



# *Variable Net Exports and Algebra of Income and Expenditure*

## CHAPTER 10

### Appendixes A and B

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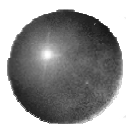
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## *Variable Net Exports and the Multiplier*

- ⊕ **A more realistic approach:**
  - ⊞ Net exports varying inversely with income
  
- ⊕ **The formula for the multiplier should include the marginal propensity to import, MPM**
  - ⊞ *The fraction of each additional dollar of disposable income that is spent on imported goods*
  
- ⊕ **Spending multiplier =  $1 / (\text{MPS} + \text{MPM})$**

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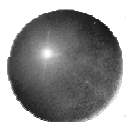
## *Algebra of Income and Expenditure*

⊕ Real GDP demanded for a given price level occurs:

❑ Income = planned spending

❑  $Y = C + I + G + (X - M)$

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## *A More Realistic Consumption Function*

❑  $C = a + b(Y - NT)$ , or

❑  $C = a - bNT + bY$

⊕ Where

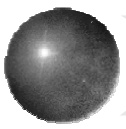
❑  $a - bNT$  is autonomous consumption

- Consumption that is independent of income

❑  $bY$  is induced consumption,

- Portion of consumption generated by the level of income in the economy

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## *General Model*

- ✦ Since income must equal output:

$$Y = a - bNT + bY + I + G + (X - M)$$

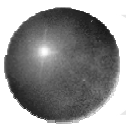
- ✦ Which can be rearranged to yield

$$Y = \left(\frac{1}{1-b}\right)(a - bNT + I + G + X - M)$$

$a - bNT + I + G + X - M$  is  
autonomous spending

And  $(1 / 1 - b)$  is the simple multiplier

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## *Variable Net Exports*

- ✦ If we now add variable net exports:

$$Y = a + b(Y - NT) + I + G + X - m(Y - NT)$$

which yields the following equilibrium  
equation

$$Y = \frac{1}{1-b+m} (a - bNT + I + G + X + mNT)$$

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