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**BUSINESS**

Paper 3 Case Study

**9609/32**

**May/June 2016**

**3 hours**

No Additional Materials are required.

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**READ THESE INSTRUCTIONS FIRST**

An answer booklet is provided inside this question paper. You should follow the instructions on the front cover of the answer booklet. If you need additional answer paper ask the invigilator for a continuation booklet.

**Section A**

Answer **all** questions.

**Section B**

Answer **one** question

You are advised to spend no more than 40 minutes on Section B.

The businesses described in this question paper are entirely fictitious.

The number of marks is given in brackets [ ] at the end of each question or part question.

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This document consists of **6** printed pages, **2** blank pages and **1** Insert.

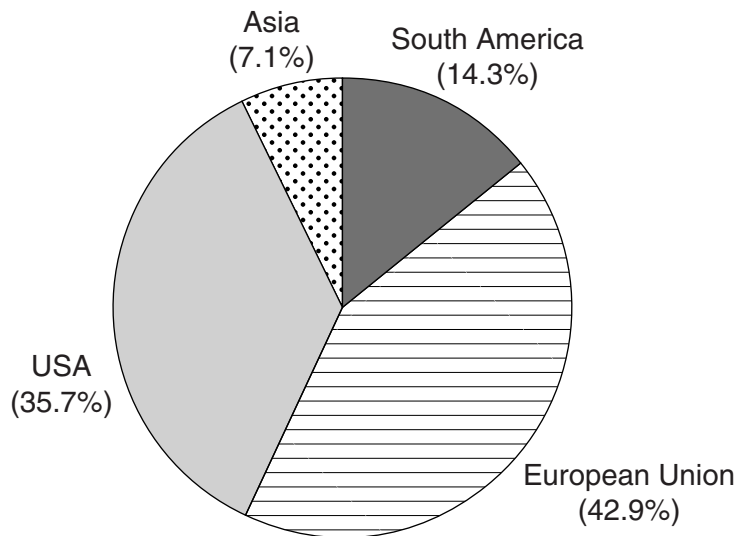
## Cameron Jet Engines (CJE)

CJE is a public limited company specialising in the manufacture of jet engines for aircraft. It has operations facilities in several African and Asian countries but its head office and main manufacturing base is in a European Union (EU) country. The corporate mission of CJE is to 'develop unrivalled engine technology and create power solutions for the next century'. CJE engines are purchased by most of the major global civil aeroplane manufacturers – Fig. 1 shows the geographical breakdown of sales in 2015. The core competence that CJE has gained in jet engines is also put to effective use in the company's marine and electricity generating divisions. CJE's core competence is also used to make power systems for fast boats and for electricity stations.

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**Fig. 1: Geographical breakdown of CJE sales (volume) 2015**

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### Production capacity

CJE managers have been surprised by the commercial success of the XL1 engine. Sales have exceeded forecasts and production capacity of 95% has been reached in the factory where the XL1 is assembled. The lack of spare capacity is most serious in the turbine blade department – the blades are an important part of every jet engine. The Operations Director is this week making a decision about whether to increase capacity in this department or outsource some turbine blade production to another business. This business, AOP, is in country X and its factory is 500 kilometres away from the XL1 assembly factory. AOP has substantial spare capacity as a jet engine manufacturer has recently cancelled a large order. The cost estimates for outsourcing and increasing factory capacity are shown in Table 1.

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**Table 1: Data comparing outsourcing with expansion of CJE factory capacity**

	Outsourcing to AOP	Increase capacity of existing factory	
Time required	Contract could be signed within 3 months – deliveries 1 month after that	15 months for completion of factory	25
Variable cost per blade	–	\$500	
Contracted price per blade	\$570	–	
Transport cost per 10 blades	\$200	–	30
Additional annual fixed costs	–	\$600 000	
Annual fixed costs of existing CJE factory	\$6 million	\$6 million	35
Annual capacity	5000	3000	

**Human resource management**

Despite significant barriers to the entry of new manufacturers, there is considerable competitive rivalry in the jet engine market. CJE's market share of 23% is under pressure from two large European based engine manufacturers. Quality, innovation and reliability are essential requirements of jet engines – but so is a competitive price. CJE has lower profit margins than its competitors and a corporate objective is to match competitors' margins. CJE is using a cost minimisation strategy to achieve this. 40

All departments have been instructed to produce plans for cutting costs by 7% this year. The Human Resource Director has already started implementing his proposals for a more flexible HR strategy: 45

- Recently recruited production employees have been appointed on short-term temporary contracts (even for skilled positions)
- Some unskilled employees have been given zero hours contracts
- All employees are to be required to learn new skills to allow flexible working. 50

**Market for helicopter jet engines**

CJE directors are determined to enter the market for the supply of engines for helicopters. Profit margins are substantially higher than in the market for engines for other types of aircraft. The Marketing Director has had lengthy negotiations with Government officials in country Y, which is a rich nation that is expanding its fleet of 'search and rescue' helicopters. The Government officials are keen for CJE to supply engines for the new helicopters in country Y. However, they have argued that CJE's engines are more expensive than those of competitors and have a shorter after-sales service agreement. Despite these factors, the officials have indicated secretly that a contract with CJE could soon be signed if substantial 'facilitating payments' were made directly to them personally in foreign bank accounts. 55 60

### Financial reporting

Under pressure from shareholders to raise the company's low profit margins, CJE's Finance Director is thinking about making the following changes to financial reporting methods this year.

- Fixed assets are depreciated by the straight line method over 10 years. If this is lengthened to 20 years then it would reduce annual depreciation by \$25m. 65
- Offering a major customer an early shipment discount could provide additional revenue of \$45 million in the current financial year. The expected operating profit margin of this contract would then be 10%.

The Finance Director claimed that, if adopted before the end of October, these measures would help to satisfy shareholder expectations – at least in the short term. 70

**Table 2: Summary of CJE accounting data forecasts, at end of October 2016 before changes suggested by Finance Director (\$m)**

Operating profit	65
Revenue (year ending)	850
Total non-current assets	1250
Intangible non-current assets	50
Net current assets	64
Long term liabilities	600

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### Strategic options

The directors are considering the following two strategies for future growth. 80

*Strategy 1:* Take over a small manufacturer of aircraft in a BRICS country. This manufacturer does not currently use CJE engines. It has designed a new small jet aeroplane which is expected to be popular in lower income countries.

*Strategy 2:* Establish a joint venture with Z&L, a USA based jet engine manufacturer. The joint venture would design and manufacture a new jet engine with a low environmental impact. This engine would be designed and manufactured in an African country. 85

Quantitative and qualitative data regarding these two options are shown in Table 3. Both strategic options would require careful implementation to achieve success as they both have elements of risk and would involve long term commitment of substantial CJE resources.

**Table 3: Data comparing the two strategic growth options**

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	Strategy 1: Take over aircraft manufacturer	Strategy 2: Joint venture with Z&L
Estimated cost	\$200m	\$150m
Forecast internal rate of return (over 5 years)	15%	20%
Greatest risk factor	Lack of synergy	Research fails to develop innovative product
Estimated chance of strategy failure	20%	40%
Expected monetary value if successful (over 5 years)	\$100m	\$120m
Greatest constraining factor	Lack of CJE directors' experience in aircraft manufacture	Culture clash with USA business managers
Greatest driving factor	Supply of CJE engines to this aircraft manufacturer	Developing low cost operations in an African country

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Appendix 1 contains some global economic forecasts that CJE's directors might find useful when making the strategic choice.

#### Appendix 1: Global economic forecasts, 2016–2020

Annual world GDP per capita growth	5%
European Union labour costs (annual growth)	8%
BRICS labour costs (annual growth)	2%
Average increase in global interest rates over period	4%
Growth in global market share of Asian aircraft manufacturers over period	12%
External costs: EU maximum permitted pollution level per jet engine in 2020 (2015 = 100)	80

**Section A**

Answer **all** questions in this section.

- 1 Analyse the impact on CJE of adopting a more flexible approach to human resource management. [10]
- 2 (a) Refer to Table 1. Calculate the difference in unit cost between the two supply options for turbine blades. [6]  
(b) Recommend whether CJE should outsource turbine blade production. Justify your answer using your answer from (a) and other information. [12]
- 3 Discuss the implications for CJE of making 'facilitating payments' to Government officials. [16]
- 4 (a) Refer to Table 2 and the information on lines 64–68. Assume the changes suggested by the Finance Director are made. Calculate:
  - (i) operating profit margin at the end of October 2016 [4]
  - (ii) gearing ratio at the end of October 2016. [4](b) Advise the Finance Director whether to make the proposed adjustments to the way CJE reports accounting results. [12]
- 5 Assess the usefulness of the forecasts in Appendix 1 to any **two** functional departments of CJE. [16]

**Section B**

Answer **one** question from this section.

- 6 Recommend to CJE's Board of Directors which one of the two strategic options the company should choose. Justify your recommendation. [20]
- 7 Assume CJE's directors choose strategy 2. Evaluate how this strategy might be implemented successfully. [20]



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