Suggested answers to 2018 VJC H2 Prelims Paper 1

Question 1

i)	Using Figure 1, compare the change in infant formula milk prices for the periods 2007 to 2014 and 2014 to 2017.	[2]
	Infant formula milk prices increased in both periods. (1)	
	Infant formula milk prices more than doubled from 2007 to 2014; while it rose by only about 10% for 2014 to 2017. (1)	
ii)	Explain whether the data in Figure 2 is able to support the observed change in infant formula milk prices for the period 2007 to 2014.	[4]
	Given the data in Figure 2, there is a positive correlation between rising infant formula milk prices and rising import of infant formula milk in China. (1) This could suggest that China could have been importing from Singapore, leading to an increase in demand creating a shortage there. Hence, the rapid rise in prices of infant formula milk over this period. (1)	
	Figure 2 is insufficient because there is no clear data on the source of the China's infant formula milk imports. Despite evidence from Extract 1 that Chinese parents were willing to pay double for these products from Singapore, China could have also imported the infant formula milk from other countries like Australia. (2) OR	
	Figure 2 alone is not able to fully support the observed change in infant formula milk prices. In addition, price changes could arise from supply factors and not only from changes in demand. Thus, information on the supply of infant formula milk China and Singapore is needed. The rapid rise in price could have been due to a fall in supply of infant formula milk in Singapore. (2)	
	What can you conclude from the evidence in Extract 2 about the price elasticity of demand for infant formula milk powder?	[2]
	From Extract 2, it can be inferred that the demand for infant formula milk powder is likely to be highly price inelastic given that parents continue to demand infant milk powder due to the perceived lack of close substitutes as they 'remain loyal' despite the huge increases in price. (2)	
	Also accept demand for infant formula milk powder is perfectly price inelastic if explained clearly – infant milk powder is the only available substitute for infant milk powder is breast milk. Lack of other close substitute available suggests demand for it is perfectly price inelastic for those who cannot breast feed.	
	With reference to the data, justify the market structure for the formula milk market in Singapore.	[4]
	It is an Oligopoly market structure, dominated by a few dominant sellers as seen in Extract 3, where Nestle, Abbott and Mead Johnson constitute 72% of the total market share in Singapore. Such dominance implies strong market power for firms in this industry. (2)	
	,	periods 2007 to 2014 and 2014 to 2017. Infant formula milk prices increased in both periods. (1) Infant formula milk prices more than doubled from 2007 to 2014; while it rose by only about 10% for 2014 to 2017. (1) ii) Explain whether the data in Figure 2 is able to support the observed change in infant formula milk prices for the period 2007 to 2014. Given the data in Figure 2, there is a positive correlation between rising infant formula milk prices and rising import of infant formula milk in China. (1) This could suggest that China could have been importing from Singapore, leading to an increase in demand creating a shortage there. Hence, the rapid rise in prices of infant formula milk over this period. (1) Figure 2 is insufficient because there is no clear data on the source of the China's infant formula milk imports. Despite evidence from Extract 1 that Chinese parents were willing to pay double for these products from Singapore, China could have also imported the infant formula milk from other countries like Australia. (2) OR Figure 2 alone is not able to fully support the observed change in infant formula milk prices. In addition, price changes could arise from supply factors and not only from changes in demand. Thus, information on the supply of infant formula milk China and Singapore is needed. The rapid rise in price could have been due to a fall in supply of infant formula milk in Singapore. (2) What can you conclude from the evidence in Extract 2 about the price elasticity of demand for infant formula milk powder? From Extract 2, it can be inferred that the demand for infant formula milk powder is likely to be highly price inelastic given that parents continue to demand infant milk powder due to the perceived lack of close substitutes as they 'remain loyal' despite the huge increases in price. (2) Also accept demand for infant formula milk powder is perfectly price inelastic if explained clearly – infant milk powder is the only available substitute for infant milk powder is breast milk. La

In addition, the **high barriers to entry (BTE)** is also a characteristic of oligopoly market structure. Extract 3 mentions that such firms aggressively advertise which may result in high brand loyalty for the incumbent firms' goods. In addition, the heavy investment in R&D in order to develop better and newer products will result in high start-up costs that require new entrants to produce at a higher output level in order to reap the large economies of scale. These strategies create high BTE, limiting the ability of new firms to enter and compete, which in turn gives firms in this industry strong market power. (2)

d. Discuss the factors Australian infant formula milk companies are likely to consider when deciding whether to enter the Chinese infant formula milk market.

[8]

Intro:

Assuming that Australian infant formula milk companies **aim to maximize profits**, they will consider factors that affect their **total revenue (TR)** as well as **total cost (TC)** when deciding whether to enter the Chinese market.

Body:

Australian infant formula milk companies are likely to consider the potential size of the Chinese market as it affects the firm's revenue.

[C, E] Australian firms will be able to capitalize on the reputation of Australia as a producer of high-quality food (Ext 4). This will cause the DD for Australian infant formula milk to rise; particularly following the stigma of infant formula milk scandal (Ext 1); existing consumers may switch to milk powder produced in Australia as a result. This rise in demand will increase the expected revenue for Australian infant formula milk companies.

Given the relaxation of China's one child policy (Ext 4 para 2), there would also be a rise in DD for infant formula milk as more children are born in China, increasing the expected revenue for Australian companies.

As Chinese households become affluent (Ext 4 para 2), income and hence their purchasing power increases, enabling them to afford premium infant formula milk, increasing the demand for infant formula milk and the firms' expected revenue.

These factors above are likely to affect the expected demand for Australian infant formula milk and hence the potential size of the infant formula milk market in China, which will in turn impact Australian firms' expected total revenue.

Australian firms are likely to consider the level of barriers to entry of Australian-produced infant formula milk to the Chinese market.

Governments can put up artificial barriers to entry in the form of food regulations or import tariffs. The free trade deal between China and Australia will bring about a tariff saving of 15% as it is phased over 4 years (Ext 4). This reduction in tariff will lower the price of Australian-produced infant formula milk in the Chinese market. If the firms pass on the cost savings (from tariff elimination) to consumers, it will result in a fall in the price of Australian infant formula milk. The resulting rise in quantity demanded is likely to be more than proportionate to the fall in price given that demand for Australian infant formula milk is likely to be price elastic (i.e. PED > 1) because of the large number of available substitutes, resulting in higher revenue reaped by the Australian firms.

However, entering the Chinese market may also mean higher cost due to the need to adhere to stricter regulation following the infant formula milk scandal (Ext 4). These measures may increase the administrative cost of importing of Australian-produced infant formula milk as they need to adhere to these regulations.

Australian firms may also consider the potential cost savings from reaping EOS by selling in the Chinese infant formula milk market.

[C, E] By expanding into the Chinese market, Australian firms will be able to produce a larger output given the size of the Chinese market, enabling it to reap greater economies of scale e.g. marketing economies of scale through the bulk purchases of factor inputs to produce infant milk powder. Increasing economies of scale will enable firms to lower their average cost of production.

The rise of internet and e-commerce have also changed tastes & preferences amongst consumers who prefer to buy online instead of physical stores. This will lower the cost of selling in the Chinese market as there is no longer a need to incur significant fixed costs in the form of rentals to set up physical stores to access the Chinese market.

Evaluation/Conclusion:

In deciding whether to enter the Chinese market, Australian infant milk companies will need to weigh the expected revenue and costs of entering the market. Given that the market is an oligopoly market structure (Ext 3), there is mutual interdependence and rivals' actions are likely to affect the extent of the changes in revenue and costs, hence firms will also have to consider the perspectives of current incumbent firms. For example, while there may be potential EOS to be reaped in selling to a larger market, the extent of the EOS may be limited given the competition from the numerous sellers in China (Ext 4 para 3). The deep pockets and vast experience of the incumbent firms also suggest that there is a high possibility of aggressive advertising and other entry deterrence strategies. Hence, the intensity of competition will be a key consideration that should also be factored in when weighing the costs and benefits of entry.

Mark scheme

Level	Descriptors	Marks
L2	A balanced and well-explained answer that considers the extent of 2 or more factors (revenue vs costs) that Australian infant formula milk companies would consider; and is well-supported by theory and case evidence.	4 – 6
L1	Response is largely theoretical and limited in scope; or Brief answer which contains some listing and explanation that theoretical and not well-supported by case evidence	1 - 3
E	Stand with some attempt at substantiation Stand with well-supported substantiation (eg. using contextual justification to highlight relative importance)	1 - 2

e. To what extent can the measures adopted by the Singapore Government mentioned in Extract 3 increase the affordability of infant formula milk for Singaporeans?

Intro:

The Singapore infant formula milk market can be characterised by an Oligopoly market structure where there are few dominant firms, high barriers to entry and imperfect information.

The measures that the Singapore Government could adopt to curb market dominance are: (1) consumer education; (2) streamline import requirements to remove unnecessary barriers to entry; and (3) regulations to curb excessive marketing.

Body:

Consumer education where infant formula milk can be stopped after the age of 1 will reduce the market demand for infant formula milk.

The Health Promotion Board's plans to educate parents who were unaware that infant formula milk can be stopped after the age of 1 will reduce information failure arising from the parents' ignorance by providing parents with information about the true marginal private benefits of their offsprings' consumption of infant formula milk after the age of 1. This will reduce the market demand for infant formula milk, ceteris paribus, exerting a downward pressure in the price of infant formula milk.

Due to the high literacy level of the population, the education campaign will reach out to the parents through the various media platforms. However, the receptiveness of the parents to the campaign may be uncertain given the constraints of the parents' need to juggle the demands of their work commitments which may result in less time to prepare and source for infant formula milk alternatives, hence the fall in demand for infant formula milk may not materialize.

To streamline import requirements as well as remove unnecessary barriers to entry in order to bring in more options for parents (Ext 3) will increase market supply for infant formula milk.

Simplifying and streamlining import requirements and the removal of barriers to entry will increase the number of firms who can offer infant formula milk in Singapore since new entrants will find it less costly and risky to enter the Singapore infant formula milk market despite the strong brand loyalty created by the incumbents, thereby increasing the supply of infant formula milk in the Singapore market. With the increase in supply, ceteris paribus, it will exert a downward pressure on the price of infant formula milk, thereby increasing the affordability of infant formula milk.

With more options available, the demand for branded infant formula milk offered by incumbent firms will also fall since consumers can now switch to the alternative brands and demand also becomes more price elastic.

Despite the streamlining of import requirements, incumbent firms may deter entry by cutting prices (limit pricing) which increases the affordability for consumers but may also take the form of non-price strategies such as product innovation which increases consumer choice instead. Thereby, the extent of the intended effect on price fall is not certain. Consumers' mind-sets & preferences take time to change. Parents' brand loyalty to the dominant firms' brands due to past experiences and advertising may still linger and result in consumers' perceived benefits derived from branded infant formula milk to be greater than the actual benefits; thereby rendering the above measures ineffective in the SR.

Regulations to curb excessive marketing and encourage greater price competition (Ext 3)

By limiting the extent of these marketing strategies, it lowers the artificial barriers to entry, allowing for a more level-playing field for new entrants into the market to provide equally good infant formula milk. With more options, parents are now able to choose based on the benefits of their infant formula milk, and be less deterred or misled by unnecessary marketing, causing the demand for infant formula milk to be more price elastic. This curbs the extent of market dominance of incumbents reducing their ability to charge high prices, hence increasing the affordability of infant formula milk.

In addition, since new entrants do not need to incur additional costs of marketing, such cost savings could be passed on to consumers in terms of lower prices.

Despite the availability of more substitute brands, demand for branded infant formula milk may still be relatively price-inelastic as they do not perceive the new entrants as close substitutes. Moreover, as it is only consumed for a short term, the proportion of income spent on the good may not be high for the average household in Singapore.

Evaluation/Conclusion:

While the above measures may bring about a fall in the price of infant milk formula, there are limitations and unintended consequence on these firms. For instance, given the oligopolistic nature of the infant formula milk market in Singapore, measures targeted at firms (regulation & streamline import requirements) will be more effective in the short-run due to the uncertainty of the outcome arising from consumer education. However, a fall in the incumbent firms' supernormal profits may affect their ability to develop better infant milk formula in the future.

However, given the possible contestability of markets as a result of the changes in regulations, existing firms are likely to continue to innovate and differentiate their products; especially given that these firms are international brands with extensive market scope.

Mark Scheme

Level	Descriptors	Marks
L2	A balanced and well-explained answer that consider the extent of TWO measures to increase affordability; and is well-supported by case evidence.	5 - 7
L1	Response is largely theoretical and limited in scope (only one measure); or Brief answer which contains some listing and explanation that theoretical and not well-supported by case evidence	1 - 4

	E	Evaluative comment which assess the extent to which measures can increase the affordability of infant formula	
		milk, taking into consideration the context.	

Question 2

a.	Describe the change in consumer prices in the UK between 2013 and 2017.	[2]
	Consumer prices increased at a decreasing rate from 2013 to 2015 [1] before increasing at an increasing rate from 2015 to 2017 [1].	
b.	Explain how the 'squeeze on living standards' of UK households could be caused by the 'sterling-induced jump in cost of living' (Extract 5).	[3]
	Depreciation of pound sterling led to a rise in the price of imported goods and services in pound sterling. (1)	
	Assuming there were no domestic substitutes available and household incomes remained the same, purchasing power of UK households fell. This translates to a fall in quantity of imported goods and services consumed and thereby lowers the material living standards for HHs. (2)	
C.	Explain possible reasons why the UK trade deficit did not improve despite the depreciation of the pound sterling.	[4]
	From Extract 6, UK has slipped down the competitiveness ranking which may suggest a fall in export competitiveness arising from poor quality of exports. This suggests that despite the depreciation of the pound, they might still have been reduced willingness to consume UK exports due to their poor quality. Hence, UK trade deficit did not improve as the depreciation of pound might not have been sufficient to increase consumer's willingness to consume UK exports. (2)	
	As explained in part a), consumer prices have continued to increase, which implies that prices of UK goods & services have increased. Assuming that the inflation rate in UK is faster than the pace of depreciation of pound sterling, price of UK exports in terms of foreign currencies will increase, quantity demanded for UK exports will fall, hence UK export revenue will fall assuming demand for UK exports is price elastic, thereby causing the UK trade deficit to worsen instead of improving. (2)	
	From Extract 5, "time lags arising from importers and exporters having to honor pre-existing contracts" suggests that firms cannot switch their suppliers in the short term (i.e. firms cannot increase demand for UK exports in the short term). Demand for imports and exports remain price inelastic due to time lags in the consumer's search for cheaper alternatives. Hence, despite the depreciation of the pound sterling, trade deficit did not improve because it takes time for UK consumers to switch their expenditure to the relatively cheaper domestic goods and services and for foreigners to switch their expenditure to the relatively cheaper UK exports. (2)	
d.	With reference to Table 2, explain how you would expect the size of the multiplier to differ between the UK and Singapore.	[3]
	Gross savings (% of GDP) in Singapore is about four times that of UK whereas imports of goods and services (% of GDP) in Singapore is about five times that of UK. It can be inferred that the marginal propensity to save (MPS) and import (MPM) is much larger in Singapore than the UK. Since the size of multiplier =	

1/marginal propensity to withdraw (MPW), where MPW = MPS+MPT+MPM, a larger MPS and MPM will thus lead to a larger MPW and hence a smaller size of the multiplier. (2) Thus, UK will have a larger size of multiplier as compared to Singapore. (1)

e. Discuss the possible consequences of Brexit on households and firms in Singapore.

[8]

Intro:

Brexit resulted in the depreciation of pound sterling against the Singdollar (Extract 8) which will have an impact on Singapore households' material standard of living and firms' profitability.

Body:

Brexit may increase households' consumption of imported goods and service, increasing their material standard of living.

The depreciation of pound sterling against Singdollar results in lower price of UK imported goods and services for households in Singapore. Assuming their income remains the same, purchasing power of households increase which increase their ability to consume a higher quantity of UK imports, thereby resulting in a rise in their material standard of living.

Brexit may reduce households' material standard of living.

British companies start to pull back on investment in manufacturing that will have a knock on effect on local support services (Extract 8). Ceteris paribus, the fall in foreign direct investments from the UK will lead to a fall in I, which will result in a multiplied fall in real GDP and increase cyclical unemployment in Singapore, thereby lowering material SOL as households face a fall in their disposable incomes as some members of their household who are employed in the local support services such as advertising, business and professional services, and financial services may be retrenched due to the fall in demand for such services.

Evaluation: Given that the Singapore economy is at or near full employment, the fall in AD may result in the easing of demand-pull inflation instead, which will have a positive impact on households' purchasing power since it results in lower prices of goods and services and thereby households may enjoy higher material standard of living.

Brexit may increase the profits of firms who depend on the UK for factor inputs.

For example, companies like Hart Technology (Extract 8) will benefit from the lower price of imported goods from UK as it lowers the marginal cost of production from the lower input prices due to the exchange rate effect. Assume that these firms do not pass on the cost savings to the consumers, profits will increase.

The extent of the cost savings that these firms achieve would be dependent on the proportion of the factor inputs that are imported from the UK.

Brexit may reduce the profits of firms who export goods and services to the UK and/or derive earnings denominated in pound sterling.

The pound sterling's free fall against most currencies is expected to hurt Asian exporters with strong exposure to UK markets (Extract 8). As the price of Singapore exports in terms of pound sterling increase, demand for Singapore exports fall, resulting in the fall in export revenue for firms who sell their goods and services to the UK. If cost remains the same, profits will fall. In addition,

Singapore firms who derived earnings in terms of pound sterling will see a fall in their earnings when they were exchanged for Singdollar, thereby reducing the profits denominated in Singdollar of these firms.

Evaluation/Conclusion:

In the short term, both households and firms will benefit given Singapore's nature & state of economy. Moreover, since Britain is No. 22 on the list of Singapore's trading partners (Extract 8), its impact on Singapore exporters may be limited as UK may not be a significant export market. Firms who have put in place currency hedging measures to mitigate the downside risks of a falling pound sterling for their earnings in pound sterling will also be protected.

In the long term, if Brexit were to negatively impact consumer and business sentiments across the EU, that would affect both households and firms in Singapore negatively since EU is a significant export market and source of FDI for Singapore.

Level	Descriptors	Marks
L2	A balanced and well-explained answer that consider the impact of Brexit on <u>both</u> households and firms; and is well-supported by theory and case evidence.	4 - 6
L1	Response that only considers the impact on either households or firms or Brief answer which contains some listing and explanation that are theoretical and not well-supported by case evidence	1 - 3
E	For an evaluative conclusion on the consequences, taking into consideration the context and case materials. E.g. time period, type of firms etc.	1 - 2

f. Assess the measures the government should adopt to address the loss of competitiveness in the UK.

Intro

The fall in UK competitiveness may be attributed to: 1) Low productivity growth arising from inefficient training system as seen in Extract 7 which results in the mismatch of skillsets between what workers possess and what firms need, negatively affecting labour competitiveness and export price competitiveness; 2) Domestic infrastructural constraints (e.g. potholed and congested roads, poor business broadband from Extract 7) which increases the cost of doing business, thereby making UK less attractive as a destination for FDI inflows.

The measures that the government should adopt to address the loss in competitiveness include: (1) improving labour productivity; (2) improving productivity through investment in transport infrastructure; and (3) lowering of corporate tax rate.

Body:

The Industrial Strategy seeks to boost productivity and earning power of people throughout the UK (Ext 7)

The government seeks to create a new National Retraining Scheme that supports people to re-skill, beginning with a £64 million investment for digital and construction training. As workers acquire the requisite skillsets to work in higher value-added industries, the value of output will increase with the same amount of input, resulting in higher labour productivity which will translate to lower marginal cost of production for firms, hence allowing firms to pass on the cost savings in the form of lower prices of final goods & services which will thereby enhance export price competitiveness of UK exports.

The Industrial Strategy may not address the root cause of the problem (mismatch in skillsets) that could arise due to the poor receptiveness of the UK workers who are generally resistant to undergo retraining. As firms faced the constraints of acquiring workers with the requisite skill sets (Ext 7) since companies can't get the people they need because the training system isn't working to deliver for them, this hampered firms' ability to restructure their operations and thereby lowered the export price competitiveness of its goods and services.

The £1.7bn Transforming Cities Fund which aims to improve productivity through investment in transport infrastructure (Ext 7) will enhance the export price competitiveness of UK goods and services & attraction of the UK as a destination for FDI.

Investment in transport infrastructure will enhance productivity when congestion is eased. Workers take less time to travel and enjoy a less stressful journey to work, which may cause them to become more productive at work. Moreover, firms also enjoy cost savings for transport with less fuel burnt due to the more efficient road networks. These will translate to lower marginal cost of production for firms, hence allowing firms to pass on the cost savings in the form of lower prices of final goods & services which will thereby enhance export price competitiveness of UK exports.

In addition, improvements in transport infrastructure will spur FDI inflows due to the fall in the cost of doing business in the UK. Firms will be more optimistic of the future business outlook and expect profit margins to improve, thereby will increase their productive capacity by stepping up investments in the UK.

There is a long gestation period arising from the need to seek approvals from the community and local government before the projects can go ahead as well as the long construction time coupled with the added inconveniences due to road diversions/closures in the interim may lower UK competitiveness in the short term before benefits begin to materialize in the medium to long-term.

Lowering of corporate tax rates to 17% by 2020 (Ext 7) will also make UK more competitive in attracting FDI.

The lowering of corporate tax rates will increase post-tax profits for firms, increasing their expected rate of returns, thereby spurring FDI inflows into UK as it makes UK a more attractive destination for FDI as firms get to retain a higher level of profits from their investment returns in UK as compared to other countries.

FDI is often driven by other factors like market sentiments and stability of exchange rate. Given the uncertainties brought about by Brexit which weaken

both business & consumer confidence in the UK and the sharp depreciation of the pound (Ext 6), the cut in tax rates may not make UK an attractive destination for FDI.

Synthesis and Conclusion

Which measure to adopt will ultimately depend on which aspect of competitiveness the government should focus on. She can take into account the impact of Brexit as well as the fundamental problems faced by Britain (e.g. domestic infrastructural constraints) and may assess that the key to restore UK competitiveness may lie in the need to make UK remain attractive to FDI and foreign skilled labour inflows and thereby pursue measures to achieve that.

Given that UK's lack of competitiveness stem mainly from "fundamentals", the most relevant policies would be measures that improve labour competitiveness and infrastructure as they target the root causes. However, as these policies have a longer gestation period, the government may need to complement them with more immediate policies like reducing of corporate tax rates to attract FDIs. This would be important in the short term given the current economic climate, where Brexit is likely to increase uncertainties and costs for foreign investors.

All the above-mentioned measures will worsen the government budget position as UK will suffer from a double whammy of rising government expenditures to fund the various productivity-enhancing initiatives and falling government revenue from the lowering of corporate tax rates. Despite the improvement in government budget position in 2017, this is not expected to sustain moving forward. Increased indebtedness of the UK government will further worsen competitiveness going forward.

Mark Scheme

Level	Descriptors	Marks
L2	A balanced and well-explained answer that considers TWO measures to address at least two aspects of competitiveness (e.g. export, investment, labour); and is well-supported by case evidence.	5 - 7
L1	Response is largely theoretical and limited in scope (only one measure or one aspect of competitiveness); OR Brief answer which contains some listing and explanation that theoretical and not well-supported by case evidence.	1 - 4
E	For an evaluative judgement that reaches a conclusion based upon consideration of the analysis and context; consideration of the effectiveness of each policy taking into account the main causes of the loss of competitiveness, state of the UK economy etc.	1 - 3