

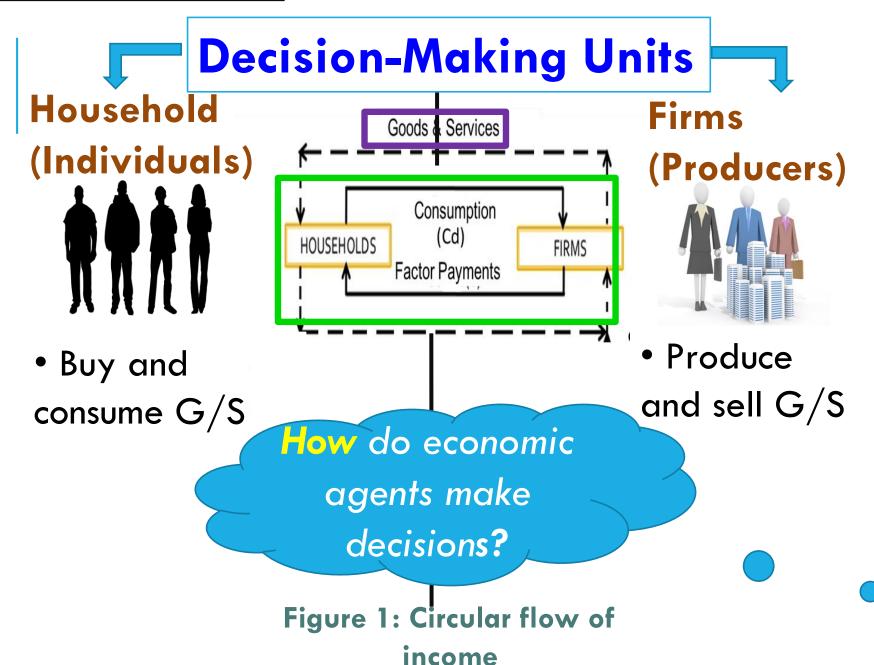
THEORY OF DEMAND

SEM1 T1 (W1-2)

#### LECTURE OBJECTIVES

- 1. Define demand
- 2. Explain the law of demand
- Differentiate between individual demand & market demand
- 4. Distinguish between change in quantity demanded & change in demand
- 5. Explain how various non-price factors affect demand
  - Distinguish between substitutes & complements
  - Distinguish between complements & goods in derived demand

# 1. INTRODUCTION



# 1. INTRODUCTION

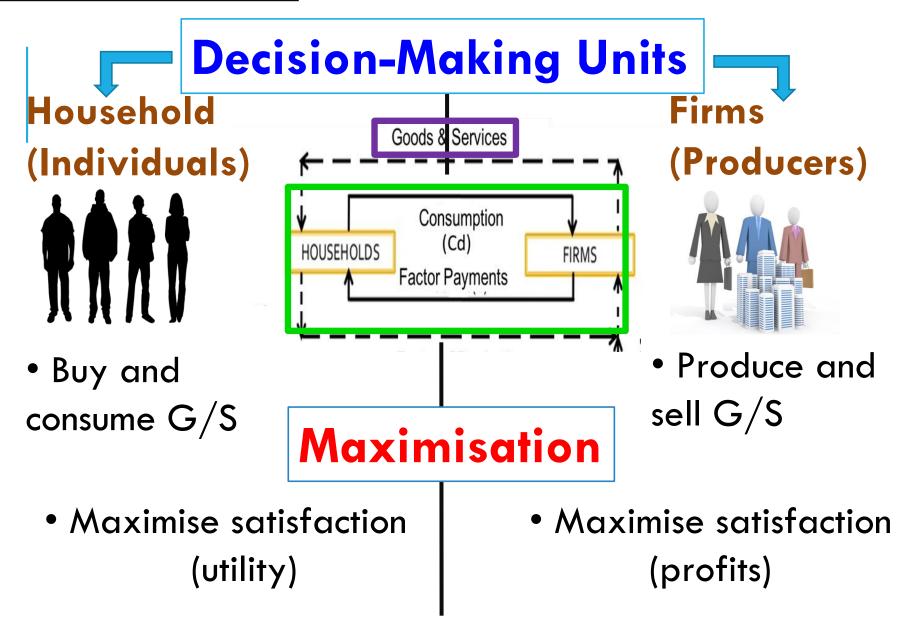
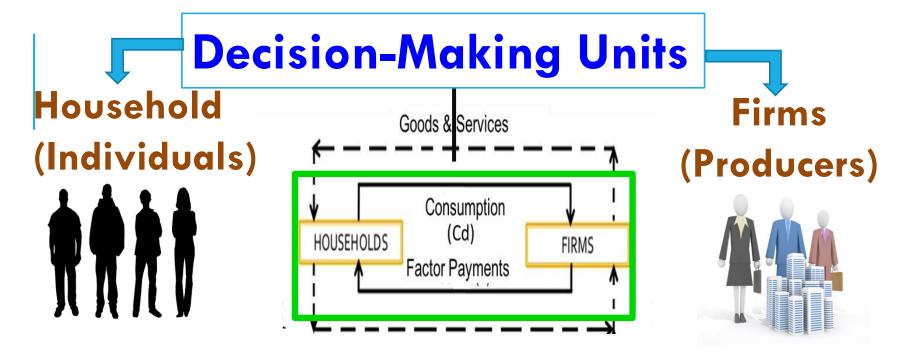
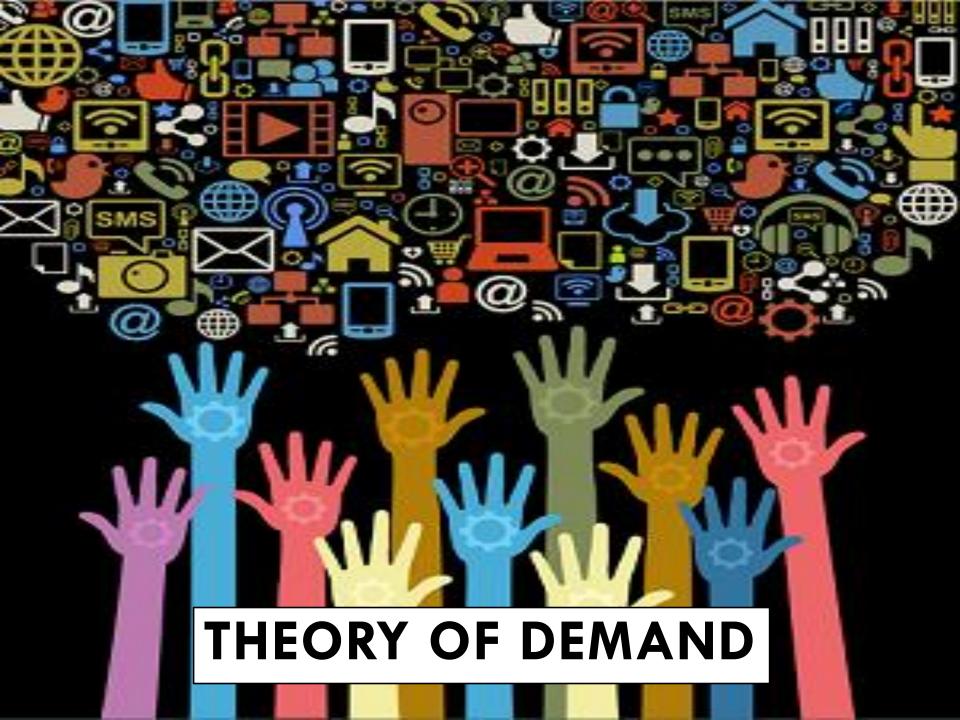


Figure 1: Circular flow of income

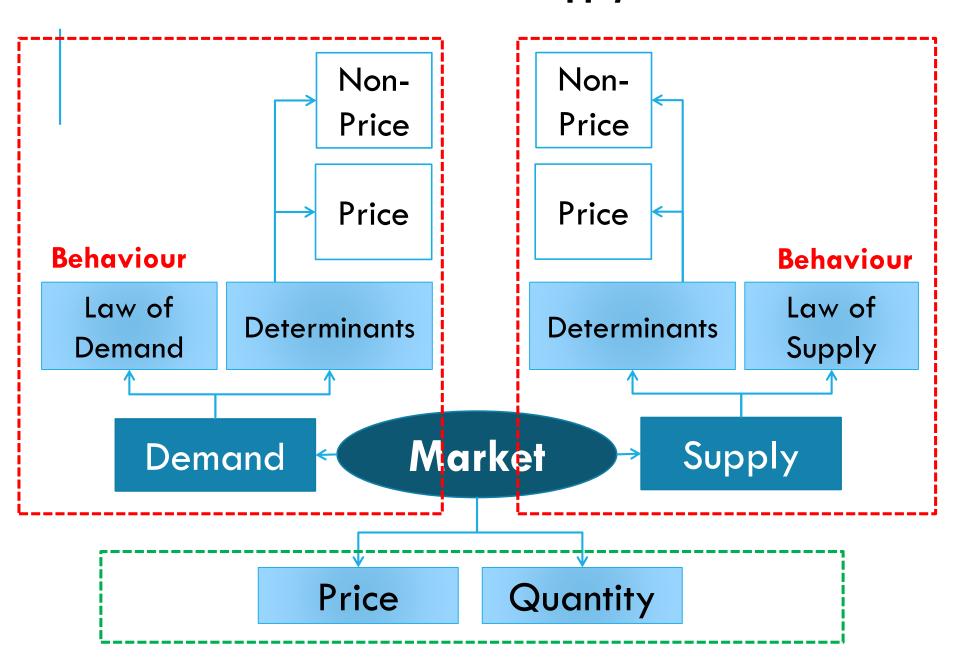
## 2. MARKET



- Not a physical place
- But an arrangement/relationship through which the firm and household interact to trade goods and services



### **Demand and Supply**



#### LESSON OBJECTIVES

- 1. Define demand
- 2. Explain the law of demand
  - Explain the law of diminishing marginal utility
- 3. Differentiate between individual demand & market demand
- 4. Distinguish between change in quantity demanded & change in demand
- 5. Explain how various non-price factors affect demand
  - Distinguish between substitutes & complements
  - Distinguish between complements & goods in derived demand



# THEORY OF DEMAND

Demand is defined as the amount of goods (or services) consumers are willing and able to buy in a given period of time at a given price, ceteris paribus (other things remaining constant).

Also known as effective demand.

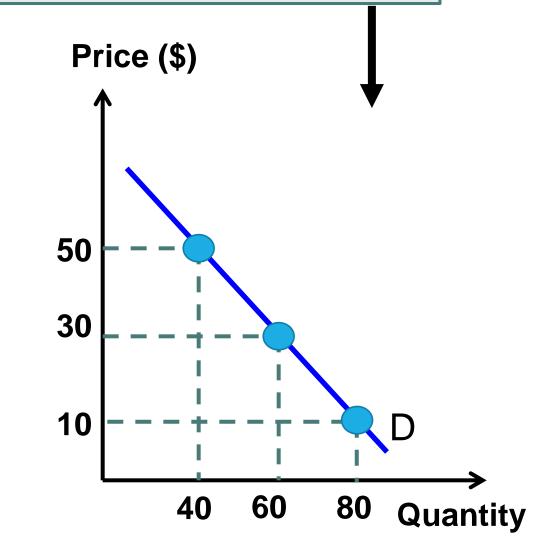
# THEORY OF DEMAND

'Ceteris paribus' – Latin for "all other things being equal."

It means that all things other than price that can affect how much the consumer is willing and able to buy are assumed to be constant and unchanging

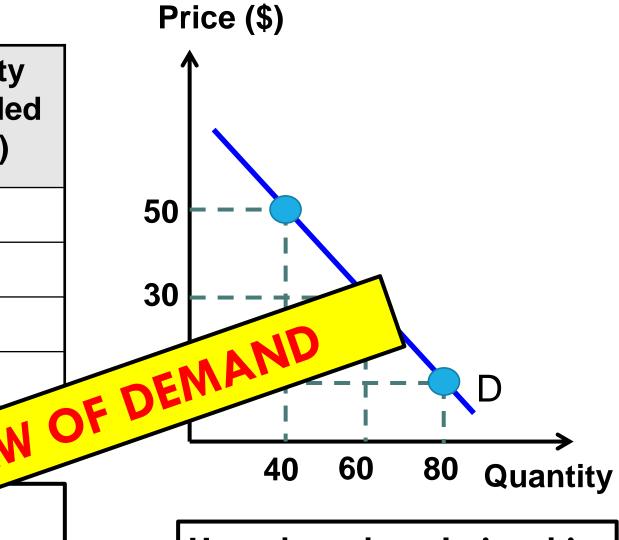


Price per unit (\$)	Quantity Demanded (units)			
10	80			
20	70			
30	60			
40	50			
50	40			





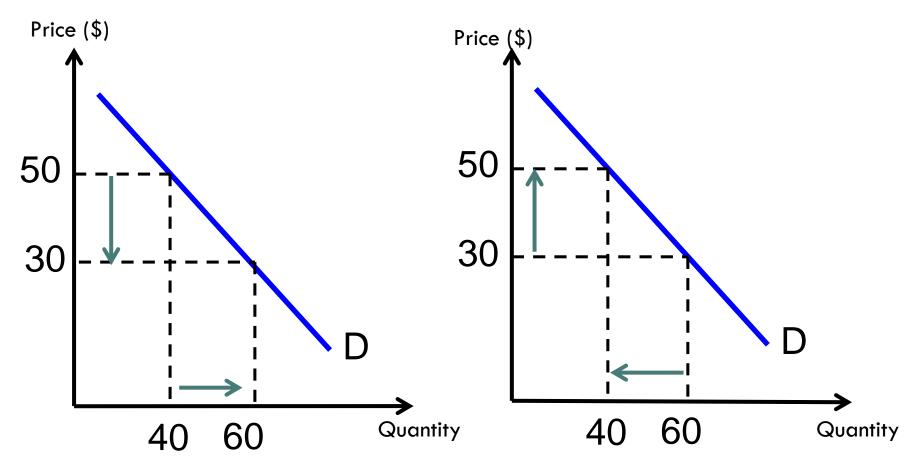
What do y motice about the relationship between price and quantity demanded?



How does the relationship affect the demand curve?

# THE LAW OF DEMAND

The Law of Demand states that in a given time period, the quantity demanded of a product is inversely related to its price, ceteris paribus.



# THE LAW OF DEMAND

 According to the law of demand, there is a negative causal relationship between the price of a good and its quantity demanded over a particular time period, ceteris paribus: as the price of the good increases, quantity demanded falls; as the price falls, quantity demanded increases, ceteris paribus.



3. Individual vs Market Demand

#### INDIVIDUAL VS MARKET DEMAND

#### Individual Demand

Refers to the demand for a good or service by an individual consumer.

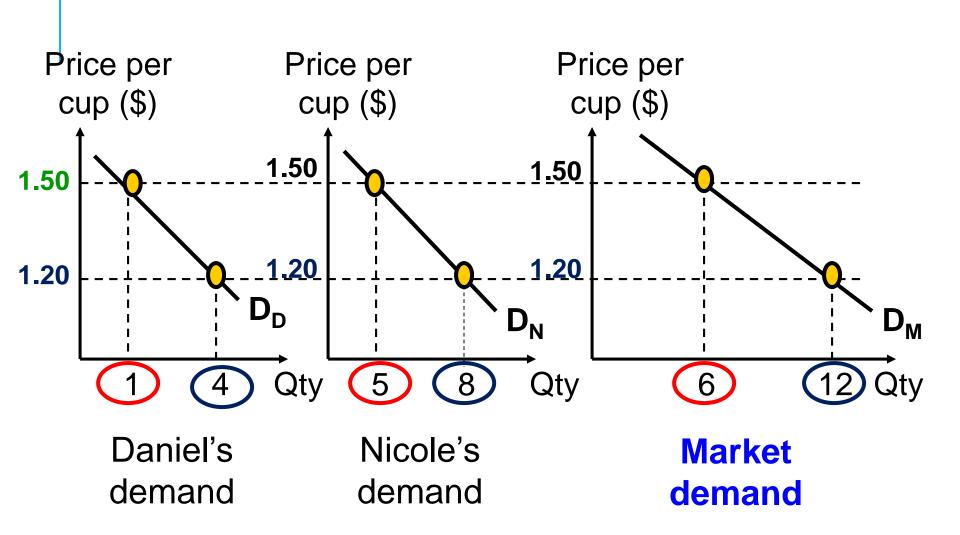
#### **Market Demand**

Refers to the **SUM** of the individual demand for a good or service by all the consumers in the market.

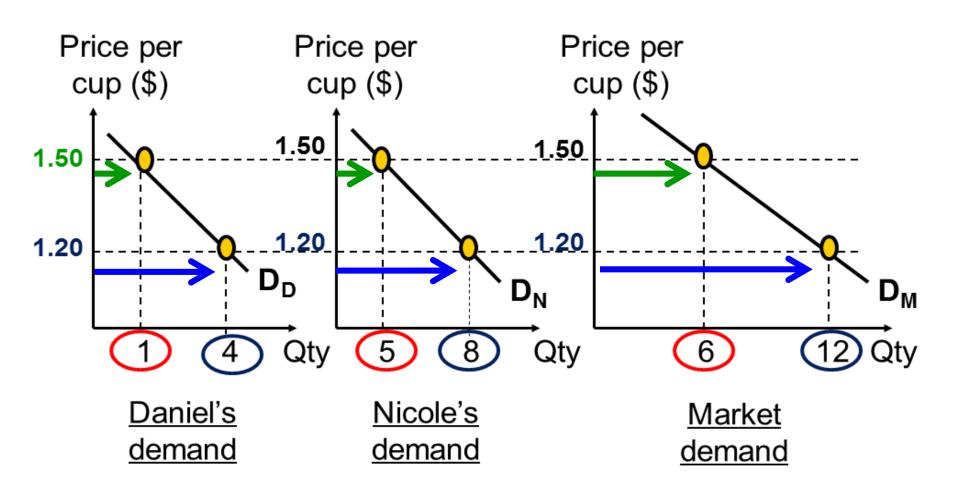
# INDIVIDUAL VS MARKET DEMAND

Price (\$) per cup	Quantity Demanded of white coffee (cups)		
	Daniel	Nicole	Market
1. 60	0	4	4
1.50	1	5	6
1.40	2	6	8
1.30	3	7	10
1.20	4	8	12
1.00	5	9	14

### INDIVIDUAL VS MARKET DEMAND



# Individual vs Market Demand



**Horizontal Summation** 

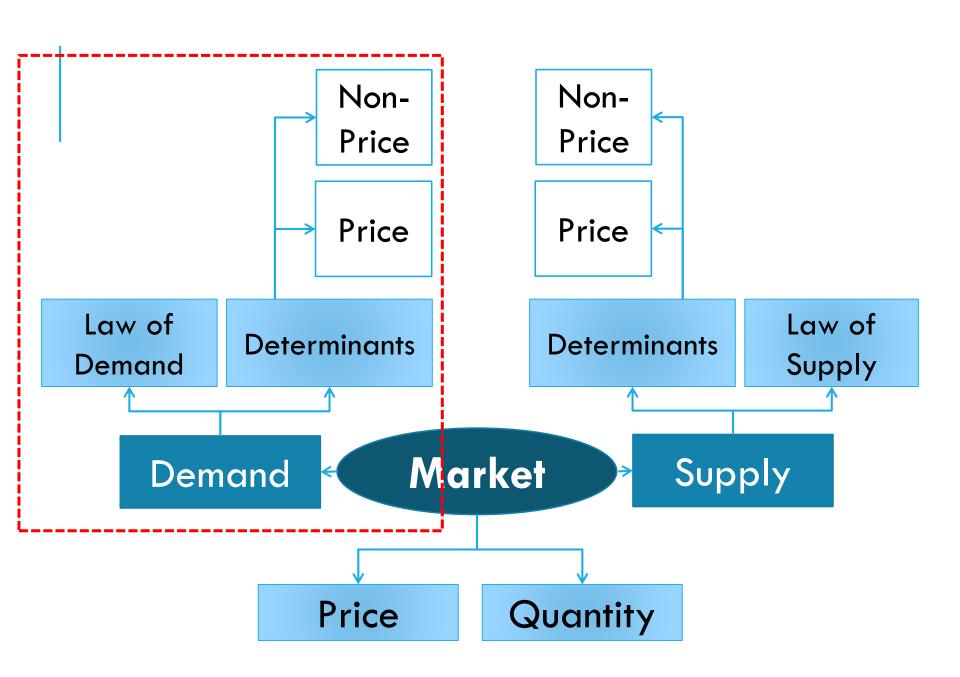
### LESSON OBJECTIVES

- 1. Define demand
- 2. Explain the law of demand
  - Explain the law of diminishing marginal utility
- 3. Differentiate between individual demand & market demand
- 4. Distinguish between change in quantity demanded & change in demand
- 5. Explain how various non-price factors affect demand
  - Distinguish between substitutes & complements
  - Distinguish between complements & goods in derived demand

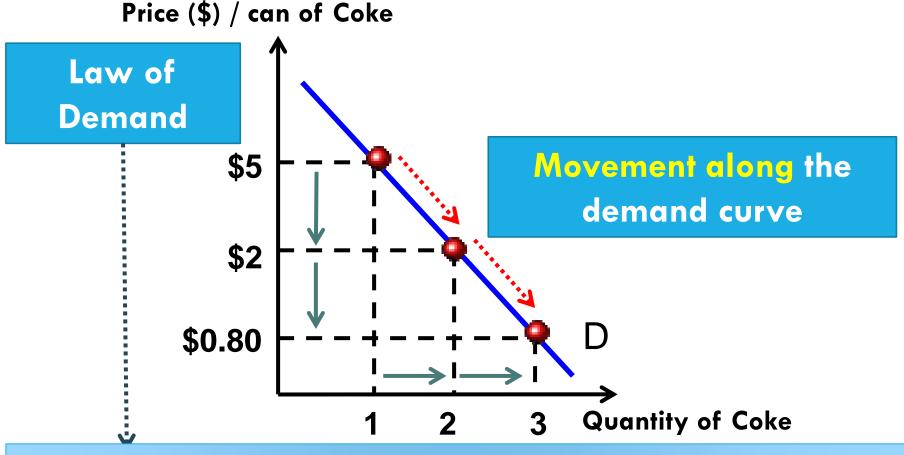


Demand is defined as the amount of goods consumers are willing and able to buy in a given period of time at a given price, ceteris paribus (other things remaining constant).

What affects ability and willingness to buy?



# Change in Price of the Good



Cause: Decrease in the price of the good

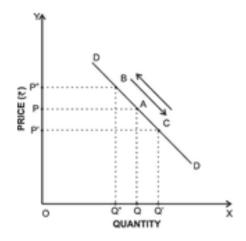
Effect: Increase in the quantity demanded of the good

ceteris paribus...

#### Expansion and contraction in demand

As explained above, other things being equal, the demand curve, schedule and the law of demand, all show an inverse relationship between price and quantity demanded. If demand for a particular commodity changes as a result of changes in its price alone, we denote it as expansion and contraction of demand. Thus, we see that expansion or contraction of demand takes place as a result of changes in price, while all other factors influencing demand remain constant.

- When the quantity demanded of a good rises due to a fall in price, it is called expansion of demand.
  - Example- If the prices of cell phones decrease, the demand for cell phones would increase. This shows expansion of demand.
- When the quantity demanded of good decreases due to a rise in price, it is called contraction of demand.
  - Example- If the prices of cell phones increase, the demand for cell phones would decrease. This shows contraction of demand.



P = Price of the commodity

P" = Increases in price

P' = Decreases in price

Q = Quantity demanded

Q" = Decrease in quantity demand

Q' = Increase in quantity demanded

Note: In case of expansion and contraction of demand, a change takes place along the same demand curve or there is a movement along the demand curve. When the price falls from P to P', the quantity demanded increases from Q to Q' on the demand curve. This downward movement on the demand curve indicates expansion of demand. Similarly, when the price increases from P to P", the quantity demanded decreases from Q to Q" on the demand curve. This upward movement on the demand curve indicates contraction of demand. In other words, movement from one point to another point (on the same demand curve) towards horizontal axis is expansion (A to C in the diagram) and movement towards the vertical axis is contraction of demand (movement from A to B). In both expansion and contraction, price would be the only detrimental factor.



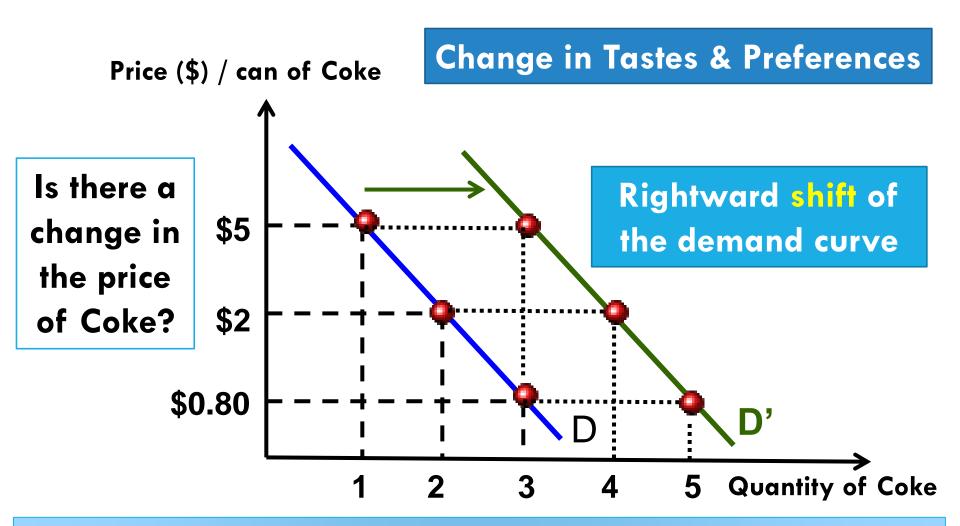
Change in price of the good

Change in non-price factor

Change in price of the good will affect the QUANTITY
DEMANDED ...

... and cause a
movement along
the demand curve

# **Change in Non-Price Factor**



A change in taste & preference in favour of Coke will increase its demand and cause a rightward shift in the demand curve

# Factors affecting DEMAND

Change in price of the good

Change in non-price factor

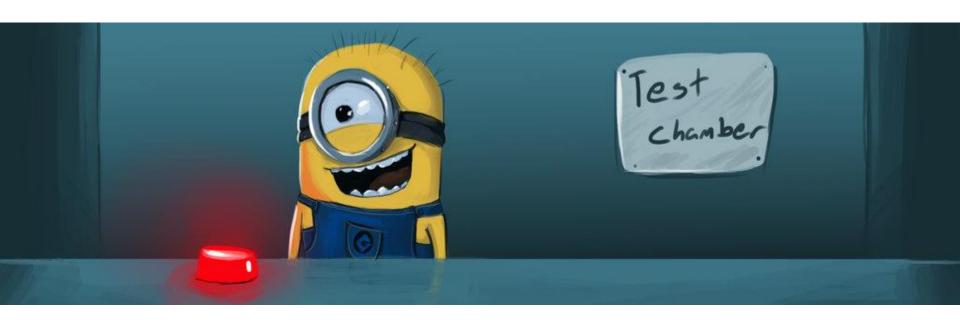
Change in price of the good will affect the QUANTITY
DEMANDED ...

Change in non-price factors will affect the DEMAND ...

... and cause a movement along the demand curve

... and cause a
shift in
the demand curve

# TEST YOURSELF! - PRICE OR NON-PRICE?



THE GOOD GUYS



About Us Store Locator & Trading Hours Login or Register



\$0.00

**BROWSE PRODUCTS** 

BRANDS ~

DEALS & CATALOGUES ~

CONCIERGE & SERVICES

MERRY GIFTMAS

Home / Black Friday

# OUR FIRST BLACK FRIDAY SA

In store and online

#### It's The Good Guys first ever BLACK FRIDAY SALE!

With so many incredible deals it's the perfect time to grab a bargain! For ONE DAY only take 15% off selected whitegoods, as well as red-hot offers on smart TVs, small kitchen appliances, dishwashers, fridges, washing machines, tablets and more! Christmas and summer BBQs are just around the corner so get everything you need now for easier entertaining. HURRY -- these incredible deals end at 11.59pm tonight!



SELECTED FRIDGES & FREEZERS SHOP NOW ^ Terms and conditions apply.

^Prices displayed inclusive of discount. Excludes price attack and clearance.

^Prices displayed inclusive of discount. Excludes price attack and clearance.

Shop Our Incredible One Day Dec



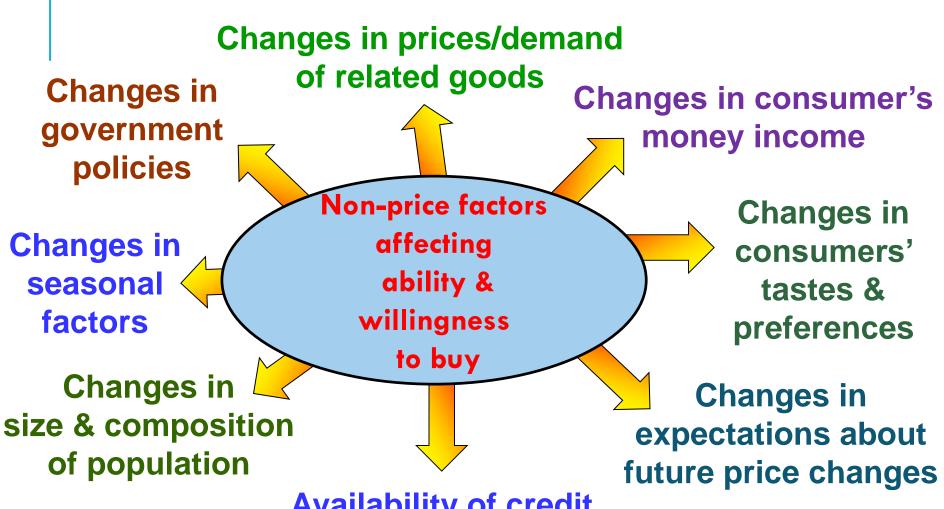






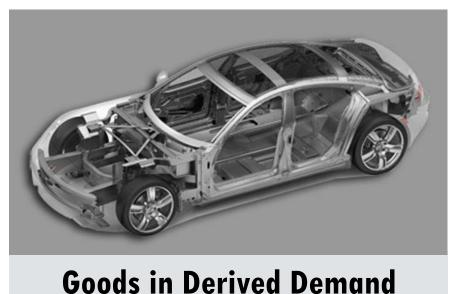


# **NON-PRICE DEMAND FACTORS**



**Availability of credit** facilities & hire purchases

# Substitutes



#### **Complements**

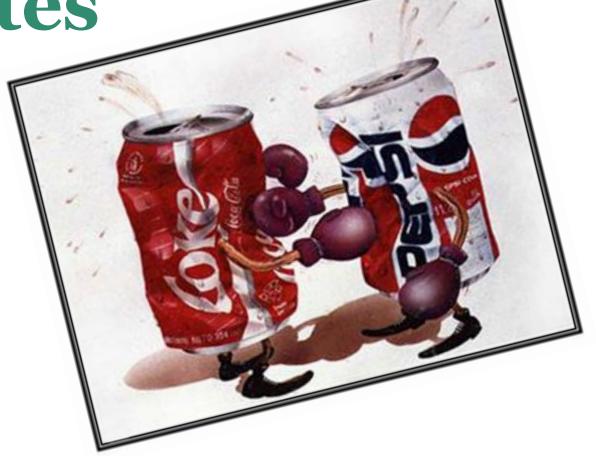


# CHANGES IN PRICE/DEMAND OF RELATED GOODS

Substitutes



"You're fired, Jack. The lab results just came back, and you tested positive for Coke."



When there is a fall in the price for Coke, what happens to the demand for Pepsi?

#### CHANGES IN PRICE OF RELATED GOODS: SUBSTITUTES

A substitute is an alternative product that can replace another because it satisfies the same want.

Also known as competitive demand.

Can you think of any examples?

In what ways are they substitutes?

- Coffee & tea
- Chicken & beef
- Public bus & taxi
- Margarine & butter
- Petroleum & natural gas
- 7-Up & Sprite

## Changes in Price of Related Goods: Substitutes

For substitutes, if the price of one good changes, the demand for the substitute good will change in the same direction.

#### **CAUSE**

Increase in the PRICE of Good A



#### **EFFECT**

Increase in

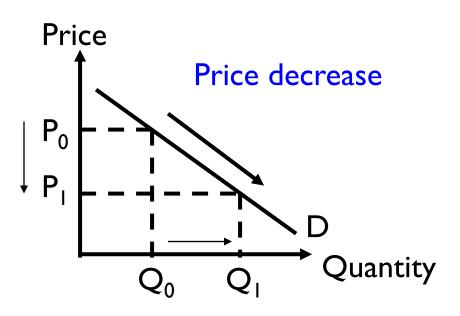
DEMAND for

Good B

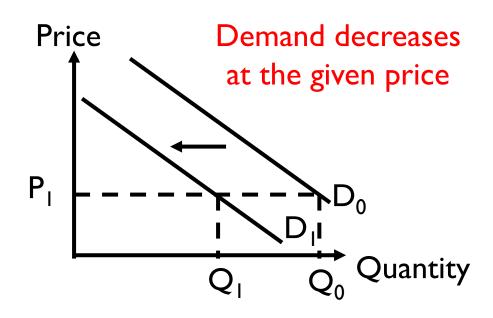
(substitute)

#### Changes in Price of Related Goods: Substitutes

Market for Coke



Market for Pepsi



★ price of Coke →

**↑** quantity demanded for Coke

Distinguish between change in quantity demanded & change in demand

Since Coke is relatively cheaper than Pepsi, given that they are substitutes, demand for Pepsi will fall as consumers switch from drinking Pepsi to Coke.

# In the News ...

#### Another Year of Chicken: US Beef Supply Will Fall in 2015

In the US, the price of ground beef was up 17% in Sept from a year earlier, and steaks and roasts also got pricier.

Consumers have traded down to less expensive meats such as chicken. "With consumption shifting away from high-priced beef, we expect chicken demand to increase by at least 3% in 2015," said Tyson Foods CEO Donnie Smith.

The same is happening in restaurants. At Chipotle Mexican Grill, some customers chose chicken over beef after the chain increased the menu price for steak by about 9%, compared with only 5% for chicken.

Source: Adapted from Bloomberg, 18 Nov 2014

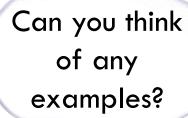
# Complements



#### Changes in Price of Related Goods: Complements

A complementary product is one that must be used at the same time with another to satisfy the same human wants.

Also known as joint demand.



In what ways are they complements?

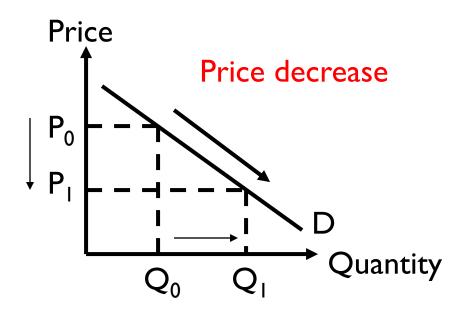
- Coffee & sugar
- Cars & petrol
- Mechanical pencils & leads
- E-book & e-book reader
- DVD & DVD player
- iPhone & iPhone app



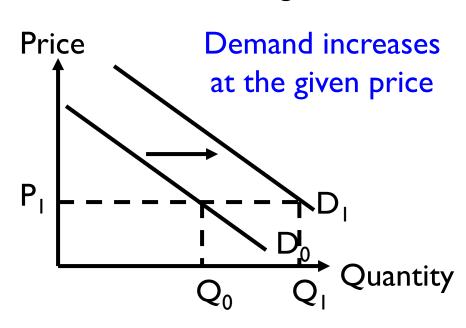
#### Changes in Price of Related Goods: Complements

For complements, if the price of one good changes, the demand for the complementary good will change in the opposite direction.





#### Market for Sugar



# **Goods in Derived Demand**



# Changes in Demand of Related Goods: Derived Demand

# When a good is in derived demand, it is demanded for its contribution to the manufacture of another product.

Can you think of any examples?

- Steel & cars
- Bricks & building
- Paper & books

- In what ways are they goods in derived demand?
- How are they different from complements?

# Changes in Demand of Related Goods: <u>Derived Demand</u>

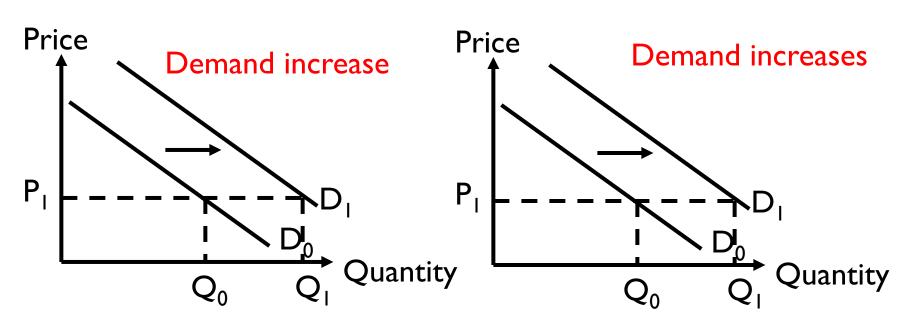
For two goods in derived demand,
a change in demand for the final good
causes a similar change in the demand
for the resource used to produce it.

# Changes in Demand of Related Goods: Derived Demand





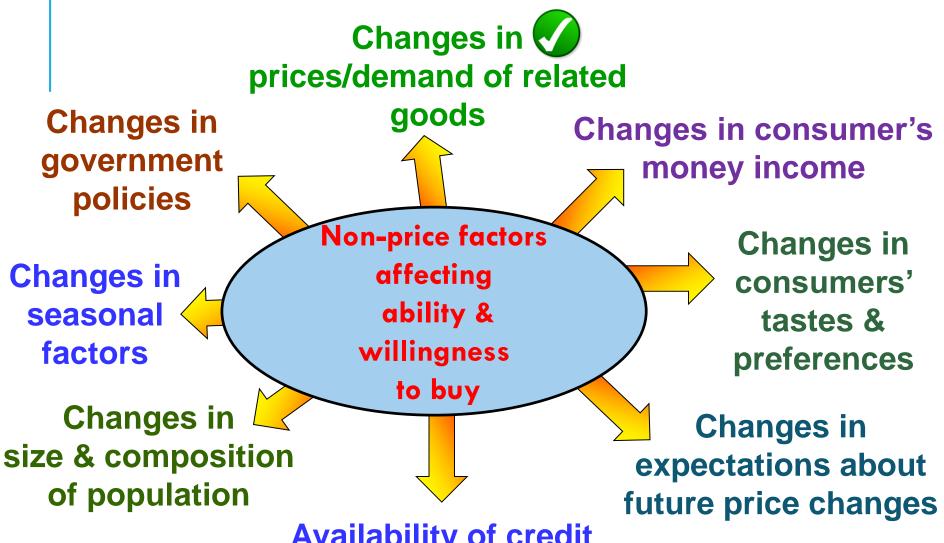
#### Market for Steel



# IDENTIFY THE ECONOMIC RELATIONSHIPS BETWEEN THESE GOODS?

Goods	Economic Relationships
Biofuels and corn	Derived demand
Cars and fuel	Complements
Public transport and cars	Substitutes
Crude oil and petrol	Derived demand

## **NON-PRICE DEMAND FACTORS**



**Availability of credit facilities & hire purchases** 

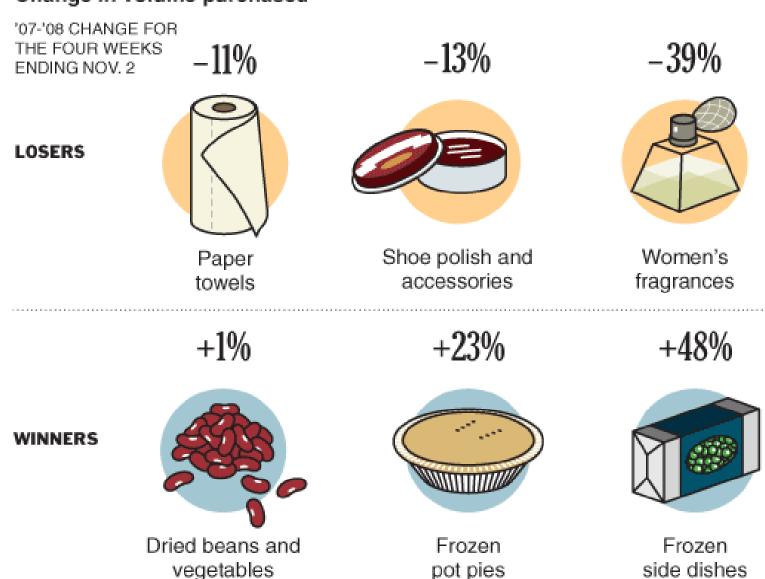
# CHANGES IN CONSUMER'S MONEY INCOME



#### Winners and Losers

While it is too early to predict the long-term effects of the economic downturn on spending habits, early results show that consumers will be polishing their shoes less and cooking at home more.

#### Change in volume purchased



#### **CHANGES IN CONSUMERS' MONEY INCOME**

For normal goods, when income changes, demand will change in the same direction.



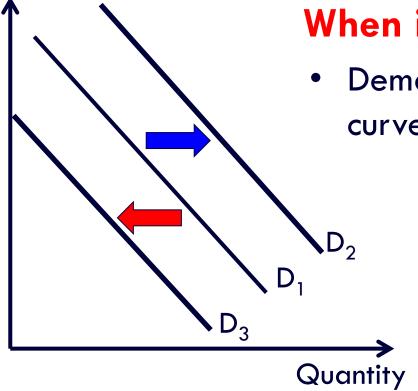
# FOR A NORMAL GOOD ...

#### When income rises:

• Demand will increase  $\rightarrow$  demand curve shifts right from D<sub>1</sub> to D<sub>2</sub>.

#### When income falls:

• Demand will decrease  $\rightarrow$  demand curve shifts left from D<sub>1</sub> to D<sub>3</sub>.



Price (\$)

#### **CHANGES IN CONSUMERS' MONEY INCOME**

For inferior goods, when income changes, demand will change in the opposite direction.



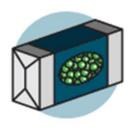
VS







Frozen pot pies



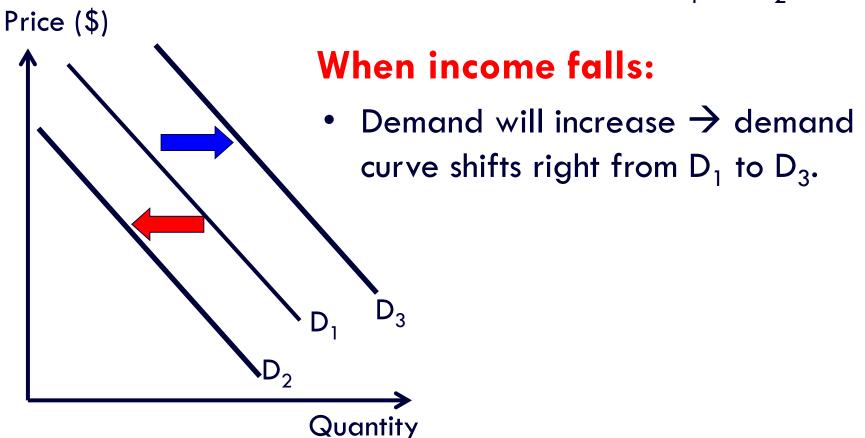
Frozen side dishes



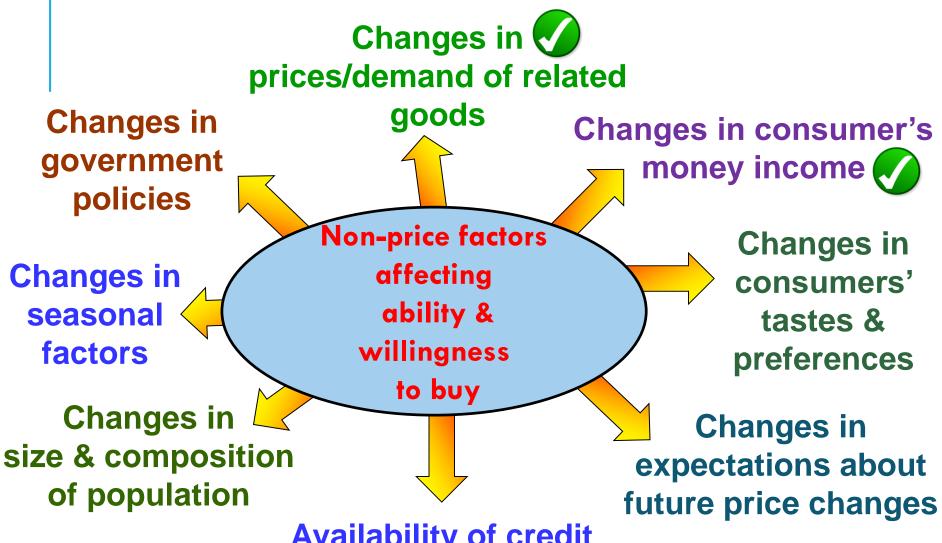
## FOR AN INFERIOR GOOD ...

#### When income rises:

• Demand will decrease  $\rightarrow$  demand curve shifts left from D<sub>1</sub> to D<sub>2</sub>.



## **NON-PRICE DEMAND FACTORS**



**Availability of credit facilities & hire purchases** 

#### **CHANGES IN CONSUMER TASTES & PREFERENCES**



Awareness campaigns

# SHENEEDS HERFUR MORE THAN YOU DO

#### **CHANGES IN CONSUMERS' TASTES & PREFERENCES**



# **Advertising**



"Just do it"

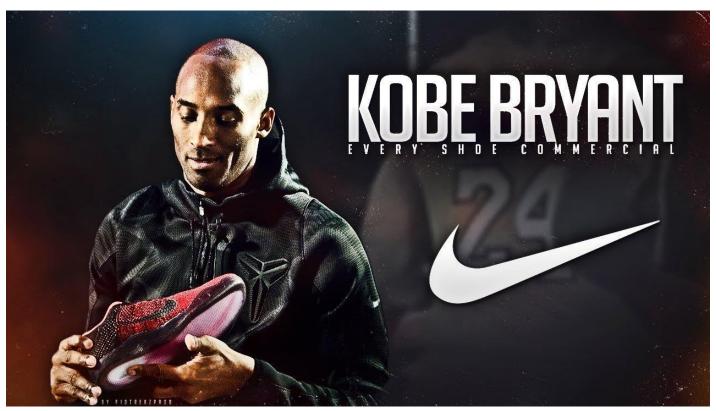
"Let your fingers do the walking."

"Connecting people"

"...melts in your mouth, not in your hands"

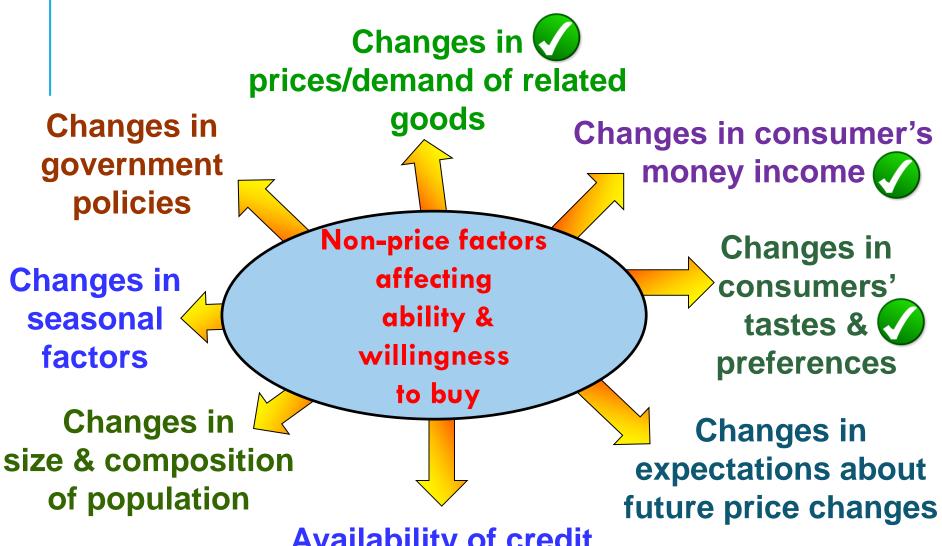
#### **CHANGES IN CONSUMERS' TASTES & PREFERENCES**

The more desirable a good is to consumers, the higher the demand and vice versa.



Tastes and preferences are influenced by advertisements, pop-star appeal, age, peers, etc.

## **NON-PRICE DEMAND FACTORS**



**Availability of credit** facilities & hire purchases

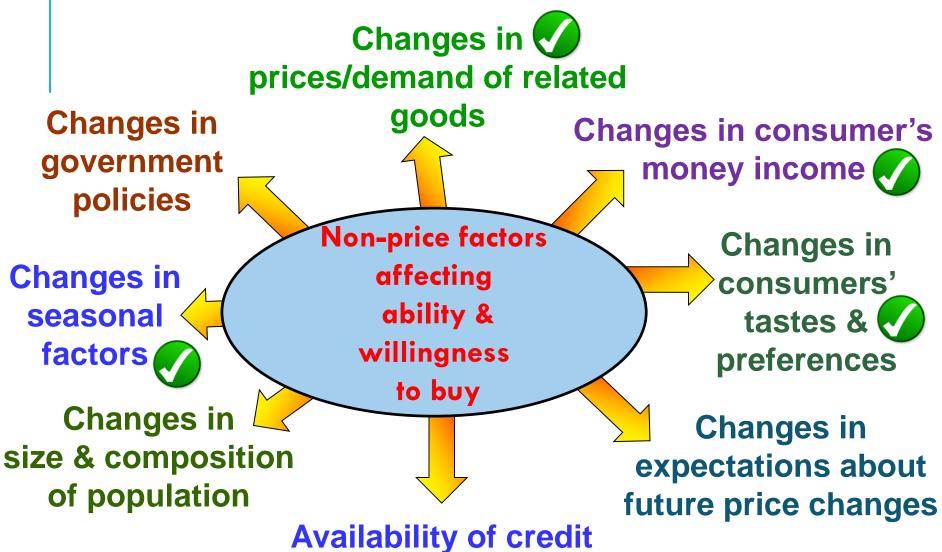
### **CHANGES IN SEASONAL FACTORS**

The demand for goods and services such as winter clothing is influenced by seasonal climatic conditions.

For example: During winter, the demand for winter clothing (e.g. mink coats) increases, shifting the demand curve to the right.

What is the effect of "a warm winter" on the demand for mink coats?

# **NON-PRICE DEMAND FACTORS**



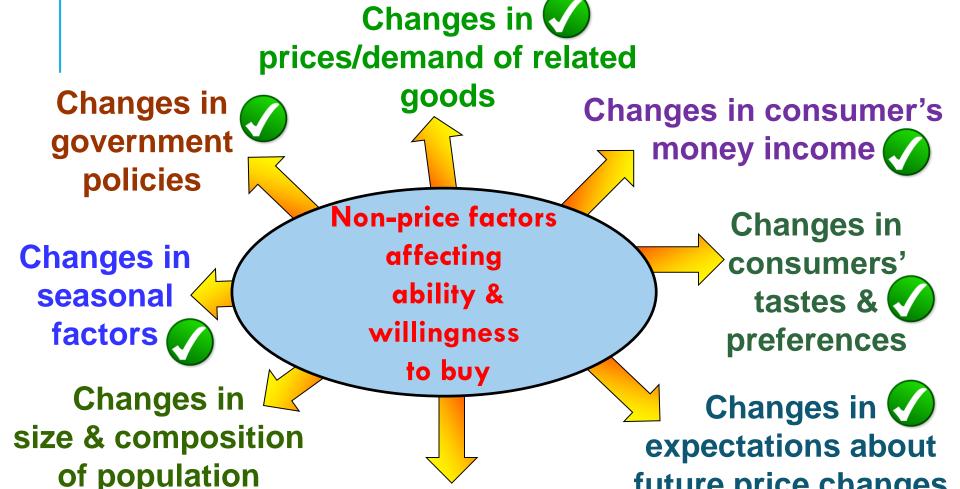
Availability of credit facilities & hire purchases

## **ACTIVITY**

The demand for goods and services such as winter clothing is influenced by seasonal climatic conditions.

For example: During winter, the demand for winter clothing (e.g. mink coats) increases, shifting the demand curve to the right.

## **NON-PRICE DEMAND FACTORS**

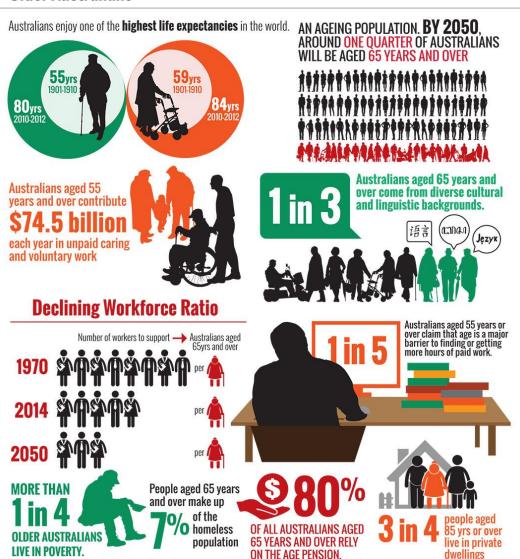


**Availability of credit** facilities & hire purchases

future price changes

#### **ACTIVITY: THINK-PAIR-SHARE**

#### **Older Australians**



# With an aging population ...

- which goods & services will face a rising demand?
- which goods & services will face a falling demand?



#### Rising demand for ...







## Falling demand for ...







# **NON-PRICE DEMAND FACTORS**

Changes in Prices/demand

Changes in of related goods

**Government policies** 

G

Changes in consumer's money income (Y)

Changes in seasonal factors

Y

Changes in consumers' Tastes & preferences

Changes in size & composition of population

T

Changes in Expectations about future price changes

**Availability of credit** facilities & hire purchases

# TUTORIAL QUESTION

Which of the following will most likely cause the demand curve for holiday packages to Germany to shift to the right?

- Removal of sales tax on hotel accommodation coupled with an increase in the wages of chambermaids in the German hotel industry
- b) An increase in fuel surcharge of German airlines
- A fall in the foreign exchange value of German Deutschmark
- d) Relaxation in the planning controls on hotel construction in Germany



# **EXCEPTIONAL DEMAND CURVE**



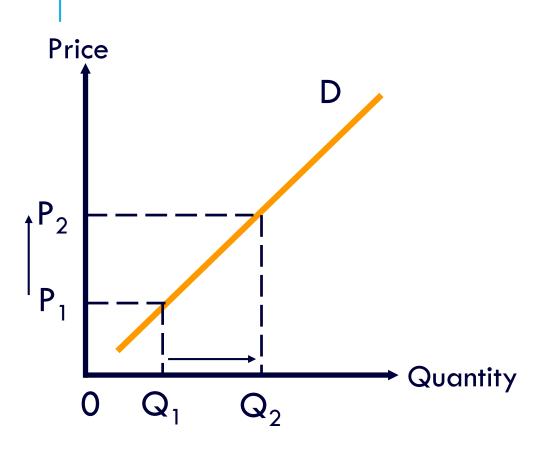
# **Exceptional Demand Curve**

- Upward sloping demand curve
- Such a good has 'snob appeal' known as ostentatious goods. It is not wanted for itself but to display one's wealth.
- E.g. exquisite jewellery, luxury cars, branded bags etc.



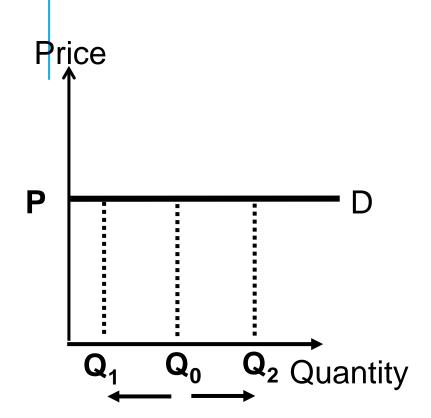


### UPWARD SLOPING DEMAND CURVE



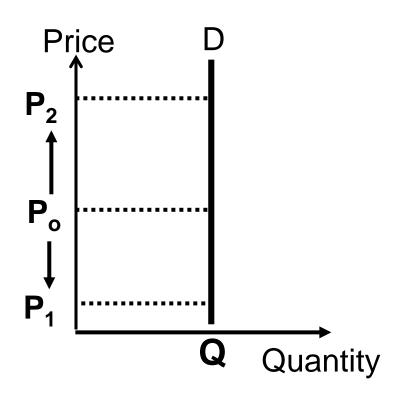
Occurs when price is used as a gauge of quality i.e. higher price is perceived to be of higher quality resulting in more being bought.

#### HORIZONTAL DEMAND CURVE

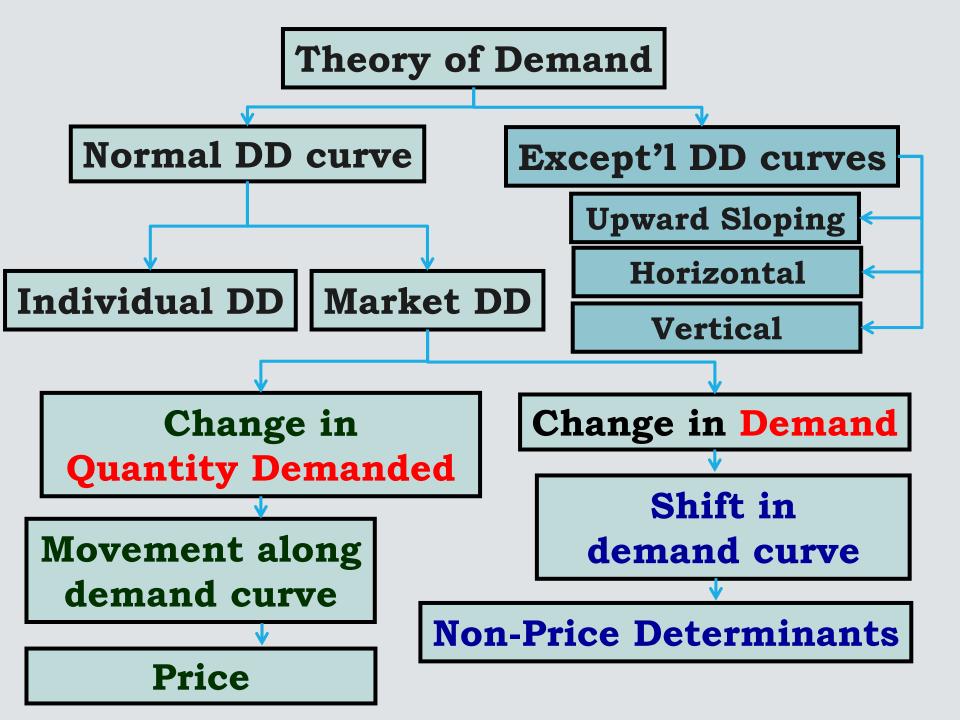


A change in price brings about an infinitely large change in quantity demanded.

#### **Vertical Demand Curve**



Whatever the price, the same quantity is demanded (fixed). Eg. necessities that lack substitutes



#### LESSON OBJECTIVES

- 1. Define demand ... willingness & ability...
- 2. Explain the law of demand ... inverse relationship between...
  - Explain the law of diminishing marginal utility
- 3. Differentiate between individual demand & market demand ... horizontal summation ...
- 4. Distinguish between change in quantity demanded & change in demand ... change in price vs change in non-price factor ...
- 5. Explain how various non-price factors affect demand
  - Distinguish between substitutes & complements
  - Distinguish between complements & goods in derived demand