- If the real interest rate is relatively low, then the opportunity cost of consuming more todayis • relatively low
- By forgoing \$1 of consumption today you are able to consume \$1 (1+r) tomorrow •
- Assume r is relatively high, then if you consumer \$1 today, you are forgoing more additional • consumption tomorrow
- Higher r leads to higher saving
- An increase in the real interest rate will create an incentive to reduce current consumptionas • it has become more expensive and increase saving out of current income

3.3.7 government saving

- The sum of household saving and business saving will give us aggregate saving by the private sector in an economy
- Public saving is measured as: BB = public saving = T G
 - G is government expenditure
- $\mathbf{T} = \mathbf{T}\mathbf{A} \mathbf{T}\mathbf{R} \mathbf{I}\mathbf{N}\mathbf{T}$
 - \circ TA = taxes
 - \circ **TR** = government transfers
 - INT = government
- An alternative name for public saving is the government budget balance (BB)

3.3.8 national saving schedule

- National savings = household saving + business saving + government spending tesale.co.u
- National saving = private saving + public saving
- NS = Y C G
 - \circ **Y** = national income
 - **C** = household consumption
 - \circ **G** = government spending
 - Excludes I because by definition it is spending that provides for future needs notcurrent ones, we are assuming that an government spending is on current consumption (no investment)

Since closed econ my 28-

Can add and subtract T, then we decompose NS into private and public saving

$$NS \equiv Y - C - G + T - T$$
$$NS \equiv [(Y - T) - C] + T - G$$

- T-G is public saving
- \circ [(Y-T)-C] is private saving

• can further decompose of NS by adding and subtracting RE to both sides

 $NS \equiv [(Y - T) - C] + T - G + RE - RE$

$$NS \equiv [(Y - T - RE) - C] + RE + T - G$$

o where Y - RE - T - C is household saving and
T-G is public saving

a rise in the real interest rate will result in an increase in the amount of nationa saving as we assume that a rise in r leads to an increase in household saving



3.3.9 national saving and investment in equilibrium

national saving = investment

4.2.9 - saving and planned investment in two-sector model

- in the two-sector model the equilibrium level of GDP - Y = PAE
 - $PAE = C + I^P \Box Y C = I^P$
 - The left hand side of the second equation is just equal to aggregate saving in the twosector model
- instead of using Y = PAE as the condition for equilibrium, we can use an equivalent equilibrium condition os saving equal to planned investments $S = I^P$
- S = Y C and C = C₀ + cY we obtain S = -C₀ + (1-c)Y • (1-c) is just the marginal propensity to save
- also obtain the same result for equilibrium GDP

$$Y^e = rac{1}{(1-c)} [C_0 + I_0]$$

4.2.10 - paradox of thrift

- the paradox of thrift is a example of a fallacy of composition, which is a fallacy of assuming what is true for an individual component of some whole, is also true for the whole
- a given increase in autonomous saving is equivalent to an equal decrease in autonomous consumption spending
- the attempt by all households to increase their autonomous saving result in a rall in real GDD which declines by just enough to lower induced so that it exactly on cast is autonomous increase
- thus while an individual household can raise its total level of saving, in the income-expenditure model this is not possible for all households in aggreagte

4.3 Open Economy Model

- we extend the two-sector model by allowing for international trade in goods and services and including imports and exports
- planned aggregate expenditure is given by
 - $\circ \quad \mathbf{PAE} = \mathbf{C} + \mathbf{I}^{\mathbf{P}} + \mathbf{X} \mathbf{M}$
- In the case of imports, the level of domestic real income or GDP is likely to be an important determinant and we are assuming the following simple linear model \Box **M** = **mY**
 - We assume there is no autonomous component to imports, the coefficient m is the marginal (average) propensity to import and can be written as

$$\circ \quad \frac{1}{\nabla} = n$$

• the equations describing out open economy model are given by

