

Teaching Plan

Title	Consumption and saving game
Instructional Objectives	➤ To illustrate the generation of an aggregate expenditure curve.
Keywords and Concepts Illustrated	<ul style="list-style-type: none"> ➤ Consumption function ➤ Savings function ➤ Aggregate expenditure curve ➤ Average propensity to consume ➤ Average propensity to save ➤ Marginal propensity to consume ➤ Marginal propensity to save
Needed Time	➤ 80 minutes
Pre-game exercise for students	➤ In this experiment, teacher has to collect some data from students. In order to minimize the time cost of data collection, teacher can distribute an Income/Expenditure Worksheet to every student 2 lessons before. Ask them to complete the table in the handout and collect them at the next lesson. Then teacher can process the data in time for this lesson on consumption and savings functions.

Sessions	Details	Time Spent
Activity/ Announcement	<p>1 T: Do you remember this table? (Project Income/Expenditure Worksheet) You received and completed it few days ago. From your data, I know how much you want to consume and save under different income levels. (Project Table 1) Actually, the summation of item one to six is a monthly expenditure on consumption. Item seven is a monthly expenditure on savings. The summation of expenditure on consumption and savings are the total expenditure which is equal to the total income.</p> <p>2 T: Here is a brief summary of your data. (Project table 2. Teacher should calculate item 1 to 3 before the lesson.) We have a total income, total consumption and total savings of the economy in this class for different income levels.</p> <p>3 Teacher can explain here:</p> <p style="padding-left: 20px;">3.1 the concepts of consumption, savings and aggregate expenditure;</p> <p style="padding-left: 20px;">3.2 the two-sector national income model; and</p> <p style="padding-left: 20px;">3.3 the income-expenditure diagram with a 45° line.</p> <p>4 Based on students' data, teacher draws the consumption function, savings function and the aggregate expenditure function in diagrams. (Most likely, they are not straight lines as shown in textbooks. Tell students that straight lines are used due to simplicity.)</p> <p>5 T: Now, if we want to know how much the class wants to spend on consumption for every dollar it earns in a month, how can we find out? We can calculate the proportion of C to income (Y), that is to calculate the ratio of C/Y. It is called the Average Propensity to Consume (APC). Similarly, the ratio of S/Y is called Average Propensity to</p>	<p>10 mins</p> <p>30 mins</p> <p>15 mins</p>

	<p>Save (APS) which shows how much the class wants to spend on savings for every dollar it earns in a month. Let's calculate the APC and APS for different monthly income levels and see whether the class's APC and APS increase or decrease when the monthly income rises. (Calculate the APCs and APSs together with the students. Teacher should bring along a calculator.)</p> <p>6 Tell students that $APC+APS=1$. Let them know APC (APS) at certain level of income is the slope of the line joining from the origin to the consumption (savings) function at that certain level of income in an income-expenditure diagram.</p> <p>7 T: Look at another table. (Project table 3. Teacher should calculate item 1, 3 and 5 before the lesson.) Now, we want to find out how much the class will spend if the total monthly income of the class increases \$1. This concept is called Marginal Propensity to Consume (MPC). To calculate this, we should firstly know the change of income and (ΔY) the change of consumption (ΔC). Then MPC is calculated by $\Delta C / \Delta Y$. Let's fill in all the blanks and see whether the MPC and MPS increase or decrease when the monthly income rises.</p> <p>8 Tell students that $MPC+MPS=1$. Let them know MPC (MPS) is the slope of the consumption (savings) function in an income-expenditure diagram.</p> <p>9 Discussion:</p> <p>9.1 What's the slope of the consumption function called?</p> <p>9.2 If the MPC is 0.7, what is the marginal propensity to save in a two-sector model?</p> <p>9.3 What will happen to the class's consumption function if the wealth of the class increases?</p> <p>9.4 What will happen to the consumption function if the interest rate increases?</p> <p>9.5 What will happen to the consumption function if the marginal propensity to consume decreases?</p>	<p>15 mins</p> <p>10 mins</p>
Tools	<ul style="list-style-type: none"> ➤ Several transparencies – for printing out Income/Expenditure Worksheet, tables 1, 2 and 3. ➤ Projector ➤ Several transparency pens 	
Definitions	<ul style="list-style-type: none"> ➤ Consumption function – a function shows the relationship between planned consumption expenditure and disposable income in an economy. (Lam, 1998) ➤ Savings function – a function shows the relationship between planned savings and disposable income in an economy. (Lam, 1998) ➤ Aggregate expenditure function – a function shows the relationship between planned aggregate expenditure and income in an economy. (Lam, 1998) ➤ Average propensity to consume – a ratio tells how much an 	

	<p>economy spends on consumption for every dollar it earns.</p> <ul style="list-style-type: none"> ➤ Average propensity to save – a ratio tells how much an economy spends on consumption for every dollar it earns. ➤ Marginal propensity to consume – an index which tells how much of an increase in national income will be developed to increased consumption spending. (Leung, 1994) ➤ Marginal propensity to save – an index which tells how much of an increase in national income will be developed to increased savings spending. 	
References	<ul style="list-style-type: none"> ➤ Brauer, Jorgen, Fall 1994, A Saving/Consumption Game for Introductory Macroeconomics, <i>Classroom Expernomics</i>, vol 3(2), pp 9-11. ➤ Brauer, Jorgen, Spring 1998, A Saving/Consumption Game: An Update, <i>Classroom Expernomics</i>, vol 7(1), pp 10-13. ➤ Leung, Man Por, 1994, <i>Hong Kong Advanced Level Examination Macroeconomics</i>, Hung Fung Book Company Ltd. ➤ Lam, Pun Lee, 1998, <i>Advanced Level Macroeconomics</i>, Macmillan Publishers (China) Ltd. 	

Appendix

Materials for Teacher

Handout	Income/Expenditure Worksheet
Table 1	Income/Expenditure Table
Table 2	Summary of Expenditure and Savings Data (1)
Table 3	Summary of Expenditure and Savings Data (2)