

**Question 4**

The size of multiplier varies significantly amongst countries.

Explain why some countries have relatively smaller multiplier values than others and discuss the extent to which the estimated multiplier value is useful in predicting the impact of a rise in government spending on an economy. [25]

**Suggested answer outline:**

Introduction:

The national income multiplier (k) is defined as the ratio of the change in national income to a change in autonomous expenditure. Due to the multiplier process, the larger the value of multiplier, k, the greater the impact on national income when there is an increase in autonomous expenditure such as government spending. The size of k is affected by marginal propensity to withdraw (mpw). It can be represented by  $k = (1/mpw)$ . The size of k depends on the values of marginal propensity to import (MPM), marginal propensity to tax (MPT) and marginal propensity to save (MPS). Hence a variation in the size of these components will lead to different national income multiplier for different countries.

Factors affecting mps

**Expectation** → if consumers are **pessimistic** of future income and employment, will want to **save more** of their **additional income** for the future, **mps rises, mpc falls → k falls**.

Example: Due to the financial crisis in US, many US households cut back on their consumption out of additional income and saved more, leading to a rise in mps and a fall in k.

**Government policies** - In Singapore, the government has implemented the CPF scheme for all working adults, which is a form of compulsory saving that forces them to save more than 20% of their income every month. Also, being an Asian society that emphasizes on being thrifty and having the need to adopt a prudent spending habit to save for contingencies in life, this contributes to high levels of savings. Hence, households save more out of any additional income they earn. As such, the MPS is high.

Factors affecting mpt

**Types of tax system** → the more regressive the tax system, the less a person will be **taxed out of their additional income** leading to **fall in mpt → higher k**

Example: Singapore government has lowered personal income and corporate tax rate to attract foreign talents and investment while at the same time raised its GST. This makes the tax system less progressive (or more regressive) as the higher-income earners are taxed a smaller proportion of their additional income → lower mpt → higher k.

**Welfare states** such as that of Australia may need to tax more to provide for greater welfare benefits → tax system will be more progressive → mpt rises → k falls.

Factors affecting mpm

**Openness of the economy** → a more open economy will have more exports and imports with the rest of the world, thus leading to a higher mpm than a closed economy → lower k.

Example: With globalisation, countries are more dependent on foreign countries to enjoy a greater variety of imported consumer goods and to buy their imported capital goods, thus leading to a higher mpm and a lower k.

**Country that have limited raw materials** may need to import more → higher mpm → lower k (e.g. Singapore)

The estimated multiplier value is useful in predicting the impact of a rise in government spending on an economy.

A rise in government spending raises the level of AE in the economy and cause the level of NY to rise by a larger extent due to the multiplier effect. This is because when income rises, people will consume more domestic goods out of the additional income, thus causing AE and NY to rise by a larger extent. The extent of the rise in NY will depend on how much people consume out of the additional income (mpc). The size of mpc and mpw affect the extent of increase in NY due to the multiplier effect. Suppose there is an increase in G of \$10m, the first group of recipient receives additional Y of \$10m. If  $mpc=0.5$  and  $mpw=0.5$ , the first group will spend \$5m and withdraw \$5m contributing to the increase in income of second group by \$5m, thus leading to a greater increase in income than the original increase in G. However, suppose that mpc falls to 0.2 and mpw rise to 0.8 (as in the case of Singapore), the first group will only spend \$2m thus contributing to a lower increase in income of the second group by \$2m instead \$5m. Thus, the multiplier effect is weaker when mpc falls and mpw rises. In the first case when  $mpc=mpw=0.5$ ,  $k=2$  while in the second case where  $mpc=0.2$  and  $mpw=0.8$ , leading to a smaller  $k=1.25$ . As illustrated above, an economy with a small multiplier would reduce the effectiveness of fiscal policy. Hence, estimated multiplier value is useful in predicting the impact of a rise in government spending on an economy.

**Other factors affect the impact of a rise in government spending on an economy**

**Pessimistic economic outlook** may reduce the impact of a rise in G on the economy.

Due to an economic downturn, households and firms are pessimistic about the future economic outlook. The loss of consumer and business confidence in the economy can be strong enough to cause consumers and producers to hold back on their consumption and investment. The level of AE may not rise significantly if the rise in government spending is negated by the fall in the level of consumer spending and investment spending. Hence, knowing the estimated multiplier value may not be useful in predicting the impact of a rise in government spending on an economy. Thus, low consumer confidence and poor business sentiments render fiscal policy (rise in G) to be ineffective in stimulating the economy regardless of the estimated size of k.

Presence of crowding-out effect may reduce the impact of a rise in G on the economy.

Crowding out effect can take the following forms: resource crowding out and finance crowding out.

Resource crowding out: a rise in government spending leads to government using resources such as raw material and labour that would otherwise be used by the private sector. If the economy is operating near to  $Y_f$ , then if government uses resources, there will fewer resources available for the private firms. Thus, resource crowding out leads to a reduction in private-sector output. This is important to note that this is only true if the economy is operating near to full capacity.

Finance crowding out: happens when a rise in government spending diverts funds from private sector firms and thus deprives them of the finance necessary for investment spending. If the government spends more without raising taxes, it will have to borrow more. This will raise the level of interest rate in the economy which discourages firms from borrowing and hence reduces the level of government spending.

**Conclusion:**

The extent to which the estimated multiplier value is useful in predicting the impact of a rise in government spending on an economy, in light of the points raised in this essay, is hence very small. Other factors like extent of crowding-out effect, the level of consumer confidence and business sentiments affect the impact of a rise in G on an economy. Even though a country may have a relatively larger multiplier value (k) than other countries, a rise in G may not have a significant impact on the economy due to low consumer confidence and bleak business outlook. In another situation, the impact of a rise in G on the economy is reduced by crowding-out effect. If finance crowding-out is present, a greater the rise in interest rate, the lower the impact of a rise in G on the economy.