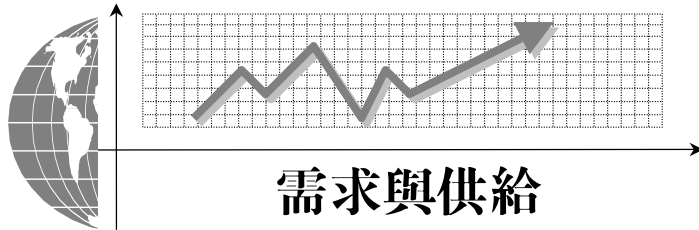


主題二



需求與供給



題型2-1 需求量的變動與需求法則

【重點指引】

1. 需求量：指在假設其他條件不變下，對應某特定價格下消費者所願意且能夠購買的商品數量。
2. 需求量的變動：在假設其他條件不變下，因商品本身價格發生變動，導致需求量在需求線上發生點的移動（movement）。
3. 需求法則：需求法則指在假設其他條件不變下，商品價格上漲會使需求量減少的關係。故需求法則是需求線上點的移動，屬於需求量的變動。

1. The factor(s) which cause(s) a movement along the demand curve include(s):

- (A) decrease in price of the good demanded. (B) decrease in price of complementary goods. (C) increase in consumer disposable income (D) increase in level of advertising. (E) All of the above. 【110中正財金】

➡(A)；

商品價格的變動會引起需求線上點的移動（movement）。

2. In order to identify a consumer's demand curve from an optimal choice diagram we

- (A) change the price of one good, holding income and the price of the

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other good constant, and identify the baskets the consumer chooses with each price level. (B)change the consumer's income, holding the prices of both goods constant, and identify the baskets the consumer chooses with each income level. (C)change the price's of both goods, holding income constant, and identify the baskets the consumer chooses with each price level. (D)change the price of one good and then change the income level so that the consumer achieves the same level of utility as before the price change and then identify the optimal consumption baskets at each price level. 【100中山財管】

►(A)；

需求曲線指假設其他條件（包括偏好、所得、其他商品價格與預期因素）不變下，描述消費者在各種價格下所願意且能夠購買之數量的圖形關係。

3. Which of the following factor does not shift the demand curve?

- (A) Consumer income. (B) Prices of other goods and service.
(C)Consumer tastes. (D)Consumer expectations. (E)None of the above.

【104清大計財】

►(E)；

(A)(B)(C)(D)皆會引起需求線的移動。

在供需分析中，該商品的價格與數量屬於內生變數，其餘皆屬於外生變數，外生變數改變將使需求線發生整條線的移動。

4. Which of the following factors would not cause the demand curve for a given product to shift?

- (A) Changes in price. (B) Changes in income. (C) Changes in the distribution of income. (D)Changes in the price of a related good.

【101成大財金】

►(A)；

商品本身價格的變動，會使需求量發生變動（movement），而非需求的變動（shift）。而(B)、(C)、(D)皆屬於影響需求的其他條件，會引起需求的變動（shift）。

5. Which of the following is least likely to cause a change in the demand for labor?

(A)An increase in the wage rate. (B)Other factor prices. (C)Price of the firm's output. (D)Technology. 【100成大財金】

►(A)；

工資提高，會引起勞動需求量的變動（movement）而非勞動需求線的移動（shift）。而(B)(C)(D)皆會引起勞動需求線的移動。

6. When we move along a given demand curve,

(A)only price is held constant. (B)income and price are held constant. (C)all nonprice determinants of demand are held constant. (D)all determinants of quantity demanded are held constant. 【112暨南財金】

►(C)；

一條特定的需求線，是假設除本身價格以外之所有其他因素皆維持固定下，描述在面對各種本身價格下，消費者願意且能夠購買之數量間的關係。

題型2-2

需求的變動

【重點指引】

需求的變動：由於其他條件改變，導致整條需求曲線（ D_x ）發生整條線的移動（shift）。

1. 偏好：偏好提高，使 D_x 右上移。

2. 所得（ M ）：

(1) 當 X 為正常財（ $\frac{\Delta q_x^d}{\Delta M} > 0$ ）： $M \uparrow$ 使 D_x 右上移。

(2) 當 X 為劣等財（ $\frac{\Delta q_x^d}{\Delta M} < 0$ ）： $M \uparrow$ 使 D_x 左下移。

3. 其他商品價格（ P_y ）：

(1) 當 X 與 Y 為替代品（ $\frac{\Delta q_x^d}{\Delta P_y} > 0$ ）： $P_y \uparrow$ 使 D_x 右上移。

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(2)當X與Y為互補品 ($\frac{\Delta q_x^d}{\Delta P_y} < 0$) : $P_y \uparrow$ 使 D_x 左下移。

4. 預期因素 : $P_x^e \uparrow$ 使 D_x 右上移。

【名詞釋義】

劣等財 (Inferior goods) : 假設其他條件不變下，當消費者所得增加時，會使商品購買量減少的商品，因此劣等財的所得彈性必為負且其 Engel curve 為負斜率。

1. The relationship between prices of Good X and the quantity demanded of four products, A-D, is shown below.

Price of X	Quantity Demanded			
	Good A	Good B	Good C	Good D
\$20	24	30	42	120
\$24	22	35	42	126

Which of the following statements is true about the relationship between Good X and Goods A-D?

(A) A is complementary, B and D are substitutes, C is unrelated. (B) A is a substitute, B and D are complementary, C is unrelated. (C) A is an inferior good, B and D are normal goods, and C is unrelated. (D) There is no relationship between Good X and any of the other goods.

【113 中山財管】

►(A) ;

假設X商品符合需求法則，價格上升時會少買，從表格中觀察到A商品隨之少買，A商品為X之互補品，B、D兩種商品增加購買，為X商品之替代品，C商品則完全不受影響，為X之獨立品。

2. If an increase in income decreases the demand for a good, then the good is

(A) a substitute good. (B) a complementary good. (C) a normal good. (D) an inferior good.

【112 暨南財金】

►(D) ;

$\frac{\partial q^d}{\partial M} < 0$ 則商品為劣等財。

3. The price of good A goes up. As a result, the demand for good B shifts to the left. From this we can infer that:

(A) good A is used to produce good B. (B) good B is used to produce good A. (C) goods A and B are substitutes. (D) goods A and B are complements. 【109暨南財金】

►(D)；

$\frac{\partial Q_B^d}{\partial P_A^d} < 0$ ，表示 A 與 B 為互補品。

4. What the following statements is (are) not correct?

Consumers eat pizzas with cokes. When the price of pizza rises, it decreases the demand for cokes. 【111中央企管】

►對；

當Pizza和Coke為互補品時，Pizza價格上漲會使Coke的需求減少。

5. If cigarettes and marijuana had been found to be substitutes, a tax placed on cigarettes would

(A) decrease the demand for marijuana. (B) increase the demand for marijuana. (C) decrease the quantity demanded of marijuana. (D) increase the quantity demanded of marijuana. 【成大財金】

►(B)；

當香菸因課稅而價格上漲時，會使人們對香菸的替代品——marijuana（大麻）的需求增加。

6. My income rose and the price of good Y rose also. That means that my demand curve for good X shifted right.

(A) This statement is always true. (B) This statement will always be true if good Y is a substitute for good X. (C) This statement will always be true if good X is a normal good. (D) This statement will always be true if good Y is a substitute for X and X is a normal good. 【成大財金】

►(D)；

在 X 與 Y 為替代品且 X 財為正常財下，當 $P_Y \uparrow$ 且 $M \uparrow$ 時，二者皆會使 X

財的需求線往右移。

7. Which of the following statements represents a correct and sequentially accurate economic explanation?

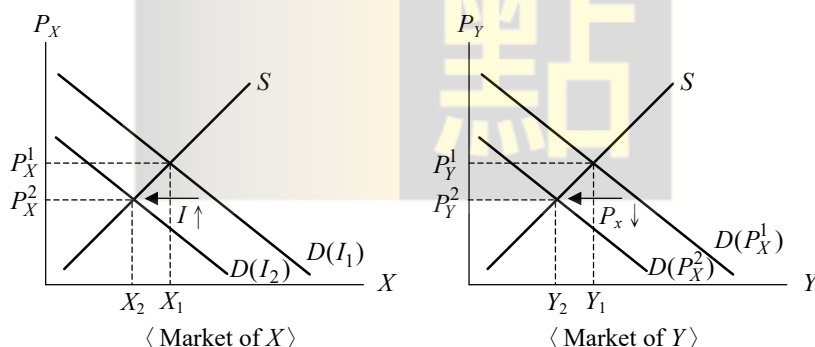
- (A) X is an inferior good and Y is a substitute for X . Income rises, the demand for X falls, the price of X falls, and the demand for Y rises. (B) X is an inferior good and Y is a substitute for X . Income rises, the demand for X falls, the price of X falls, and the demand for Y falls. (C) X is an inferior good and Y is a substitute for X . Income falls, the demand for X rises, the price of X rises, and the demand for Y falls. (D) X is an inferior good and Y is a substitute for X . Income rises, the quantity demanded of X rises, the price of X rises, and the demand for Y falls. (E) None of the above.

【台大財金】

►(B)；

依題目給定條件進行分析：① X 為一劣等財；② Y 為 X 的替代品。

(一)所得上升時：所得上升會造成消費者對 X 財需求下降（因其為劣等財）導致均衡價格將下降；而消費者對 Y 的需求則將因 X 價格下降而減少（因其為替代品），如下圖示之：



(二)所得下降時：與(一)狀況相反，此時消費者對 X 需求上升，其均衡價格上升，消費者對 Y 的需求也將上升。

8. Consider the demand curve $Q^d = 100 - 5P - 7S$. If the value of S falls, the demand curve will

- (A) shift to the right. (B) shift to the left. (C) remain unchanged. (D) rotate

along the quantity axis.

【成大財金】

➡(A)；

$\frac{\partial Q^d}{\partial S} = -7 < 0$ ，表示S減少時會使需求曲線往右移動。

9. Suppose you like banana cream pie made with vanilla pudding. Assuming all other things are constant, you notice that the price of bananas is higher. How would your demand for vanilla pudding be affected by this?

- (A) It would decrease. (B) It would increase. (C) It would be unaffected.
(D) There is insufficient information given to answer the question.

【110政大商學】

➡(A)；

由於香草布丁與香蕉是製造香蕉奶油派的互補要素。當香蕉價格上漲時會連帶使人們對香草布丁的需求減少。

題型2-3 市場需求

【重點指引】

1. 私有財的市場需求： $Q^d = \sum_{i=1}^n q_i^d$ （水平加總）。
2. 公共財的市場需求： $P^d = \sum_{i=1}^n P_i^d$ （垂直加總）。

1. The market demand curve

(A) shows how quantity demanded changes when the number of sellers changes. (B) represents the sum of the prices that all the buyers are willing to pay for a given quantity of the good. (C) is found by vertically adding the individual demand curves. (D) represents the sum of the quantities demanded by all the buyers at each price of the good.

【112暨南財金】

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►(D)；

$$Q^d = \sum_{i=1}^n q_i^d(P)$$

市場需求為個別需求的水平加總。

2. Which of the following would shift the demand curve for new textbooks to the right?

- (A) A fall in the price of paper used in publishing texts. (B) A fall in the price of equivalent used textbooks. (C) An increase in the number of students attending college. (D) A fall in the price of new textbooks.

【105政大商學】

►(C)；

- (A) 生產要素價格下降將使供給線向右上移。
 (B) 替代品（二手書）價格下降，將使消費者對new textbook之需求減少，需求線向左下移。
 (C) 上大學人數增加，消費者人數將增加，將使得需求線向右上移。
 (D) 商品本身價格下降，將造成需求量之增加（需求線上點的移動）。

3. 某市場中有A、B兩類消費者：

A類消費者共有600位，每一位A類消費者的個人需求曲線為：

$$P = 8 - q$$

B類消費者共有400位，每一位B類消費者的個人需求曲線為：

$$P = 6 - 0.5q$$

其中 P 為價格， q 為個人消費數量。試求出某市場之市場需求曲線，並將此市場需求曲線以圖形表示。

【台大財金】

►市場需求為個別需求的水平加總：

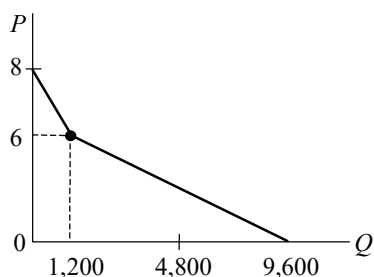
$$\because q_i = 8 - P \quad i = 1, \dots, 600$$

$$q_j = 12 - 2P \quad j = 1, \dots, 400$$

$$Q_i = \sum_{i=1}^{600} (8 - P) = 4,800 - 600P$$

$$Q_j = \sum_{j=1}^{400} (12 - 2P) = 4,800 - 800P$$

當 $Q_i = 0$ 時， $P = 8$



當 $Q_j = 0$ 時， $P = 6$

故市場需求曲線為如上圖以 $P = 6$ 為折拗點之需求線：

$$Q = \begin{cases} 4,800 - 600P & P > 6 \\ 9,600 - 1,400P & P \leq 6 \end{cases}$$

4. 物品X的市場上有3位消費者A、B和C，其對X的需求曲線分別為 $P = 100 - 2q$ ， $P = 150 - 3q$ 和 $P = 120 - 4q$ ， q 表示需求量，則X的市場需求曲線為_____。【113中央財金】

► $q_A = 50 - \frac{1}{2}P$ 當 $q_A = 0$ 時， $P = 100$

$q_B = 50 - \frac{1}{3}P$ 當 $q_B = 0$ 時， $P = 150$

$q_C = 30 - \frac{1}{4}P$ 當 $q_C = 0$ 時， $P = 120$

故市場需求為：

$$Q = \begin{cases} 130 - \frac{13}{12}P, & P \leq 100 \\ 80 - \frac{7}{12}P, & 100 < P \leq 120 \\ 50 - \frac{1}{3}P, & 120 < P \leq 150 \end{cases}$$

5. Mary, Eric, and Kurt are all buyers of apples, Mary's demand function is $Q_m = 520 - 13P$, Eric's demand function is $Q_e = 40 - P$, Kurt's demand function is $Q_k = 200 - 5P$. Together, these three constitute the entire demand for apples. At what price will the price elasticity of market demand be -1 ?

(A)\$19. (B)\$20. (C)\$25. (D)\$15. (E)None of the above. 【110高雄金管】

►(B)；

市場之總需求為個別需求之加總： $Q^d = \sum_{i=1}^n q_i = Q_m + Q_k + Q_e$

$\Rightarrow Q^d = 760 - 19P$

此時若欲使 $E_{xx} = -1 \Rightarrow \frac{\partial Q^d}{\partial P} \cdot \frac{P}{Q^d} = \frac{-19P}{760 - 19P} = -1$

由上式可求得 $P = 20$, $Q = 380$

題型2-4 需求函數之設定與估計

1. The demand function for X is $P_x = 10 - Q_x + 0.5P_y + 0.8I$, where P_x is the price of X , Q_x is the quantity of X , P_y is the price of Y , and I is income. Which of the following statements is true?

(A) X is an inferior good. X and Y are complements. (B) X is a normal good. X and Y are complements. (C) X is an inferior good. X and Y are substitutes. (D) X is a normal good. X and Y are substitutes. 【113中正財金】

►(D) ;

需求函數可表達為 $Q_x = 10 - P_x + 0.5P_y + 0.8I$, 其中 : $\frac{\partial Q_x}{\partial I} = 0.8 > 0$, 表

示 X 商品為正常財 ; $\frac{\partial Q_x}{\partial P_y} = 0.5 > 0$, 表示 X 商品為 Y 商品的替代品。

2. 假設某甲只消費 X 、 Y 、 Z 三種財貨，且其所得 M 完全用於消費。已知某甲對 Z 的需求函數為：

$$Q_Z^D = 250 - 0.05M + 0.2P_X - 3P_Y - 2P_Z$$

其中， P_X 、 P_Y 、 P_Z 分別是 X 、 Y 、 Z 三種財貨的價格。下列何者為真？

(A) Z 與 X 為互補物品 (B) Z 為劣等物品，但不是季芬物品 (C) X 與 Y 有可能同為劣等物品 (D) 若 X 為季芬物品，則 Y 必為正常物品。 【台大商學】

►(B)(D) ;

$$Q_Z^D = 250 - 0.05M + 0.2P_X - 3P_Y - 2P_Z$$

(A) $\frac{\partial Q_Z^D}{\partial P_X} = 0.2 > 0$, 表示 Z 與 X 為替代品。

(B) $\frac{\partial Q_Z^D}{\partial M} = -0.05 < 0$, 表示 Z 為劣等品。

$\frac{\partial Q_Z^D}{\partial P_Z} = -2 < 0$, 表示 Z 財滿足需求法則，故 Z 不是 Giffen goods。