

## TJC Prelims 2017 (H2) CSQ1 Answers

- (a) (i) From Figure 1, describe the trend in Singapore's residential property prices from 2010 to 2016. [2]

Singapore's residential property prices were generally increasing from 2010 to 2016. [1] Prices increased steadily from 2010 to reach a peak in 2013 and have been on a gradual decline since. [1]

- (ii) Suggest two possible reasons for the trend identified in (i) [2]

Explain general increase:

The general price increase was probably due the "very low interest rate environment and continued income growth in Singapore" (Extract 3). Low interest rates indicate low cost of borrowing, thus raising affordability of housing and boosting demand for property. Continued income growth leads to higher purchasing power, also leading to higher demand for property. Higher demand for property thus explains the general price increase from 2010 to 2016. [1]

Explain gradual decline since 2013:

The gradual decline in prices since 2013 can be attributed to government's measures to "cool demand and expand supply, so as to moderate the increase in housing prices" (Extract 3). Dampened demand and increased supply thus led to prices slowing down after 2013. [1]

- (b) Explain whether public housing fulfills the characteristics of a public good. [4]

A public good is a good which is both non-excludable and non-rivalrous, resulting in total market failure and non-provision of the good.

Non-excludable means it is impossible or highly prohibitive to exclude non-payers from enjoying the good once it's produced, resulting in the free-rider problem. [1] Public housing not a public good as it is excludable. An HDB flat-owner has to first purchase the flat before being given the key to his apartment. HDB can also evict those who fail to make payments for their apartments.[1]

Non-rivalrous means consumption of the good by one individual does not diminish the quantity and quality enjoyed by others. [1] Public housing is not a public good as it is rivalrous. When one HDB flat has been sold to a family, there is one less HDB flat available for other families. It is impossible to house the entire community in an HDB flat without creating intolerable overcrowding. [1]

Hence, public housing does not fulfill the characteristics of a public good.

- (c) Explain the possible impact of a bursting of the real estate bubble in China on Singapore's balance of payments. [4]

China's real estate appears to be headed for a hard landing, with "the ratio of mortgage payments to a buyer's income" showing that "housing prices are now more expensive than those during Japan's property bubble" and "close to U.S.

prices just before the global financial crisis exploded”. [1]

“Excessive bubble expansion in the property sector” are associated with higher debt levels, and “analysts are sounding the alarm about growing Chinese debt loads”. A subsequent sharp correction of property prices may lead to rising defaults on mortgages and possibly bank failures, resulting in “a drag on the entire global economy.” [1]

Business and consumer confidence are likely to be negatively affected, causing Investment I and Consumption C to fall, and hence AD to fall, and through the reverse multiplier effect, national income to fall by a larger magnitude. This could lead to slower growth or even a recession in China, dampening its demand for imports, including imports from Singapore. As China is a significant export market for Singapore, a fall in demand by China will cause Singapore’s trade balance and hence its current account to deteriorate. [1]

Moreover, China’s investments abroad, including to Singapore, is likely to be greatly reduced due to troubles at home. With long-term capital inflows sharply reduced, Singapore’s capital account could deteriorate too. [1] With both current account and capital account deteriorating, a bursting of China’s property bubble is likely to cause Singapore’s Balance of Payments to worsen.

Note: Answers which argue that capital account could improve if “hot money” flows into Singapore due to its safe-haven reputation are acceptable.

- (d) Using an economic framework, discuss how the factors mentioned in Extract 3 affect the markets for public housing and private housing in Singapore. [8]

The markets for public and private housing in Singapore is affected by various demand and supply factors. The demand factors include “very low interest rate environment and continued income growth in Singapore” as well as macro-prudential cooling measures by the government aimed at preventing the formation of a property bubble. On the supply side, “a large supply of public and private housing – up to 200,000 units in total – will be completed in the coming years”. The overall impact on equilibrium price and quantity depends on the extent of the shift in demand compared to the shift in supply, as well as the price-elasticity of demand (PED) and price-elasticity of supply (PES) for housing.

#### *Examining demand factors*

The demand factors mentioned in the extracts work in opposing ways. Low interest rates indicates low cost of borrowing for home-buyers and together with continued income growth, boosts their purchasing power and hence demand for housing. However, the macro-prudential cooling measures on “property ownership for investments as well as on foreign buyers” reduces speculative demand for property, raising expectations of a price fall, resulting in demand falling. Whether overall demand increases or falls depends on which factor has a stronger impact. The cooling measures are aimed at “property ownership for investment” and targetted “on foreign buyers”, and are likely to affect private housing more than public housing, which is bought for owner-occupation and are off-limits to foreign buyers. Hence, moving forward, demand for private housing is likely to fall while demand for public housing could continue to increase.

When demand changes, the relevant elasticity concept is Price Elasticity of

Supply (PES), which measures the responsiveness of quantity supplied for a given change in own-price. Supply for both public and private housing is likely to be price-inelastic ( $PES < 1$ ) as it takes a few years for developers to bid for land and build housing units in response to a price change. When demand for public housing increases, price increases, leading to a less than proportionate increase in quantity supplied of public housing as  $PES < 1$ . When demand for private housing falls, price falls, leading to a less than proportionate fall in quantity supplied of private housing as  $PES < 1$ .

### *Examining supply factors*

Supply for both private and public housing will rise due to the completion of 200,000 units coming on-stream. When supply changes, the relevant elasticity concept is Price Elasticity of Demand (PED), which measures the responsiveness of quantity demanded for a given change in own-price. Demand for public housing is likely to be price-inelastic ( $PED < 1$ ) as it can be considered a necessity as every household needs a roof over their heads. When supply for public housing increases, price falls, leading to a less than proportionate increase in quantity demanded. Demand for private housing is likely to be price-elastic ( $PED > 1$ ) given that it forms a large proportion of a typical buyer's income. When supply for private housing increases, price falls, leading to a more than proportionate increase in quantity demanded.

### *Overall impact on Public Housing*

The combined impact of the fall in demand and increase in supply on the market for public housing is represented in Figure 1. Demand is likely to increase only a little, from D1 to D2, as macroprudential measures aimed at private housing are likely to have a dampening effect on buyer sentiment in the public housing market too. Buyers are likely to be cautious even though income is growing and interest rates are low. Supply is likely to increase more significantly, from S1 to S2, as the government is determined to ensure affordability and availability of housing to young Singaporeans. Overall, equilibrium price is likely to fall from P1 to P2, but equilibrium quantity is likely to increase more significantly from Q1 to Q2, resulting in total expenditure in the public housing market increasing slightly from  $P1 \times Q1$  to  $P2 \times Q2$ .

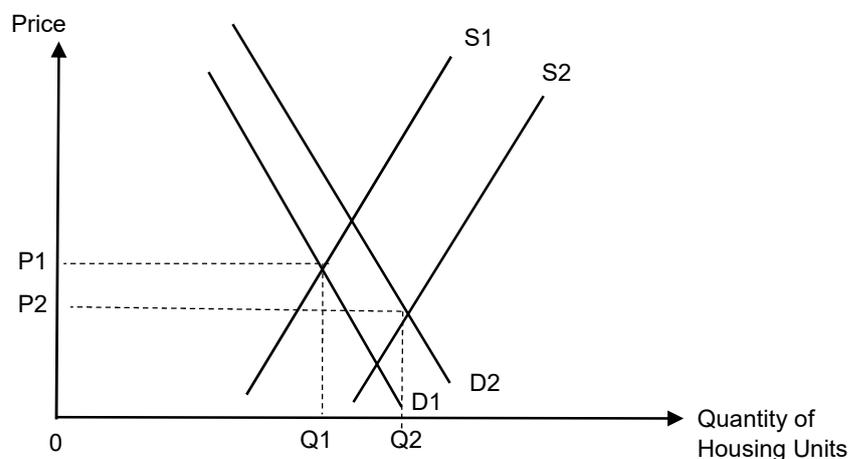


Figure 1: Concurrent shifts in demand & supply of Public Housing

### *Overall impact on Private Housing*

The combined impact of the fall in demand and increase in supply on the market for private housing is represented in Figure 2. Demand is likely to fall significantly, from D1 to D2, as cooling measures have a strong impact on consumer and investor sentiment, resulting in expected price falls in the housing market, and buyers holding back their purchases. While there is a large supply coming on-stream, this is likely to be spread out over a few years, and may not be significant in the immediate term. Moreover, current owners are likely to hold out and wait for a price recovery before selling, thus dampening supply. Overall, equilibrium price is likely to fall from P1 to P2, and equilibrium quantity is likely to fall less significantly from Q1 to Q2, resulting in total expenditure in the public housing market falling from  $P1 \times Q1$  to  $P2 \times Q2$ .

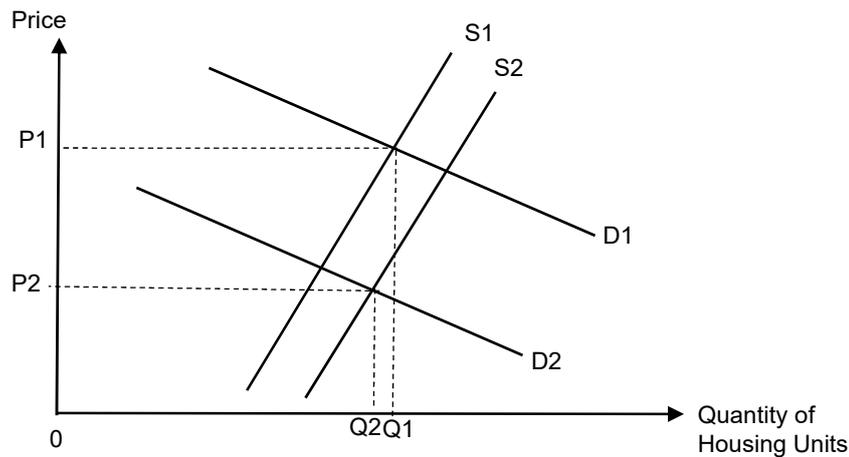


Figure 2: Concurrent shifts in demand & supply of Private Housing

Levels of Response Marking Scheme (LORMS)

Levels	Descriptor	Marks
L2	A well-developed answer with consistent demonstration of economic rigour. Makes use of case materials and elasticity concepts to arrive at conclusion on impact on market for both public and private housing. Both demand and supply factors are analysed.	4-6
L1	Consistent lack of economic rigour and narrow scope, with little differentiation made in analysis between public and private housing. Capped at this level if case materials not used.	1-3
E	Evaluative judgement and comments with synthesis on overall impact of both demand and supply factors on both markets.	1-2

- (e) As an economic adviser to the Singapore government, discuss whether you will recommend the removal of cooling measures in Singapore. [10]

Macro-prudential property cooling measures were first imposed to prevent a property bubble from forming as well as to ensure affordability of housing in Singapore. According to Extract 3, in 2013, further measures were adopted as according to Minister for Finance then, “interest rates are extraordinarily low” and “continue to add fuel to our property market”. These measures were said to be

needed in order to “avoid a more serious correction in prices further down the road.”

*Thesis Point 1: Property prices have fallen, thus achieving original intent of cooling measures.*

There is merit to the argument that cooling measures should be removed. Firstly, these measures have borne fruit and achieved their original intent. According to Extract 4, “property prices are now at one of the most affordable levels on record.” URA data also shows that private home prices have fallen for “13 consecutive quarters” to reach “their lowest level in six years.”

*Thesis Point 2: Interest rates are rising, thus dampening speculative demand*

Moreover, real estate consultant JLL argues that “house prices are under considerable pressure” given “subdued economic outlook both globally and in Singapore” as well as “expectations of rising interest rates.” Property prices are highly-sensitive to interest rates movements. Singapore is a price-taker and its interest rates track US interest rates closely. US interest rates have bottomed as its economy recovers from the sub-prime crisis. Higher interest rates raise the cost of borrowing for buyers, and this lowers their purchasing power, reducing demand for property. As such, there is less need for cooling measures to rein in demand and they can be removed without fear of speculative demand being fuelled by hot money returning to the market.

*Thesis Point 3: Removal of cooling measures could help boost economic growth*

Extract 5 noted that in 2017, Singapore’s GDP growth stood at 1.8%, narrowly averting a recession. Hence, the removal of cooling measures could boost consumption and investment in the property development market. As such, the aggregate demand could increase. Since Singapore is still on the phrase of economic recovery, there could still be excess resources, allowing the real output to increase further, thereby boosting economic growth.

*Anti-Thesis Point 1: Global interest rates are still at historic lows*

Although US interest rates have bottomed out, they are still at historically low levels. As mentioned by Minister Tharman, “The reality we face is that interest rates are extraordinarily low, globally and in Singapore, and continue to add fuel to our property market.” Low interest rates means continued affordability for buyers of property and removal of cooling measures could encourage speculative buying again. There is thus a need to be cautious about making such a move.

*Anti-Thesis Point 2: China factor*

Chinese policymakers have instituted measures aimed at cooling the overheating housing market, and analysts expect “these measures may lead investors to funnel money into property in cities where real estate has been appreciating less quickly.” These cities include Singapore, and if cooling measures are removed prematurely, demand from China investors could cause the property market to reach exuberant levels again.

Conclusion

The government is rightfully cautious when deciding whether to remove the cooling measures. Removal of cooling measures sends a strong signal to the market and could fuel speculative buying again. This is especially so in Singapore where there is latent demand for property given the Asian culture of preference for property ownership. On the other hand, these measures are forms of market distortions, which cause allocative inefficiency. The government thus faces a fine balancing act between maximising societal welfare, ensuring equitable outcomes and preventing macroeconomic instability. The most important factor that the government might consider is likely to be the supply-demand conditions, as a huge surplus could lead to sharp falls in prices, which could cause an economic downturn. Given the present market conditions and global economic environment, I would recommend a wait-and-see approach and not recommend a removal of the cooling measures.

Levels of Response Marking Scheme (LORMS)

Levels	Descriptor	Marks
L2	A well-developed balanced answer with economic analysis that thoroughly explains whether property cooling measures in Singapore should be removed, with reference to case material.	5-7
L1	Lacks balance: One-sided answer that rigourously explains EITHER why Singapore's property cooling measures should be removed OR why they shouldn't be removed. <b>OR</b> Lacks rigour: Two-sided answer that is not thoroughly explained OR merely lifting evidence from the passage but no clear link to the issues. <b>OR</b> Lacks reference to case material and the application to the issues.	1-4
E	Evaluative judgement and comments based on economic or contextual analysis. Answers are able to synthesise the arguments for and against and come to a stand.	1-3