**Chapter- 4:**

**Consumption & Saving (استهلاك و إنقاذ)**

The concept of consumption function plays an important role in Keynes’ theory of income and employment. According to Keynes, of all the factors it is the current level of income that determines the consumption of an individual and also of society.

**Consumption Function (**استهلاك وظيفة**):** the relationship between various level of disposable income and consumption expenditure.

C = f(Yd) = a + bYd

Where, C = Consumption;

 Yd = Level of Income;

 a = Intercept or Autonomous consumption (does not dependent on income);

 b = Slope of consumption curve (or, MPC or proportion of disposable income which is consumed); and

 f = function (that is, depends on)

**Consumption Curve (**منحنى استهلاك**):** the curve which shows the relationship between consumption expenditure and income is called consumption curve.

**Propensity to consume (**الميل للاستهلاك**):** Ratio between consumption expenditure and aggregate income.

**Average propensity to consume (APC) (**متوسط الميل للاستهلاك**):** Ratio between total consumption expenditure and aggregate income (C/Y).

***Example:*** *Suppose the level of income of Saudi economy is SR 50,000 million and consumption is SR 40,000 million. What is the average propensity to consume for the Saudi economy?* (**Hint:** *Average Propensity to Consume (APC) =*$\frac{C}{ Y}$)

**Solution:** The level of income, Y = SR 50,000 million

 Consumption, C = SR 40,000 million

Hence, average propensity to consume (APC) = C/Y = 40,000/50,000 = 0.8 = 80 %

**Marginal propensity to consume (MPC) (**الميل الحدي للاستهلاك**):** Ratio between addition to total consumption expenditure and addition to total income (∆C/∆Y). It varies between zero and one.

**Example:** *Suppose the income increases from SR 50,000 million to SR 60,000 million and as a result consumption increases from SR 40,000 to SR 47,000 million in Saudi economy. What is the marginal propensity to consume for the Saudi economy?*

**Solution:** The formula for marginal propensity to consume (MPC) = ∆C/∆Y

 Where ∆C = SR 47,000 – SR 40,000 = SR 7000 million

 ∆Y = SR 60,000 – SR 50,000 = SR 10,000 million

Hence,

The marginal propensity to consume (MPC) for the Saudi economy = ∆C/∆Y = 7000/10000 = 0.7 = 70 %.

**Algebraic and Diagrammatic Explanation of Consumption Function:**

C = f(Y)

C = a + bY

Where; C is consumption expenditure;

*a* is consumption (autonomous consumption) at zero level of income and it remains constant;

*b* is marginal propensity to consume (∆C/∆Y) or slope of consumption function; and

Y is level of income.

|  |  |
| --- | --- |
| http://www.economicsdiscussion.net/wp-content/uploads/2014/02/clip_image00218.jpg | https://encrypted-tbn2.gstatic.com/images?q=tbn:ANd9GcQyvB0eZ9quWW2bJr5jGhwmHsLtdyTgXI4ZiPopkgNa3HQjzwT9 |

**Example:** *Suppose the value of autonomous consumption (a) is SR 40 million and marginal propensity to consume (b) is 0.6, then how can you estimate consumption at different levels of income (0, 100, 200, 300, 400, 500, and so on)?*

Solution: Since, Consumption Function is, C = a + bY

 If Y = 0, then C = a + bY

 = 40 + 0.6× 0

 = 0

If Y = 100, then C = a + bY

 = 40 + 0.6× 100

 = 100

If Y = 200, then C = a + bY

 = 40 + 0.6× 200

 = 160

In the same way, we can calculate other values of consumption as shown in the following table:

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Consumption Schedule** (C = a + bY; where a= 40; and b = 0.6)

|  |  |
| --- | --- |
| **Income (Y)** | **Consumption (C = a + bY)** |
| 0 | 40 |
| 100 | 100 |
| 200 | 160 |
| 300 | 220 |
| 400 | 280 |
| 500 | 340 |

 |  |

The above table shows that aggregate consumption varies directly but not proportionately with the level of income.

Increase in consumption as a result of an increase in income is determined by propensity to consume (b).

**Theory of Consumption (نظرية الاستهلاك)**

**There are following theories of consumption:**

1. The Absolute Income Theory of Consumption or Psychological law of consumption (*Keynesian Theory of Consumption*), and
2. The Post- Keynesian Theory of Consumption:---
3. Relative income theory of consumption (*J. S. Duesenberry*);
4. Life cycle theory of consumption (*Ando A. Modigliani*);
5. Permanent income theory of consumption (*Friedman*)

**Absolute Income Theory of Consumption:**

Prof. Keynes laid stress on the absolute size of income as a determinant of consumption and his theory is known as absolute income theory of consumption. He gave a *psychological law of consumption* which state that *as income increases consumption increases but not by as much as the increase in income.*



In this theory of consumption, Keynes makes three points:

1. He suggests that consumption expenditure depends mainly on absolute income of the current period;
2. Consumption expenditure does not have a proportional relationship with income; and
3. Since the APC falls as income increases, the MPC is less than the APC (MPC < APC).

**Determinants/ factors affecting propensity to consume or save:**

Prof. Keynes divided the factors determining the propensity to consume or the consumption function into two groups: subjective factors and objective factors.

**Subjective factors:** unforeseen contingencies, such as illness, unemployment, accidents, etc, some future needs such as education, marriages, save more for accumulate wealth, etc.

**Objective factors:** changes in general price level, rate of interest, stock of wealth, fiscal policy, credit conditions, income distribution, windfall gains and losses, change in expectations.

**Consumption Function Puzzle: Keynes’ Consumption Function and Kuznets Findings:**

Kuznets’ consumption function contradicts Keynes’ consumption function which is known as *consumption function puzzle*.

Keynes’ consumption function can be algebraically written as:

**C = a + bY**

Where ***a*** is a positive intercept, known as autonomous consumption as it does not vary with income and ***b*** is marginal propensity to consume (∆C/∆Y) which falls as income increases.

|  |  |
| --- | --- |
| **Keynes Consumption Function****https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcRRytJz92xSrBOEFi8Ty5zeyhQUuPJu1Cp7H6xjwHI1X9FsEbEn4Q** | **Kuznets Consumption Function**http://www.yourarticlelibrary.com/wp-content/uploads/2014/04/clip_image01718.jpg |

On the other hand, Kuznets found that consumption function is of the form:

**C = bY**

In Kuznets consumption function there is no intercept term (i.e., no autonomous consumption). Kuznets consumption function starts from the origin and is very near to 45° line showing that the propensity to consume (*b*) is very high nearly 0.9.

So, we can see that implication of Keynes’ consumption function (**C = a + bY**) and Kuznets’ consumption function (**C = bY**) are different. Whereas in Keynes’ consumption function APC falls as income rises, in Kuznets’ consumption function it remains constant over a long period. Further, the value of MPC which is less than one is much higher in Kuznets function as compare to Keynes’ consumption function. Keynes’ consumption function is short- run consumption function whereas Kuznets’ function is a long- run consumption function.

**Relative Income Theory of Consumption:**

An American economist J. S. Duesenberry gave stress on relative income rather than absolute income as a determinant of consumption. According to this theory, consumption of an individual is not the function of his absolute income but of his relative position in the income distribution in a society that is, his consumption depends on his income relative to the incomes of other individuals in the society.

For example, if the incomes of all individuals in a society increase by the same percentage, then his relative income would remain the same, though his absolute income would have increased.

According to Duesenberry, because his relative income has remained the same the individual will spend the same proportion on consumption as he was doing before the absolute increase in his income. That is, his average propensity to consume (APC) will remain the same despite the increase in his absolute income.



Duesenberry’s relative income theory suggests that as income increases consumption function curve shifts above so that average propensity to consume remains constant. This is due to demonstration effect and ratchet effect.

**Life Cycle Theory of Consumption:**

This consumption theory has been given by Modigliani and Ando. According to life cycle theory, the consumption in any period is not the function of current income of the period but of the whole lifetime expected income.



**Permanent Income Theory of Consumption:**

This theory has been given by Milton Friedman. According to this theory, consumption is determined by long- term expected income rather than current level of income. It is this long- term expected income which is called by Friedman as permanent income on the basis of which people make their consumption plans.

**Saving:**

Saving is excess of income over consumption expenditure.

Symbolically,

**S = Y – C**

Where, S = Saving;

 Y = Income; and

 C = Consumption expenditure.

Like consumption, saving is also a function of income. In other words, saving depends on money income.

***Saving Function:*** the relationship between income and saving is called saving function.

**S = f(Y)**

Where, S = aggregate saving;

 Y = Level of Income; and

 f = function (that is, depends on)

Saving function explains the relationship between national income and aggregate savings.

Saving function can be written as follow;

**S = -a + (1-b)Y**

Where, S = Saving;

 -a = saving at zero level of income;

 b = marginal propensity to save (mps); and

Y = Level of Income.

**Example: suppose for the Saudi economy, the value of –a = 40, and b = 0.6. How can you estimate saving at different levels of income?**

Solution: Since, -a = 40, b = 0.6

If, Y = 0, then S = -a + (1-b)Y

 = -40 + (1- 0.6) ×0

 = -40 + 0 = -40

If, Y = 100, then S = -a + (1-b)Y

 = -40 + (1- 0.6) ×100

 = -40 + 0.4×100

 = -40 + 40 = 0

In the same way, we can calculate other values of saving at different levels of income as shown in the following table:

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |  |
| --- | --- |
| Income (Y) | Saving (S = -a + (1-b)Y) |
| 0 | -40 |
| 100 | 0 |
| 200 | 40 |
| 300 | 80 |
| 400 | 120 |
| 500 | 160 |

 |  |

***Propensity to save:*** Ratio between aggregate income and total saving.

***Average propensity to save (APS):*** Ratio between total saving and aggregate income (S/Y).

**Example:** *If at a particular time the level of income in Saudi economy is SR 50,000 million and the level of saving is SR 10,000 million (assuming consumption equal to SR 40,000 million at this level of income). What is the average propensity to save for the Saudi economy?*

**Solution:** Since, Average Propensity to Save (APS) = $\frac{Saving (S)}{Income (Y)}$

 Here, Income (Y) = SR 50,000 million, and

 Saving (S) = SR 10,000 million

 Hence,

 Average Propensity to Save (APS) = $\frac{Saving (S)}{Income (Y)}$ = $\frac{10,000}{50,000}$ = 0.2 = 20 %

***Marginal propensity to save (MPS):*** Ratio between addition to total saving and addition to total income (∆S/∆Y).

**Example:** *Suppose at the income level of SR 50,000 million, saving amounts to SR 11,000 million. An income at SR 60,000 million, saving increased to SR 14,000 million. What is the marginal propensity to save for the Saudi economy?*

**Solution:** Since, Marginal Propensity to Save (MPS) = $\frac{Additional Saving (∆S)}{Additional Income (∆Y)}$

 Here, Additional Income ($∆$Y) = SR 60,000 - SR 50,000 = SR 10,000 million, and

 Additional Saving ($∆$S) = SR 14,000 - SR 11,000 = SR 3,000 million

 Hence,

 Marginal Propensity to Save (MPS) = $\frac{∆S}{∆Y}$ = $\frac{3,000}{10,000}$ = 0.3 = 30 %

**Relationship between Propensity to Consume and Propensity to Save:**

Consumption and saving both are functions of money income.

**Relationship between Average Propensity to Consume (APC) and Average Propensity to Save (APS):**

The sum of average propensity to consume (APC) and average propensity to save (APS) is always equal to unity.

 In other words, APC + APS = 1. (Y = C + S, Dividing both side by Y, we get, APC + APS = 1)

It is so because the money income can either be spent on consumption or it can be saved.

**Relationship between Marginal Propensity to Consume (MPC) and Marginal Propensity to Save (MPS):**

The sum of marginal propensity to consume (MPC) and marginal propensity to save (MPS) is always equal to unity. In other words, MPC + MPS = 1.

We know that ∆Y = ∆C + ∆S,

Dividing both sides by ∆Y, we get,

$\frac{∆Y}{∆Y}$ = $\frac{∆C}{∆Y}$ + $\frac{∆S}{∆Y}$

1 = MPC + MPS

MPC + MPS = 1

**Example:** The relationship between propensity to consume and propensity to save is shown with the help of following table:-

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Y | C | APC = C/Y | MPC = $\frac{∆C}{∆Y}$ | S | APS= S/Y | MPS = $\frac{∆S}{∆Y}$ |
| 100 | 90 | 0.90 | ----- | 10 | 0.10 | ----- |
| 120 | 108 | 0.90 | 0.90 | 12 | 0.10 | 0.10 |
| 140 | 124 | 0.89 | 0.80 | 16 | 0.11 | 0.20 |
| 160 | 139 | 0.87 | 0.75 | 21 | 0.13 | 0.25 |
| 180 | 153 | 0.85 | 0.70 | 27 | 0.15 | 0.30 |
| 200 | 167 | 0.83 | 0.70 | 33 | 0.17 | 0.30 |

**Review Questions**

**I. Multiple Choice Questions with Answer:**

1. The French economist Jean-Baptiste Say transformed the equality of total output and total spending into a law that can be expressed as follows:

|  |  |
| --- | --- |
| a. | Unemployment is not possible in the short run. |
| b. | Demand and supply are never equal. |
| c. | Supply creates its own demand. |
| d. | Demand creates its own supply. |

2. The classical economists argued that the production of goods and services (supply) generates an equal amount of total income and, in turn, total spending. This theory is called:

|  |  |
| --- | --- |
| a. | Keynes' General Theory. |
| b. | Say's Law. |
| c. | The "animal spirits" theory. |
| d. | The law of autonomous consumption. |

3. Which of the following statements is true about Say's law?

|  |  |
| --- | --- |
| a. | It states that supply creates its own demand. |
| b. | It states that demand creates its own supply. |
| c. | It states that total output will always exceed total spending. |
| d. | It states that consumption spending is the most volatile component of aggregate expenditures. |
| e. | It is a major proposition of the Keynesian model. |

4. The school of thought that emphasizes the natural tendency for an economy to move toward equilibrium full employment without inflation is known as the:

|  |  |
| --- | --- |
| a. | Keynesian school. |
| b. | Supply- side school. |
| c. | Non-interventionist school. |
| d. | Rational expectations school. |
| e. | Classical school. |

5. According to Keynes, what is the most important determinant of households' spending on goods and services?

|  |  |
| --- | --- |
| a. | The price level. |
| b. | The interest rate. |
| c. | Autonomous consumption. |
| d. | Disposable income. |

6. The consumption function shows the relationship between consumer expenditures and:

|  |  |
| --- | --- |
| a. | The interest rate. |
| b. | The tax rate. |
| c. | Savings. |
| d. | Disposable income. |

7. The relationship between consumer expenditures and disposable income is the:

|  |  |
| --- | --- |
| a. | Savings function. |
| b. | The tax rate function. |
| c. | Disposable income function. |
| d. | Consumption function. |
|  |  |

8. Which of the following statements is true concerning the consumption function?

|  |  |
| --- | --- |
| a. | It slopes upward. |
| b. | Its slope equals the MPC. |
| c. | It represents the direct (positive) relationship between consumption spending and the level of real disposable income. |
| d. | If the consumption function lies above the 45-degree line then saving is positive. |
| e. | All of the above. |

9. The consumption function shows the relationship between consumption and:

|  |  |
| --- | --- |
| a. | Interest rates. |
| b. | Saving. |
| c. | Price level changes. |
| d. | Disposable income. |

10. At the point where the disposable income line intersects the consumption function, saving:

|  |  |
| --- | --- |
| a. | equals consumption. |
| b. | equals disposable income. |
| c. | is less than zero. |
| d. | is equal to zero. |

11. Autonomous consumption is consumption that:

|  |  |
| --- | --- |
| a. | varies directly with disposable income. |
| b. | varies inversely with disposable income. |
| c. | is independent of the level of disposable income. |
| d. | is constant at first and then varies with disposable income. |

12. Autonomous consumption is equal to the level of consumption associated with:

|  |  |
| --- | --- |
| a. | unstable disposable income. |
| b. | positive disposable income. |
| c. | zero disposable income. |
| d. | negative disposable income. |

13. Given the consumption function C = $100 billion + 0.75 ($300 billion), autonomous consumption is equal to:

|  |  |
| --- | --- |
| a. | $100 billion. |
| b. | $225 billion. |
| c. | $300 billion. |
| d. | $325 billion. |
| e. | $400 billion. |

14. That part of disposal income not spent on consumption is defined as:

|  |  |
| --- | --- |
| a. | transitory disposable income. |
| b. | permanent disposable income. |
| c. | disposal income. |
| d. | autonomous consumption. |
| e. | saving. |

15. If disposal income is $400 billion, autonomous consumption is $60 billion, and MPC is 0.8, what is the level of saving?

|  |  |
| --- | --- |
| a. | $20 billion. |
| b. | $210 billion. |
| c. | $380 billion. |
| d. | $590 billion. |
| e. | $780 billion. |

16. The marginal propensity to consume (MPC) is computed as the change in:

|  |  |
| --- | --- |
| a. | consumption divided by the change in savings. |
| b. | consumption divided by the change in disposable personal income. |
| c. | consumption divided by the change in GDP. |
| d. | None of the above. |

17. The marginal propensity to consume (MPC) is the slope of the:

|  |  |
| --- | --- |
| a. | GDP curve. |
| b. | disposable income curve. |
| c. | consumption function. |
| d. | autonomous consumption curve. |

18. The slope of the consumption function is called the:

|  |  |
| --- | --- |
| a. | autonomous consumption rate. |
| b. | marginal consumption rate. |
| c. | average propensity to consume. |
| d. | marginal propensity to consume. |

19. The change in consumption divided by a change in disposable income is defined as:

|  |  |
| --- | --- |
| a. | the marginal propensity to consume. |
| b. | autonomous consumption. |
| c. | the consumption function. |
| d. | Keynes' absolute disposable income hypothesis. |
| e. | transitory consumption. |

20. The marginal propensity to consume is:

|  |  |
| --- | --- |
| a. | the change in disposable income divided by the change in consumption. |
| b. | consumption spending divided by disposable income. |
| c. | disposable income divided by consumption spending. |
| d. | the change in consumption divided by the change in disposable income. |
| e. | the change in consumption divided by disposable income. |

21. The marginal propensity to consume measures the ratio of the:

|  |  |
| --- | --- |
| a. | average amount of our disposable income that we spend. |
| b. | average amount of our savings that we spend. |
| c. | change in consumer spending to a change in money holdings. |
| d. | change in consumer spending to a change in interest rates. |
| e. | change in consumer spending to a change in disposable income. |
|  |  |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 22. The marginal propensity to save (MPS) is computed as the change in:

|  |  |
| --- | --- |
| a. | savings divided by the change in saving. |
| b. | savings divided by the change in disposable personal income. |
| c. | saving divided by the change in GDP. |
| d. | None of the above. |
|  |  |

  |
| 23. If your disposable personal income increases from $30,000 to $40,000 and your savings increases from $2,000 to $4,000, your marginal propensity to save (MPS) is:

|  |  |
| --- | --- |
| a. | 0.2. |
| b. | 0.4. |
| c. | 0.5. |
| d. | 0.8. |
| e. | 1.0. |
|  |  |

  |
| 24. The marginal propensity to save is:

|  |  |
| --- | --- |
| a. | the change in saving induced by a change in consumption. |
| b. | (change in S) / (change in Y). |
| c. | 1 - MPC / MPC. |
| d. | (change in Y - bY) / (change in Y). |
| e. | 1 - MPC. |
|  |  |

  |
| 25. If the marginal propensity to consume = 0.75, then:

|  |  |
| --- | --- |
| a. | the marginal propensity to save = 0.75. |
| b. | the marginal propensity to save = 1.33. |
| c. | the marginal propensity to save = 0.20. |
| d. | the marginal propensity to save = 0.25. |
| e. | since the marginal propensity to save and the marginal propensity to consume are unrelated, we cannot determine the marginal propensity to save from the information given. |
|  |  |

  |
|  **Diagram- 1 Consumption function****practice_test_for_e_files/i0370000.jpg**  |
| 26. As shown in Diagram 1, autonomous consumption is:

|  |  |
| --- | --- |
| a. | 0. |
| b. | $2 trillion. |
| c. | $4 trillion. |
| d. | $6 trillion. |
| e. | $8 trillion. |
|  |  |

  |
| **Diagram- 2 Disposable income and consumption data**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Disposableincome | Consumption | Saving | Marginal propensity to consume (MPC) | Marginal propensity to save (MPS) |
| 0    | $100  |   |   |   |
| 100    | 175 |   |   |   |
| 200    | 250 |   |   |   |
| 300    | 325 |   |   |   |
| 400    | 400 |   |   |   |
| 500    | 475 |   |   |   |
| 600    | 550 |   |   |   |
|  |  |  |  |  |

Note: All amounts are in billions of dollars per year.  |
| 27. As shown in Diagram- 2, if disposable income is $100 billion, saving is:

|  |  |
| --- | --- |
| a. | $100 billion. |
| b. | $75 billion. |
| c. | -$75 billion. |
| d. | -$175 billion. |
|  |  |

 |
| **Diagram- 3 Consumption function****practice_test_for_e_files/i0410000.jpg**  |
| 28. As shown in Diagram- 3, autonomous consumption is:

|  |  |
| --- | --- |
| a. | 0. |
| b. | $1 trillion. |
| c. | $2 trillion. |
| d. | $3 trillion. |
| e. | $4 trillion. |
|  |  |

  |
| 29. As shown in Diagram 3, the marginal propensity to consume (MPC) is:

|  |  |
| --- | --- |
| a. | 0.25. |
| b. | 0.50. |
| c. | 0.75. |
| d. | 0.90. |
|  |  |

 |

30. Psychological law of consumption has been given by-----

|  |  |
| --- | --- |
| a. J. M. Keynes | b. *J. S. Duesenberry* |
| c. *Ando A. Modigliani* | d. *Friedman* |

31. The absolute income theory of consumption has been given by-----

|  |  |
| --- | --- |
| a. J. M. Keynes | b. *J. S. Duesenberry* |
| c. *Ando A. Modigliani* | d. *Friedman* |

32. Relative income theory of consumption has been given by-----

|  |  |
| --- | --- |
| a. J. M. Keynes | b. *J. S. Duesenberry* |
| c. *Ando A. Modigliani* | d. *Friedman* |

**Write *T* for True and *F* for False against each of the following statements:**

1. The concept of consumption function is given by Prof. J. M. Keynes.
2. The *General Theory of Employment, Interest and Money* was written by Prof. J. N. Keynes in 1936.
3. Consumption function shows the relationship between consumption expenditure and various level of disposable income.
4. Marginal propensity to consume varies between zero and infinity.
5. Average propensity to consume is the addition in consumption to the addition in disposable income.
6. The sum of average propensity to consume and marginal propensity to consume is always equal to one.
7. The sum of average propensity to consume and average propensity to save is always equal to one.
8. Autonomous consumption depends on level of income.
9. Friedman has given the famous psychological law of consumption.
10. *“a*” is autonomous consumption and “*b*” is the marginal propensity to consume in the consumption equation, C= a + bY.
11. Marginal propensity to consume is the slope of consumption curve.
12. When saving is equal to zero, consumption is equal to disposable income.
13. In the equation C = 500 + 0.80Y, marginal propensity to save is equal to 30 per cent.
14. In the equation C = 500 + 0.80Y, the marginal propensity to consume is equal to 20 per cent.
15. In the equation C = 500 + 0.80Y, autonomous consumption is equal to 500.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Q** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| **A** | T | F | T | F | F | F | T | F | F | T | T | T | F | T | T |

**Matching Test:**

|  |  |
| --- | --- |
| **Match- I** | **Match- II** |
| 1. Average Propensity to Consume (APC)
 | 1. $\frac{ΔC}{ΔY}$
 |
| 1. Marginal Propensity to Consume (MPC)
 | 1. $\frac{ΔS}{ΔY}$
 |
| 1. Average Propensity to Save (APS)
 | 1. $\frac{C}{Y}$
 |
| 1. Marginal Propensity to Save (MPS)
 | 1. $\frac{S}{Y}$
 |
| **Match- I** | **Match- II** |
| 1. The absolute income theory of consumption
 | 1. Friedman
 |
| 1. Relative income theory of consumption
 | 1. J. S. Duesenberry
 |
| 1. Life cycle theory of consumption
 | 1. J. M. Keynes
 |
| 1. Permanent income theory of consumption
 | 1. Ando and Modigliani
 |

**Match the following after studying the above table:**

**Table- Relationship among Disposable income, consumption and saving:**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
| Disposableincome | Consumption | Saving |
| 0 | 100 | -100 |
| 100 | 175 | -75 |
| 200 | 250 | -50 |
| 300 | 325 | -25 |
| 400 | 400 | 0 |
| 500 | 475 | 25 |
| 600 | 550 | 50 |

 |  |
| **Match- I** |  **Match- II** |
| 1. Autonomous Consumption
 | 1. 100
 |
| 1. MPC at income level 500
 | 1. 0.25
 |
| 1. APS at income level 600
 | 1. 0.75
 |
| 1. MPS at income level 200
 | 1. 0.08
 |

**Questions with Answers:**

1. **What is consumption function?**

The relationship between various level of disposable income and consumption expenditure is known as consumption function. It can be shown as follow:

C = f(Yd)

Where, C = Consumption;

 Yd = Level of Income; and

 f = function (that is, depends on)

1. **What do you mean by average propensity to consume (APC) and marginal propensity to consume (MPC)?**

**Average propensity to consume (APC):** Ratio between total consumption expenditure and aggregate income (C/Y).

**Marginal propensity to consume (MPC):** Ratio between addition to total consumption expenditure and addition to total income (∆C/∆Y). It varies between zero and one.

1. **Diagrammatically show the consumption function, C = a + bY.**

Consumption function, C = a + bY

Where; C is consumption expenditure;

*a* is consumption (autonomous consumption) at zero level of income and it remains constant;

*b* is marginal propensity to consume (∆C/∆Y) or slope of consumption function; and

Y is level of income.

|  |  |
| --- | --- |
| http://www.economicsdiscussion.net/wp-content/uploads/2014/02/clip_image00218.jpg | https://encrypted-tbn2.gstatic.com/images?q=tbn:ANd9GcQyvB0eZ9quWW2bJr5jGhwmHsLtdyTgXI4ZiPopkgNa3HQjzwT9 |

1. **What is absolute income theory of consumption?**

**Or, what is Psychological law of consumption?**

Prof. Keynes laid stress on the absolute size of income as a determinant of consumption and his theory is known as absolute income theory of consumption. He gave a *psychological law of consumption* which state that *as income increases consumption increases but not by as much as the increase in income.*



In this theory of consumption, Keynes makes three points:

1. He suggests that consumption expenditure depends mainly on absolute income of the current period;
2. Consumption expenditure does not have a proportional relationship with income; and
3. Since the APC falls as income increases, the MPC is less than the APC (MPC < APC).
4. **What is permanent income theory of consumption?**

This theory has been given by Milton Friedman. According to this theory, consumption is determined by long- term expected income rather than current level of income. It is this long- term expected income which is called by Friedman as permanent income on the basis of which people make their consumption plans.



1. **What is saving function?**

The relationship between income and saving is called saving function.

**S = f(Y)**

Where, S = aggregate saving;

Y = Level of Income; and

 f = function (that is, depends on)

Saving function explains the relationship between national income and aggregate savings.

Saving function can be written as follow;

**S = -a + (1-b)Y**

Where, S = Saving;

 -a = saving at zero level of income;

 b = marginal propensity to save (mps); and

Y = Level of Income.

1. **How can you derive a saving function?**

Since, S = Y – C, and C = a + bY

 S = Y – (a + bY)

 S = Y – a – bY

 S = - a + Y – bY

 S = -a + Y(1-b)

 S = -a + (1-b)Y

1. **Define average propensity to save (APS) and marginal propensity to save (MPS).**

***Average propensity to save (APS):*** Ratio between total saving and aggregate income (S/Y) is called average propensity to save.

***Marginal propensity to save (MPS):*** Ratio between addition to total saving and addition to total income (∆S/∆Y) is called marginal propensity to save.

1. **Fill in the blanks with appropriate digits:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Y | C | APC  | MPC  | S | APS | MPS |
| 100 | 90 |  |  |  |  |  |
| 120 | 108 |  |  |  |  |  |
| 140 | 124 |  |  |  |  |  |
| 160 | 139 |  |  |  |  |  |
| 180 | 153 |  |  |  |  |  |
| 200 | 167 |  |  |  |  |  |

**10. Given the data of the disposable income (Yd) and amount of consumption at initial level of income (SR 100). Assuming that marginal propensity to consume is 50 per cent. Complete the table and draw the graphs of consumption and saving functions.**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **S. No.** | **Yd** | **C** | **S** | **APC** | **MPC** | **APS** | **MPS** |
| 1. | 100 | 150 |  |  |  |  |  |
| 2. | 200 |  |  |  |  |  |  |
| 3. | 300 |  |  |  |  |  |  |
| 4. | 400 |  |  |  |  |  |  |
| 5. | 500 |  |  |  |  |  |  |
| 6. | 600 |  |  |  |  |  |  |