supply" and a change in "quantity supplied?"

A change in quantity supplied is caused by a change in the price of the good. A change in supply implies the relationship between price and quantity supplied has changed (the supply curve shifts).

13. What is meant by an increase (decrease) in supply? Be very specific. As part of your answer, use the concept of reservation prices.

An increase in supply occurs when the quantity supplied increases at each possible price.

Alternatively, this change can be viewed as a decrease in the set of limit prices - that is, at any given quantity, sellers are willing to offer this quantity for sell at a price lower than before. A decrease in supply occurs when the quantity supplied decreases at each possible price. Alternatively, this change can be viewed as an increase in the reservation prices - that is, at any given quantity, sellers are now willing to offer this quantity only at a higher price than before.

14. Holding supply constant, what is the only thing that can cause a change in "quantity supply?" What are the things that cause a "change in supply?"

A change in market price for the good leads to a change in quantity supplied. Things that change the number of sellers, or increase or decrease the cost of production (including opportunity costs) of a good lead to a change in supply.

15. Why are the following statements FALSE?

A. Demand increases lead to supply increases.

A change in demand leads to a change in price which leads to a change in quantity supplied via a movement along the supply curve - not a change in supply (not a shift in the supply curve).

B. The demand for health care is inversely related to price.

The quantity demanded (not demand) is inversely related to price.

C. An increase in income will always lead to an increase in demand.

Depends on whether the good is normal (not inferior)

D. An increase in supply implies the supply curve shifts up.

An increase in supply implies the supply curve shifts down (reservation prices fall) or to the right (at each possible price, the quantity supplied increases).

E. If beer and wine are substitutes, a price increase by wine retailers will increase both the demand and supply of beer.

The increase in the price of wine will increase the demand for beer. The increase in the demand for beer will increase the price of beer leading to an upward movement along the supply curve (an increase in the quantity supplied of beer).

F. An increase in the price consumers are willing to pay for home computers should lead to an increase in the supply of home computers.

Same logic as in E. The increase in the demand for PCs will increase the price of PCs, leading to an upward movement along the supply curve (an increase in the quantity supplied of PCs).

G. An increase in the supply of oranges would increase the demand for oranges.

The increase in the supply of oranges will decrease the price of oranges leading to a downward movement along the demand curve (an increase in the quantity demanded of oranges).

H. The law of demand states that demand is inversely related to price.

The "law of demand" states that there is an inverse relationship between price and quantity demanded.

I. An increase in the price of Pepsi would increase the quantity demanded of Cokes, but not the demand for Cokes.

If the manufacturers of Pepsi raise the price of Pepsi, this will increase the demand for Coke (a shift rightward in the demand curve for Coke). At every possible price of Coke, consumers will be willing to buy a greater quantity of Cokes.

J. An increase in the price of Coke would decrease my limit prices for Coke.

No. An increase in the price of Coke will decrease my quantity demanded.

K. An increase in the price of Coke would decrease my limit prices for Pepsi.

An increase in the price of Coke will increase my demand for Pepsi - this can be interpreted as an increase in my set of limit prices for Pepsi.

16. Discuss how demand or supply will be affected in each of the following examples -- tie your discussion back to the S&D model we have been using in class.

A. the buying of cigarettes is made illegal -- impact on the cigarette industry If buying is made illegal, this will decrease demand - leading to a decrease in price - leading to a movement down along the supply curve for cigarettes - leading to a new equilibrium at a lower price and a lower quantity.

B. the selling of cigarettes is made illegal -- impact on the cigarette industry If selling is made illegal, this will decrease supply - leading to an increase in price - leading to a movement up along the demand curve for cigarettes - leading to a new equilibrium at a higher price and a lower quantity.

C. interest rates on "charge cards" are reduced to 6% -- the impact on retail clothing stores. The decrease in interest rates will lower the "full cost" of buying clothes. This will increase the demand for clothes - leading to an increase in price - leading to a movement up along the supply curve for clothes - leading to a new equilibrium at a higher price and a higher quantity.

D. higher licensing fees are placed on trawling for shrimp in the Gulf of Mexico -- impact on the shrimp industry. The higher license fees will increase cost of production. This will decrease supply leading to an increase in price - leading to a movement up along the demand curve for shrimp - leading to a new equilibrium at a higher price and a lower quantity.

E. higher licensing fees are placed on trawling for shrimp in the Gulf of Mexico -- impact on the beef industry As in answer D, the price of shrimp will increase with people buying less shrimp. This will cause an increase in the demand for beef (shrimp and beef are substitutes) - leading to an increase in price - leading to a movement up along the supply curve for beef - leading to a new equilibrium at a higher price and a higher quantity in the beef industry.

F. the price of natural gas (used in home heating) increases -- impact on the market for firewood As in answer E, the increase in the price of natural gas will lead to people buying less gas. This will cause an increase in the demand for firewood (firewood and natural gas are substitutes) - leading to an increase in price - leading to a movement up along the supply curve for firewood - leading to a new equilibrium at a higher price and a higher quantity in the firewood industry.

G. the minimum wage is increased to \$7.00 per hour -- impact on the fast food industry The increase in minimum wage will increase costs of production leading to a decrease in the supply of fast food. This will decrease supply leading to an increase in price - leading to a movement up along the demand curve for fast food - leading to a new equilibrium at a higher price and a lower quantity in the fast food industry.

17. Graphically work through the four basic cases for a change in PE and QE. In each case, explain how the shift in D or S leads to a shortage or surplus. Discuss how this surplus leads to a change in market price and a resulting change in Qd and Qs until a new equilibrium is reached.

See the answer on page II9 of the Workbook.

18. Take each example in question 16 -- show graphically the affect on equilibrium price (PE) and equilibrium quantity (QE) in the relevant markets.

These graphs are not provided. Check your graphs against the "written answer" given in 16.

19. What complication arises in our S&D model if there is a change which causes both S&D to simultaneously change?

For example, how would PE and QE be affected if simultaneously it is made illegal to both buy and sell cigarettes? If both S&D change, the effect on either PE or QE will be indeterminate. For example, making it illegal to buy and sell cigarettes will simultaneously decrease demand and supply. The decrease in demand (alone) will decrease PE and decrease QE. The decrease in supply (alone) will increase PE and decrease QE. The combined impact will be a decrease in QE, but the effect on PE is indeterminate without more information on the relative effects of the two changes.

20. True/False - explain

A. tomatoes and lettuce are complements - an increase in cost of producing lettuce will decrease the demand for tomatoes.

True - the increase in cost of producing lettuce will decrease the supply of lettuce leading to a higher price for lettuce and a smaller quantity consumed. This will decrease the demand for tomatoes.

B. tomatoes and lettuce are complements - an increase in cost of producing lettuce will decrease the supply of tomatoes.

False - as in A, there will be a decrease in demand for tomatoes which will cause a movement up along the supply curve for tomatoes (but, not a shift in the supply curve for tomatoes).

C. an increase in the profitability of growing corn will decrease the supply of soy beans.

True - there is an increase in the opportunity cost of growing soy beans. This will decrease the supply of soy beans.