

## Question 1

### Chocolate battles out

#### Extract 1 Higher costs bite chocolate makers

Hershey Co.'s rebuff of a \$23 billion bid by Mondelez International Inc. this month comes as rising commodity prices are making it more expensive to produce a chocolate bar. Cocoa-butter prices are at multiyear highs as cocoa-bean processors struggle with unusually small cocoa beans in West Africa, where about 70% of the world's cocoa is grown. Still, the bulk of the costs of making chocolate are in transportation and marketing costs.

The cocoa crop in Ghana, the world's second-largest producer, experienced an unusually high drop in 2015, after farmers there applied key pesticides late in the crop's development. Moreover, it takes a cacao tree five years before it produces its first beans. Hershey said in its last earnings call that the price increases had hurt demand and were in part to blame for a 3.6% drop in sales volume in the second quarter.

Retail prices are expected to rise 2.2% this year in the U.S., according to Euromonitor International, the lowest year-over-year percentage increase in a decade. That modest price increase is because chocolate makers feel they have to absorb rising costs because they can't pass them on to consumers, analysts say.

Source: *Wall Street Journal*, 11 July 2016

#### Extract 2 Appeals for anti-trust laws for Nestle, Hershey and Mars

Buyers accused the three confectionery giants of conspiring to raise chocolate prices in US between 2002 and 2007 during discussions at trade shows and association events. However, the case was dismissed because they failed to provide evidence that the firms' actions were concerted and collusive. In light of the court's ruling, over 20 pharmacies and food retail chains filed appeals against the judgment.

Jeff Beckham, spokesperson for Hershey, said that the company had expected the appeal but said it was pleased the court recognised that there is no basis for the case and misconduct. The chocolate firms said that any pricing increases were due to rising ingredient, manufacturing cost and denied price fixing.

Source: *William Reed Business Media*, 22 May 2014

**Table 1: Top five US confectionery brands: share of confectionery sector**

Share of confectionery sector (%)	2015
Hershey's	31.3
Mars	29.1
Mondelez	5.4
Lindt	5.4
Nestle	5.0

Source: Statista, 2015

### **Extract 3 Sales Pressure on Mondelez, Hershey Could Bolster Case for Merger**

Rival snack makers Mondelez International Inc. and Hershey Co. are both expected to show sales pressure when they report quarterly earnings this week, bolstering some arguments that the two giants could benefit from joining forces. Both Mondelez and Hershey are grappling with changing consumer tastes toward healthier and more natural foods, and in some cases the trend has sent a few companies in search of deals that help them reduce overall costs. Revenue is expected to be \$6.34 billion, down 17% from the same period last year, according to consensus estimates from Thomson Reuters.

Last year's megamerger of Kraft Foods Group Inc. and H.J. Heinz Co. helped the packaged food conglomerates save on overhead expenses and distribution costs. The combined company, Kraft Heinz Co., has posted double-digit increases in profits in recent quarters, despite continued sales decline. Analysts said the appeal for Mondelez to buy Hershey lies in the money the combined company could save by pooling resources and ingredient purchasing. Mondelez could also profit from expanding the Hershey brands overseas, which include Reese's peanut butter cups and Twizzlers, as they are heavily concentrated in the U.S. In fact, many of Hershey's brands have global brand recognition and distribution upside.

However, Bernstein analyst Alexia Howard feels that an acquisition of Hershey would be "strategically unsound" for Mondelez. "Our strongly held view that health and wellness trends will play a key part in the U.S. food industry's future makes us naturally skeptical of this transaction," she said. Hershey has said its sales and profit for the year will be lower than expected as its chocolate bars struggle to compete with newer snacks like fruit-and-nut bars considered by many consumers to be healthier.

Source: *Wall Street Journal*, 26 July 2016

### **Extract 4 Not so sweet if Mondelez buys Hershey**

On paper, a sale to Mondelez could benefit Hershey. Hershey's U.S. market share was at about 44% as of last year, and Mondelez, which generates about 30% of its global sales from chocolate, owns major chocolate brands such as Cadbury. While Hershey has a strong U.S. presence, Mondelez has a global network. A marriage of the two would create the world's largest confectionery company with an estimated 18 percent of the market share, said market research firm Euromonitor International Ltd. In addition, because almost 75% of Mondelez's business is concentrated outside of North America, a potential Hershey takeover may not raise many antitrust concerns within the U.S.

However, while Mondelez has vowed to keep Hershey's name and preserve jobs, some said such promises would ring empty. U.S. food giant Kraft drew controversy in 2010 after it shut a factory in southwest England following its takeover of Cadbury, now owned by Mondelez, going back on an earlier promise to keep the factory open.

Mondelez's bid for Hershey to create the world's largest cocoa buyer, could also hand the bargaining chips in the volatile niche market back to the candy makers. With more buying power, candy makers could demand lower prices from traders already operating on thin margins. The consolidation among chocolate makers create larger buyers of commodities including cocoa and sugar, worrying middlemen who have already seen their margins squeezed. Mondelez is already the world's largest cocoa consumer, and after a tie-up with Hershey it would consume 650,000 tonnes per year, 50 percent more than the No. 2 consumer, Nestle.

Adapted from: *Reuters and Fortune*

**Figure 1: Cocoa Prices from 2000-2014**



Source: CNBC, 13 Feb 2015

### Questions

- (a) (i) With reference to Figure 1, describe the trend in cocoa prices. [2]
- (ii) With reference to Extract 1, use a diagram to explain how an increase in demand for chocolate affects the market for cocoa. [2]
- (b) (i) Identify and justify the type of market structure operating in the confectionery sector. [2]
- (ii) Explain how the firms in this market structure compete against one another. [2]
- (c) Explain why food retail chains are concerned with price fixing by the three confectionery giants. [4]
- (d) With reference to Extract 3 and 4, discuss the impacts of Mondelez and Hershey "joining forces". [8]
- (e) Assess the options open to the government to reduce the possible detrimental effects that will result if Mondelez successfully takes over Hershey. [10]

(a)	(i)	With reference to Figure 1, describe the trend in cocoa prices.	[2]
		Overall, Cocoa prices increased however there was with a sharp drop in 2013.	
	(ii)	With reference to Extract 1, use a diagram to explain how an increase in demand for chocolate affects the market for cocoa.	[3]
		<p>Draw a DD/SS diagram</p> <p>An increase in demand of chocolate will cause demand for cocoa to increase since the demand for cocoa is derived from demand. The equilibrium price and quantity for cocoa increased.</p> <p>Given that supply of cocoa beans are price elastic due to its long gestation period of 5 years, the increase in price brings about a less than proportionate increase in quantity supplied.</p>	
(b)	(i)	Identify and justify the type of market structure operating in the confectionery sector.	[2]
		Oligopoly. The market is dominated with firms with large market share and its 3-firm concentration ratio is larger than 50%.	
	(ii)	Explain how the firms in this market structure compete against one another.	[2]
		<p>In an oligopolistic market, firms are mutually interdependent as there are a few firms with huge market share.</p> <p>They could compete where they engage in non-price competition such as repackaging or advertising to differentiate their range of chocolates sold from their rival firms.</p>	
(c)		Explain why food retails chains are concerned with price fixing by the three confectionery giants.	[3]
		<p>From Extract 2, it is said that the companies are 'conspiring to raise prices', hence they are colluding to behave like a monopoly where they restrict output and increase prices. The food retail chains are concerned as more costly chocolates sold by the confectionary giants reduce food retail chains' consumer surplus and raise their unit cost of production. [1m] If the food retails chains are unable to pass on the higher cost to the consumers in the form of higher prices, their total revenue and hence profits will fall.</p>	
(d)		With reference to Extract 3 and 4, discuss the impacts of Mondelez and Hershey "joining forces".	[8]
		<p><b>[Impacts on producers]: Examples</b></p> <ul style="list-style-type: none"> <li>The merged firm has more substantial market share (Table 1) and will be able to produce at higher output. It is more able to reap internal EOS e.g. marketing economies as the "combined company can save [money] by pooling resources and ingredient purchasing" (Ext 3), managerial economies from better division of labour. As a result, the firm enjoys lower average cost of production</li> <li>This is especially beneficial to the firm since "the bulk of the costs of making chocolate are in transportation and marketing costs" (Ext 1) and therefore the merger will allow for costs of production to be lower to a large extent.</li> </ul>	

**[EV]** However, other confectionary companies might engage in more non-price competition if they view the takeover as a threat. The merged firm may respond by also spending more money engaging in non-price competition (e.g. advertisements) to compete with the other confectionery companies, reducing their profits.

**[Impact on consumers]: Examples**

- When the merged firm is able to enjoy lower costs, they might be able to pass down cost savings to consumers via lower prices hence increases consumer surplus
- The merged firm's ability to sustain supernormal profits in the LR implies that they will have greater ability to channel supernormal profits into R&D which results in greater ability to innovate, generate new products and greater variety for consumers. It is also more able to generate new processes to lower cost of production too and consumers may benefit in the long term

**[Overall impact on economy/society]**

- The takeover might lead to more jobs being created as the combined company expands internationally. This increases employment in factories not just in the U.S. but other areas in which both the companies have factories
- However, in its costs savings drive, it might streamline its production process and lay off workers
- This seems plausible as mentioned in Ext 4 that "while Mondelez has vowed to keep Hershey's name and preserve jobs, some said such promises might ring empty" as similar issue happened when Kraft shut down its factory in southwest England following its takeover of Cadbury, now owned by Mondelez (Ext 4) when Mondelez had earlier agreed to keep the factory open

**[Potential impact on cocoa farmers]**

- The buying power of the merged firm leads to lower prices which may lead to lower profit margins for cocoa traders, hence reducing their material standard of living as the lowered profits reduces their income and hence access to goods and services

**[Synthesis/Conclusion]**

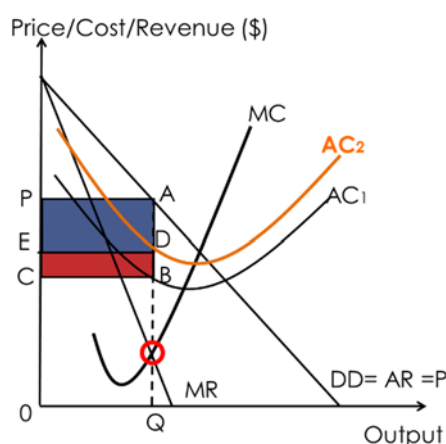
Cost of merger is likely to outweigh benefits

- [Potential entry/ Theory of contestable markets] The combined market share of Hershey's and Mondelez in U.S. will be significantly higher than the next highest firm, Mars. Together with the fact that cocoa prices are rising (Ext 1), and that consumers are increasingly switching away from consuming chocolates for healthier options (Ext 3), it is unlikely that there will be potential new suppliers entering the market → suggests that there will be little threat of potential competition → merged firm is less incentivized to pass down cost savings to consumers and innovate further for the benefit of consumers.

Level	Level Marking Scheme	Marks
L3	Candidate demonstrates their ability to analyse and evaluate the pros and cons of merger for consumers and producers with reference to case materials.	7-8

		<table><tr><td><b>L2</b></td><td>Candidates accurately analyse the effects of merger with the use of economic tools. However, no evaluative comments are demonstrated. Little use of case materials</td><td><b>4-6</b></td></tr><tr><td><b>L1</b></td><td>Candidates makes some relevant comments but without any appropriate analysis.</td><td><b>1-3</b></td></tr></table> <p><i>Adv/disadv without evaluative conclusion- max 6m</i> <i>Cite evidence for both sides of analysis. If evidence only cited for 1 side- max 6m</i> <i>No evidence provided- max 4m</i></p>	<b>L2</b>	Candidates accurately analyse the effects of merger with the use of economic tools. However, no evaluative comments are demonstrated. Little use of case materials	<b>4-6</b>	<b>L1</b>	Candidates makes some relevant comments but without any appropriate analysis.	<b>1-3</b>	
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<b>(e)</b>	Assess the options open to the government to reduce the possible detrimental effects that might result if Mondelez successfully takes over Hershey.	<b>[10]</b>							
	<p><i>Students are expected to address the detrimental effects identified in part(d)(i)</i></p> <p><i>(Identify the detrimental effects to address)</i> <b>Detrimental effects to address:</b> possible exploitation of consumers by merged firm, possible loss of jobs (structural unemployment), impact on cocoa traders who might face lower prices</p> <p><i>(Identify &amp; analyse the different policies to detrimental effects of a takeover)</i> <b>Anti-trust policies:</b></p> <ul style="list-style-type: none"><li>• Detrimental effects: Exploitation of market power leading to higher prices, inefficient allocation of resources and/or anti-competitive behaviours (such as collusion, predatory pricing). The result is a loss in consumer welfare</li><li>• Anti-trust policies are programmes designed to prevent the deliberate creation of monopolies, and to prevent dominant firms from engaging in anti-competitive practices (such as the price-fixing behaviour by Nestle, Hershey and Mars in Ext 2). Government agencies can take firms accused of such behaviours to court, forced it to be split up and/or impose penalties such as fines</li><li>• <b>[EV]</b> However, whether a firm has breached an anti-trust policy is rarely a clear cut case. Also, in this particular instance, as Ext 4 mentions, it seems like the potential takeover may not raise many antitrust concerns within the U.S. simply because almost 75% of Mondelez's business is concentrated outside of North America.</li><li>• Moreover, sometimes companies merge or take over another company not to reduce competition but to lower costs through more efficient joint production. The lower cost can benefit the consumers.</li></ul> <p><b>Regulation through lump-sum taxes</b></p> <ul style="list-style-type: none"><li>• Detrimental effect: greater inequity if the merged firm reaps excessive profits at the expense of consumers and other firms</li><li>• A <b>lump-sum tax</b> can be used to reduce this excessive profit earned as a result of market dominance. A lump-sum tax is a tax fixed in amount and levied without any regard to the output or revenue of the firm. It can be regarded as a fixed cost to the firm and therefore shifts the AC</li></ul>								

curve upwards. If the government uses the tax revenue earned to subsidise the lower-income families, inequity issues can be further reduced.



**[EV]** Firms have incentive to avoid excessive profits by charging lower prices which will help to reduce inequity

### **Supply-side policies (to deal with loss of jobs)**

**Conclusion:** Offer evaluative judgement as to which policy options are better.

Level	Knowledge, Application, Understanding & Analysis	Marks
L3	A well-developed answer on at least 2 detrimental effects of Mondelez's takeover (demerits of monopoly, unemployment due to shutdown of companies, low prices of cocoa) and at least 2 policy available(well explained) to tackle it, considered in the context of that is well supported with usage of analytical tools and evidences. Reasoned judgment on which option should be undertaken based on the problems faced.	7-8
L2	One-sided answer that analyses the effectiveness of 1 relevant policy and 1 detrimental effect OR underdeveloped analysis of two policies and effects of the takeover, with little reference to case materials.	5-6
L1	A descriptive answer that only explains the detrimental effect and policy in brief with many inaccuracies. No evidence capped at level 1	1-4
	<b>Up to 2 marks for evaluation</b>	
E1	Application of relevant economic concepts to make judgment about the appropriateness of measures in the Singapore's healthcare market.	1-2