

4. PRIVATE CONSUMPTION, HOUSEHOLD SAVINGS AND INVESTMENT

Problem 4.1.

The Keynesian consumption function describes the relation between private consumption and

- a) permanent disposable income;
- b) private savings;
- c) current disposable income;
- d) a) and c);
- e) none of the above.

Problem 4.2.

The idea of saving during working lifetime to spend later in consumption after retirement is related with

- a) the Keynesian consumption theory;
- b) the Permanent-Income theory;
- c) the Life-Cycle theory;
- d) b) and c);
- e) all of the above.

Problem 4.3.

The idea that individuals save in good years with the goal of financing consumption in bad years is related with

- a) the Keynesian consumption theory;
- b) the Permanent-Income theory;
- c) the Life-Cycle theory;
- d) b) and c);
- e) all of the above.

Problem 4.4.

Which of the issues listed below are reasons to justify that private consumption depends more on current disposable income than it is suggested by forward-looking-oriented theories?

- a) buying durable goods can be delayed when current disposable income decreases;
- b) banks do not usually lend to individuals with low current disposable income, even when there is an expectation that they may earn more in the future;
- c) taxation and transfers policies do not affect private consumption;
- d) a) and b);
- e) none of the above.

Problem 4.5.

Changes in current disposable income of households originate:

- a) movements along the curve representing the consumption function;
- b) changes in the consumption function;
- c) changes in the savings function;
- d) b) and c);
- e) a) and c).

Problem 4.6.

If the marginal propensity to consume changes, it produces:

- a) a movement along the curve representing the savings function;
- b) a change in the consumption function;
- c) a movement along the curve representing the consumption function;
- d) a) and c).
- e) b) and c).

Problem 4.7.

The autonomous private part in the Keynesian consumption function is:

- a) the part of the disposable income that is not spent in consumption;
- b) the increase in the private consumption when the disposable income increases in one unit;
- c) the part of the private consumption that does not depend on current disposable income;
- d) the amount of private consumption per unit of disposable income;
- e) none of the above.

Problem 4.8.

The marginal propensity to save is:

- a) the amount of savings per unit of disposable income;
- b) the autonomous part in the savings function;
- c) the part of disposable income that is not spent in consumption;
- d) the change in private savings when disposable income changes by one unit;
- e) b) and c).

Problem 4.9.

Consider a graph representing the Keynesian consumption function where both axes have the same scale. If we draw a line passing through the origin and with a 45° slope we know that private savings are positive whenever:

- a) the curve representing the consumption function is above that line;
- b) the curve representing the consumption is below that line;
- c) the curve representing the consumption function intercepts that line;
- d) b) and c);
- e) none of the above.

Problem 4.10.

Firm investment is associated with:

- a) the purchase of new equipment goods;
- b) changes in inventories of raw materials and produced goods;
- c) the purchase of new housing;
- d) a) and b);
- e) none of the above.

Problem 4.11.

The change of physical capital stock of a firm during a certain period is:

- a) the Gross Fixed Capital Formation of the firm in that period;
- b) the change in inventories in that period;
- c) the difference between the money value of all building, machines and other equipment, and inventories at the end of the previous period and the investment during that period;
- d) the Gross Capital Formation of the firm in that period;
- e) the amount (at constant prices) of GFCF in that period, minus the share of the capital stock necessary to replace the depreciation in that period.

Problem 4.12.

Before investing, managers in the firms have to:

- a) forecast future revenues;
- b) forecast future costs;
- c) adjust future revenues and costs to inflation;
- d) to calculate the present value of future profits using the real interest rate;
- e) all of the above.

Problem 4.13.

Firm investment is worthy if:

- a) the present value of the total expected profits is higher than the total cost of the project;
- b) the present value of the total expected revenues is higher than the total cost of the project;
- c) the present value of the total expected profits is lower than the total cost of the project;
- d) the present value of the total expected costs is lower than the total cost of the project;
- e) none of the above.

Problem 4.14.

Firms can finance their investment using:

- a) their own funds;
- b) external funds;
- c) increasing the prices of their products;
- d) a) and b);
- e) none of the above.

Problem 4.15.

The investment function represents the total investment at each level of:

A função de investimento descreve o valor total do investimento a cada nível de:

- a) price;
- b) disposable income;
- c) real interest rate;
- d) gross domestic product;
- e) none of the above.

Problem 4.16.

Changes on the market interest rate lead to:

- a) movements along the curve representing the investment function;
- b) changes in the investment function;
- c) changes in the savings function;
- d) b) and c);
- e) none of the above.

Problem 4.17.

Changes in the sensitivity of investment to the real interest rate produce:

- a) a movement along the curve representing the investment function;
- b) a change in the investment function;
- c) a movement along the curve representing the consumption function;
- d) a) and c);
- e) none of the above.

Problem 4.18.

The autonomous part of the investment function represents:

- a) the part of national income that is not invested;
- b) the change of investment when the interest rate changes one unit;
- c) the part of the investment that does not depend on interest rate;
- d) the value of investment per unit of gross domestic product;
- e) none of the above.

Problem 4.19.

Compute the private consumption function of an economy for an economy with the following data:

- The household consumption intentions depend linearly on their disposable income.
- When the disposable income is equal to 8925 m.u., private consumption intentions are equal to 6650 m.u.
- If disposable income increases 10 m.u., private consumption intentions increase 7 m.u.

Explain what the function parameters represent

Problem 4.20.

In an economy where the behaviour of household consumption is represented by a linear Keynesian consumption function the following information is known:

- the value for disposable income for which savings intentions are zero is 455 m.u.;
- a 10 m.u. increase in disposable income leads to an increase in consumption intentions of 8 m.u.

Considering the information above:

- a) Compute the private consumption function and interpret the meaning of its parameters.
- b) Compute the savings function, interpret the meaning of the parameters, and relate them to those of the function in a).
- c) Calculate the expression for the average propensity to consume and derive mathematically the conditions under which the value of this propensity is always higher than the corresponding marginal propensity. Interpret the meaning of the two propensities.

Problem 4.21.

Suppose that you have to assess the viability of a 1 million euros investment project to implement in 2013. Net expected profits of this project are:

- 100 000 euros in 2014;
- 400 000 euros in 2015;
- 400 000 euros in 2016;
- 400 000 euros in 2017.

Is this project worthwhile, from the firm's point of view, if the market interest rate (constant during the period) is equal to 8 per cent/year?

Problem 4.22.

Present the investment function and explain the meaning of each parameter based on the following information:

- investment is represented by a linear function of the real interest rate;
- when the real annual interest rate varies 2 percentage points, investment intentions show a negative change of 224.2 m.u.;
- when the real interest rate is 3% per year, investment intentions are equal to 1605.0 m.u.

Uncover the private consumption function based on this information:

- household consumption intentions depend linearly on disposable income;
- the average propensity to consume is equal to 0.975 when disposable income is 4000 m.u.; however, this propensity varies -0.035 when disposable income is equal to 5000 m.u.

Considering the private consumption function obtained, explain what do the function parameters represent.

Problem 4.24.

In a given economy, assume that all disposable income is spent in consumption, whatever its level. Represent graphically the consumption and savings functions and indicate the values their marginal and average propensities.

Problem 4.25.

A study representing the aggregate behaviour of all firms in an economy, provided the following data:

- the planned private investment depends linearly on the market real interest rate;
- when the market real interest rate is 0.05/year, planned investment is equal to 9812 m.u., and if the interest rate doubles, planned investment decreases 28 m.u.

- a) Represent the investment function of the firms and interpret its parameters.
- b) Evaluate the viability of an investment project in this economy, considering an interest rate of 0.075/year, with an initial expenditure of 12000 m.u. and expected profits equal to 4500 m.u. in each one of the 3 years of the project.

Problem 4.26.

A study of the product market in an economy provided the following information:

- investment intentions of the firms vary linearly with the real interest rate;
- a 0.03/year increase in the real interest rate (expressed as a number/year) leads to a 1350 m.u. decrease in planned investment;
- when the real interest rate is equal to 0.05/year, investment intentions of the firms in the economy are equal to 6100 m.u.

Uncover the firms' investment function in this economy and interpret the meaning of its parameters.