

Savings Equals Investment

Warm Up

DIRECTIONS

This activity helps you use your knowledge about GDP to mathematically prove that savings always equals investment. Cut out the rectangles at the bottom of the page. Use the clues on the left-hand side to glue the rectangles into the proper order on the right-hand side. The abbreviations are explained in this box.

GDP	Gross Domestic Product	X	Exports	T	Taxes paid to the government
C	Consumer spending	M	Imports	TR	Transfers of taxes to private sector
I	Investment spending	S_{Private}	Private Savings (no government)	NS	National Savings
G	Government spending	S_{Government}	Government Savings		

- 1) Given.
- 2) Let's assume that this is a closed economy for simplicity. This means there are no exports or imports. Find the equation that expresses GDP with no exports or imports.
- 3) Use the equation from Step 2 and rewrite it so that Investment is all by itself on one side of the equation.
- 4) Locate the equation for Private Savings. It contains GDP calculated using the income approach, subtracts consumer expenditures, adds Transfers of taxes, and subtracts Taxes.
- 5) Locate the equation for Government Savings. It contains all Tax revenue, subtracts Transfers back to the private sector, and also subtracts government expenditures.
- 6) Total National Savings is equal to Private Savings plus Government Savings.
- 7) Look at Step 4 and Step 5. We can substitute these values into the equation from Step 6.
- 8) Take the equation from Step 7 and simplify it as much as possible. All Taxes and Transfers cancel each other out.
- 9) Look at Step 3 and Step 8. These equations show that Investment and National Savings are equal to the same thing. If we substitute values, we are left with this identity.

1)	$GDP = C + I + G + (X - M)$
2)	
3)	
4)	
5)	
6)	
7)	
8)	
9)	

$NS = S_{Private} + S_{Government}$	$S_{Private} = GDP + TR - T - C$
$GDP = C + I + G$	$I = GDP - C - G$
$S_{Government} = T - TR - G$	$NS = GDP - C - G$
$NS = I$	$NS = (GDP + TR - T - C) + (T - TR - G)$