

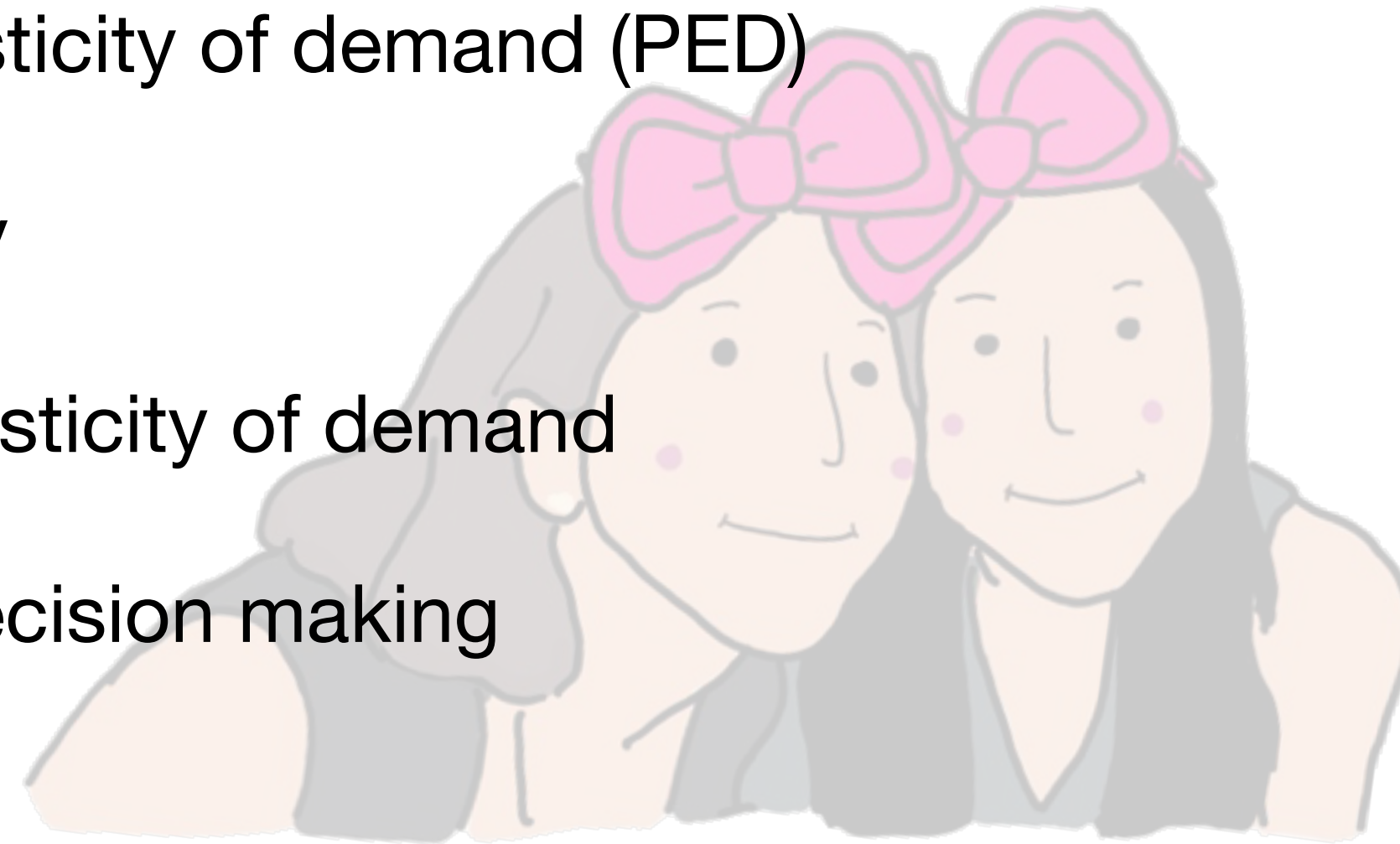


MICROECONOMICS - Price elasticity of demand

By Kru P'Eve and Kru P'Da Knockout.Economics

Overview

1. Definition and how to calculate price elasticity of demand (PED)
2. Interpretation of price elasticity of demand (PED)
3. Other degrees of elasticity
4. Factors affecting price elasticity of demand
5. Implications of PED for decision making

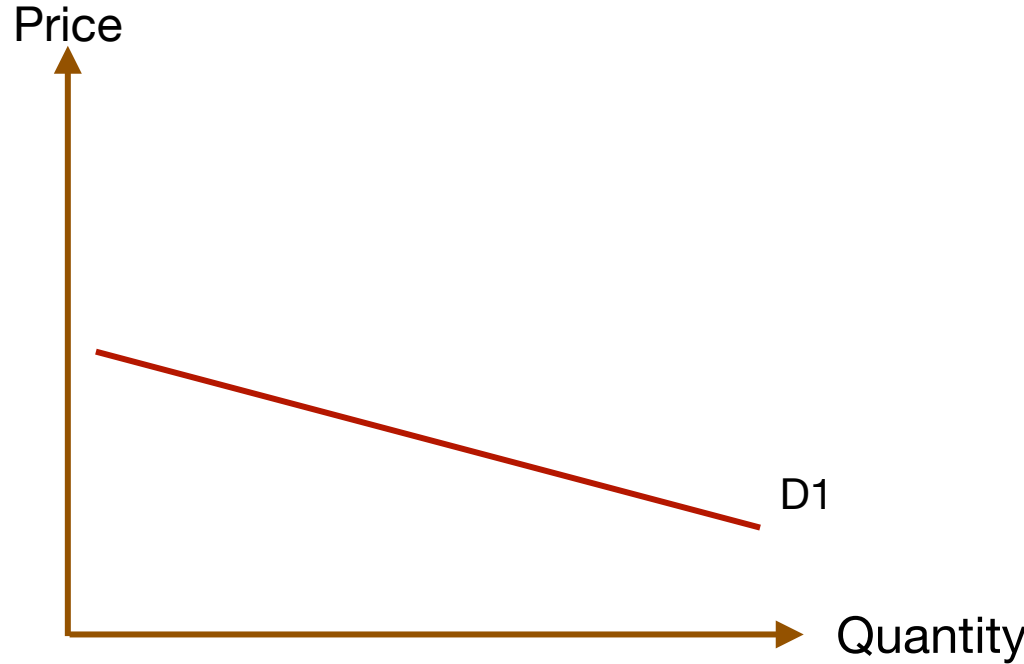
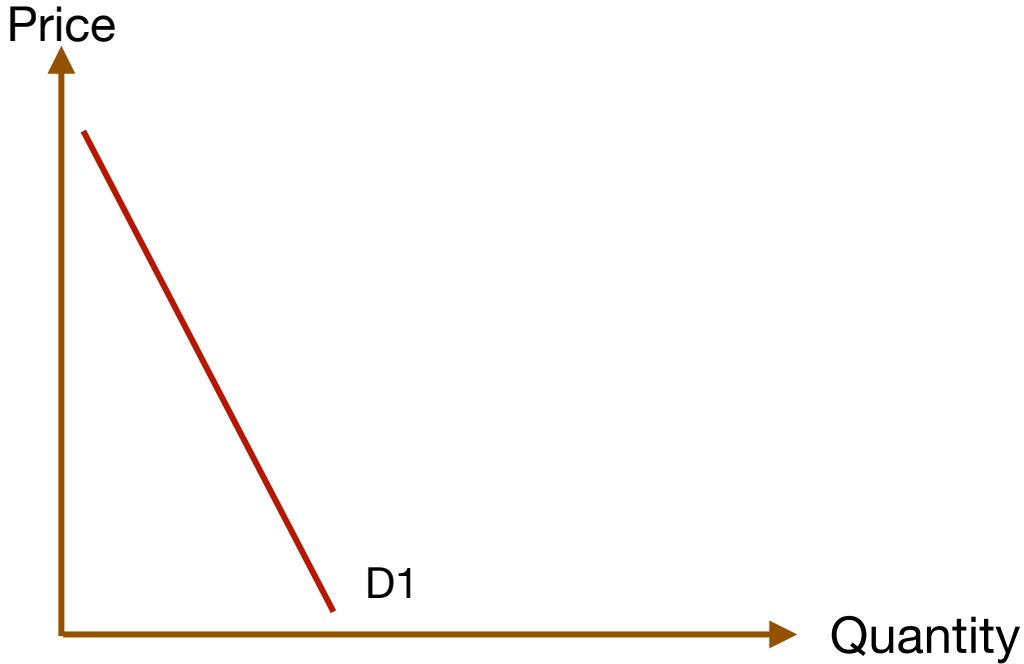


1. Definition and how to calculate price elasticity of demand (PED)

- **Price elasticity of demand (PED)** : measures the responsiveness of quantity demanded when a change in price.
- **Formula PED** :
$$\frac{\% \text{ change in quantity demanded}}{\% \text{ change in price}}$$

For example : The price of a products rises from 100 baht to 150 baht. This causes demand to contract from 500 units to 300 units. Calculate PED ?

2. Interpretation of price elasticity of demand (PED)

	Elastic	Inelastic
PED	$PED > 1$	$0 < PED < 1$
Meaning	When the quantity demanded changes by a larger percentage than the change in price	When the quantity demanded changes by a smaller percentage than the change in price
Calculation	Eg. P1 : 100 Baht P2 : 80 Baht Q1 : 10 unit Q2 : 25 units	Eg. P1 : 100 Baht P2 : 60 Baht Q1 : 10 unit Q2 : 12 units
Diagram	 <p>A graph with 'Price' on the vertical axis and 'Quantity' on the horizontal axis. A red line labeled 'D1' slopes downwards from left to right. The line is relatively flat, indicating high elasticity.</p>	 <p>A graph with 'Price' on the vertical axis and 'Quantity' on the horizontal axis. A red line labeled 'D1' slopes downwards from left to right. The line is very steep, indicating low elasticity.</p>

3. Other degrees of elasticity

	Perfectly elastic demand	Perfectly inelastic demand	Unitary
PED	$PED = \infty$	$PED = 0$	$PED = 1$
Meaning	When a change in price causes a complete change in the quantity demanded	When a change in price causes no change in the quantity demanded	When a change in price causes an equal change in the quantity demanded
Diagram			

4. Factors affecting price elasticity of demand

- The value of PED for a good depends on many factors

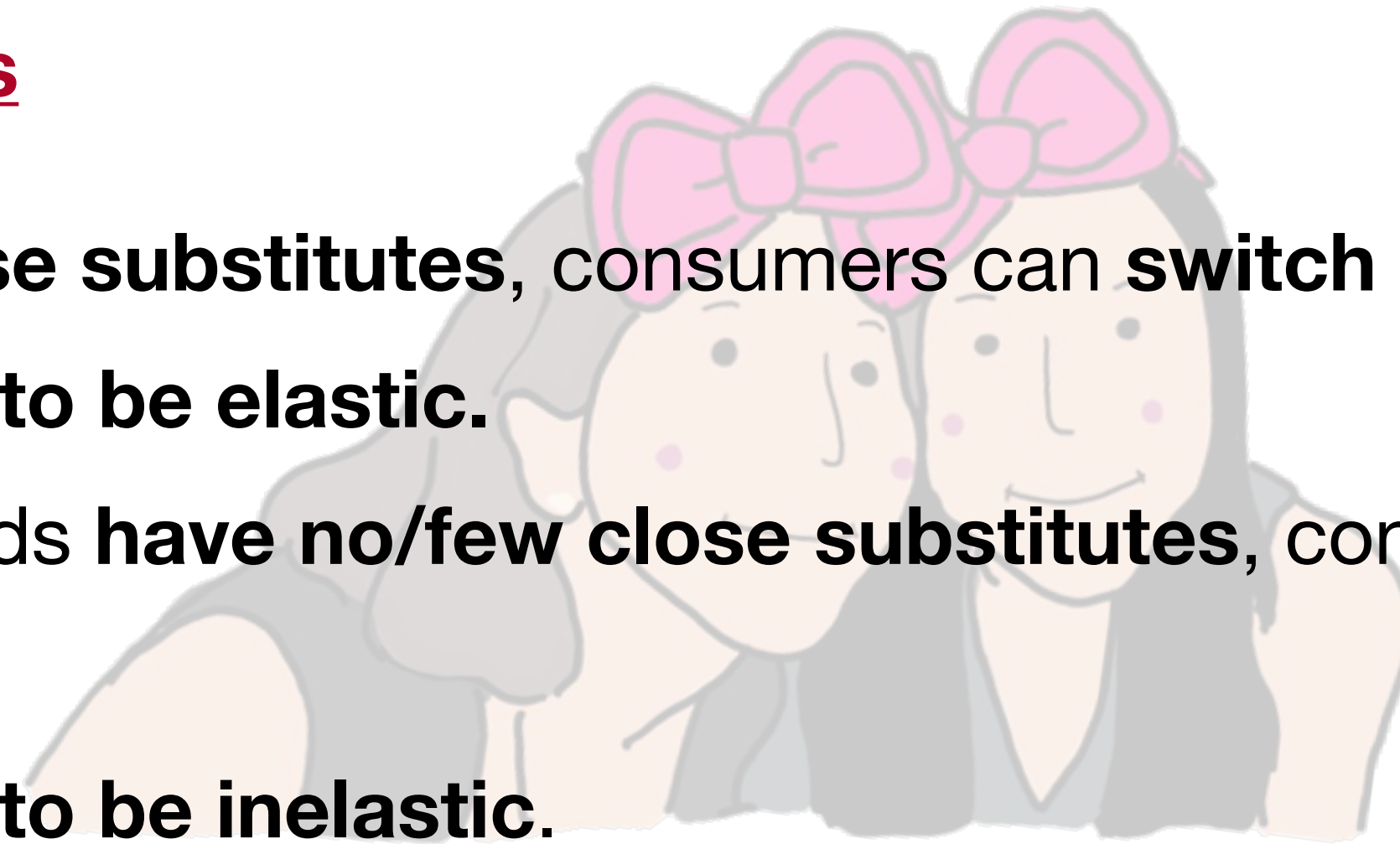
1. Availability of substitutes

: if goods have **lots of close substitutes**, consumers can **switch easily from one good to another**.

: As a result, **PED is likely to be elastic**.

: On the other hand, if goods **have no/few close substitutes**, consumers can be **difficult to switch from one good to another**

: As a result, **PED is likely to be inelastic**.



4. Factors affecting price elasticity of demand

- The value of PED for a good depends on many factors

2. Degree of necessity

- : Goods which are **essential** by consumers are likely to be **inelastic demand**.
- : Goods which are **not essential** by consumers are likely to be **elastic demand**.

3. Proportion of income spent on a product

- : If consumers **spend a large proportion of** income on a product, **demand will be elastic**.
- : If consumers **spend a small proportion of** income on a product, **demand will be inelastic**.

4. Factors affecting price elasticity of demand

- The value of PED for a good depends on many factors

4. Time

: In the short term, Consumers are **unable to find alternative goods**. Therefore, **goods are likely to be inelastic demand**.

: In the long term, Consumers can **search for alternatives goods**. Therefore, **goods are likely to be elastic demand**



5. Implications of PED for decision making

- When there is a **price change**, there will be a **change in the quantity demanded** and as a consequence a **change in total revenue**.

Price elasticity	Value of elasticity	Price change	Effect on Quantity	Total revenue
Elastic	$PED > 1$	P ↓ 10%	Q ↑↑ more than 10%	
Elastic	$PED > 1$	P ↑ 10%	Q ↓↓ more than 10%	
Inelastic	$0 < PED < 1$	P ↓↓ 10%	Q ↑ less than 10%	
Inelastic	$0 < PED < 1$	P ↑↑ 10%	Q ↓ less than 10%	
Unitary	$PED = 1$	P ↓ 10%	Q ↑ 10%	
Unitary	$PED = 1$	P ↑ 10%	Q ↓ 10%	

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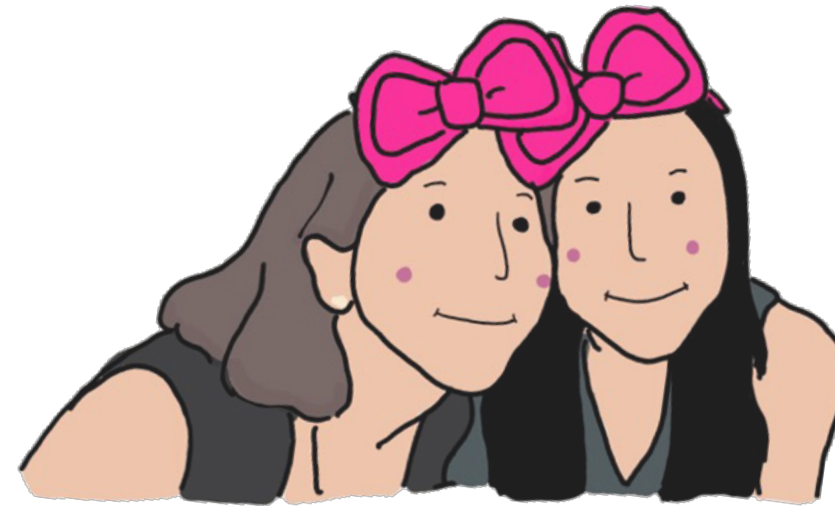
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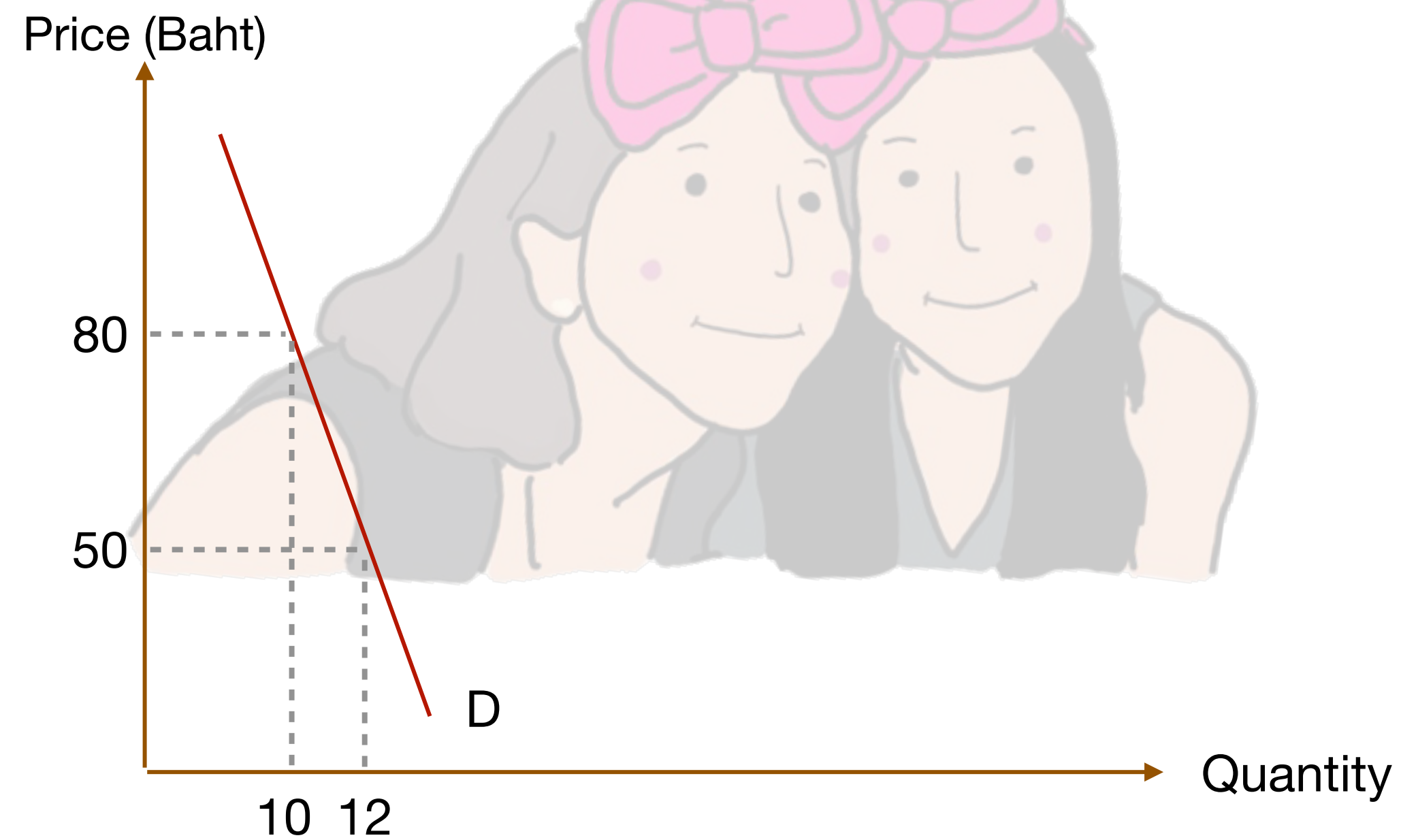


MICROECONOMICS - Exercise - Price elasticity of demand

By Kru P'Eve and Kru P'Da Knockout.Economics

Exercise: MCQ

1. The diagram represents the demand curve for a product. What is the price elasticity of demand when the price decreases from 80 baht to 50 baht ?



A. 1.7

B. 1.2

C. 0.53

D. 0.8

Exercise: MCQ

2. BTS sky train increases ticket price by 10 % for travel between 5.30-9.00, causing a decrease in demand by 5%. However, after 9.00 it reduces ticket prices by 5%, resulting in a 12% increase in demand. What is the price elasticity of demand in response to these price changes?

	Between 5.30 and 9.00	After 9.00
A	Inelastic	Elastic
B	Inelastic	Inelastic
C	Elastic	Inelastic
D	Elastic	Elastic

Exercise: MCQ

3. A recent study has found that the price elasticity of demand for alcohol in the UK is -0.8 . What can be concluded from this information?

- A. A rise in the price of alcohol would lead to a fall in consumer expenditure on alcohol
- B. A fall in the price of alcohol would lead to a fall in the revenue of alcohol producers.
- C. A 8% increase in the price of alcohol would reduce the quantity demanded by 10%.
- D. A 10% increase in the cost of producing alcohol would lead to a 8% fall in the quantity supplied.

Exercise: Essay

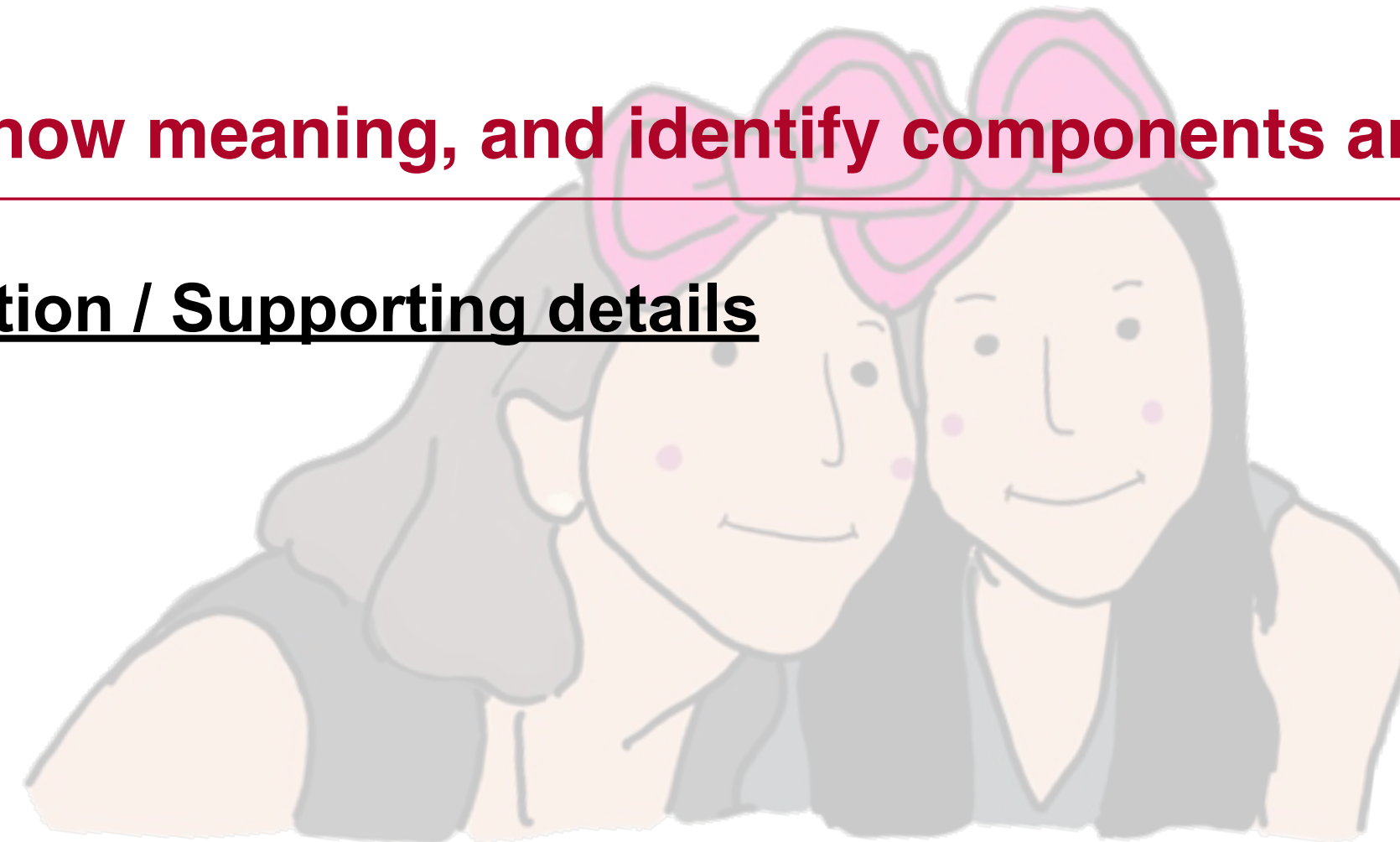
1. Analyse why demand for goods may become more elastic over time. [6]

Command Word:

Analyse: examine in detail to show meaning, and identify components and the relationship between them

Knockout Tips: Issues + Explanation / Supporting details

- Number of substitute goods
- Degree of necessity
- Proportion of income spent on a product



Exercise: Essay

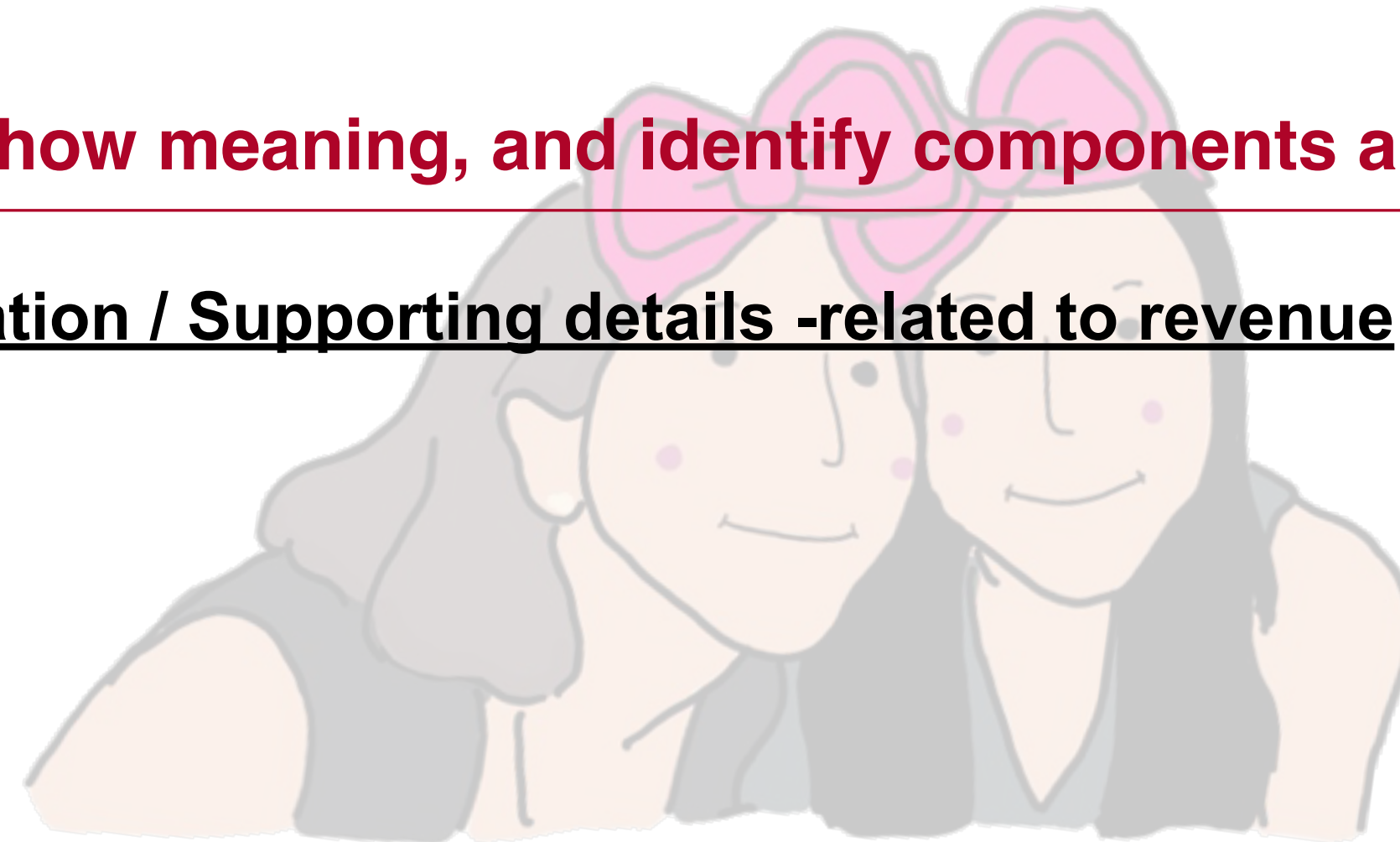
2. Analyse how might knowledge of price elasticity be of use to a producer? [6]

Command Word:

Analyse: examine in detail to show meaning, and identify components and the relationship between them

Knockout Tips: Issues + Explanation / Supporting details -related to revenue

- Meaning PED
- Pricing strategies



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