



UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS  
General Certificate of Education Advanced Level

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**BUSINESS STUDIES**

9707/03

Paper 3

May/June 2008

CASE STUDY

3 hours

Additional Materials: Answer Booklet/Paper



**READ THESE INSTRUCTIONS FIRST**

If you have been given an Answer Booklet, follow the instructions on the front cover of the Booklet.  
Write your Centre number, candidate number and name on all the work you hand in.  
Write in dark blue or black pen.  
You may use a soft pencil for any diagrams, graphs or rough working.  
Do not use staples, paper clips, highlighters, glue or correction fluid.

**Section A**

Answer **all** questions.

**Section B**

Answer **one** question.

The businesses described in this question paper are entirely fictitious.

You are advised to spend 40 minutes on Section B.

At the end of the examination, fasten all your work securely together.

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

This document consists of **5** printed pages and **3** blank pages.



## PYRAMID TELEVISIONS (PT)

PT is based in Country Y and manufactures televisions (TVs). The business undertakes all processes in TV production including research and development, manufacture of components and final assembly. This is unusual in the industry, but the directors believe it ensures excellent product quality. Business is booming for PT. Demand from the home market and export markets is at an all time high. Exports have been boosted by a recent depreciation of Country Y's currency exchange rate. Demand from home market consumers has risen due to low interest rates. The government in Country Y has recently stated its policy of low interest rates is helping to reduce unemployment. Some economists doubt whether this policy can continue. The rate of inflation has just risen for the fifth month in a row.

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### Capacity issues

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PT operates three factories in different locations. Each one specialises in TVs of different sizes and styles. All factories have reached their maximum production capacity with the recent employment of a third shift of workers, working at night for which they are paid a bonus. Average fixed costs have fallen as capacity utilisation reached its maximum. However, the overall efficiency of production has declined. This is shown in Table 1:

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**Table 1: Average costs of production in existing factories**

| Rate of capacity utilisation in the business (%) | Average fixed costs per TV (\$) | Average variable costs per TV (\$) | Average total costs per TV (\$) |
|--|---------------------------------|------------------------------------|---------------------------------|
| 70   | 20                              | 55                                 | 75                              |
| 80   | 18                              | 50                                 | 68                              |
| 90   | 16                              | 54                                 | 70                              |
| 100  | 14                              | 60                                 | 74                              |

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Machinery in two of the factories is unreliable due to continuous working and lack of time for maintenance. Purchased in 2003, the machinery is old by TV industry standards. Technology is changing so rapidly that factory machines need updating every two years. The Operations Director has two alternative proposals for solving the problems of full capacity and declining efficiency. She outlined them at the last Board of Directors' meeting:

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**Option 1:** We could build a large new factory. This could be in a region of high unemployment where government grants are available. Also, planning laws are less strict so it would not matter if the factory was next to a housing estate. This new factory would double the business's production capacity. The three old factories would be closed.

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**Option 2:** This is cheaper. It involves updating the oldest machinery with new, much quicker, robot-controlled equipment to assemble TVs. Production capacity will increase. These machines take up a lot of space. To increase capacity further I propose buying in components from a low cost foreign supplier rather than making the components ourselves."

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### Financial issues

The Operations Director continued: "I have forecast some of the financial data for these two options. It is clear that both options will offer a lower break-even level of production than at present." She presented the data in Table 2 to her fellow directors.

**Table 2: Financial forecasts for the two options**

|   | Option 1    | Option 2                            |
|---|-------------|-------------------------------------|
| Capital cost                            | \$25m       | \$12m                               |
| Annual fixed costs                      | \$21m       | \$12m (total for 3 factories)       |
| Average variable cost per TV            | \$30        | \$40                                |
| Average TV selling price (to retailers) | \$60        | \$60                                |
| Expected annual maximum capacity        | 1.5 million | 1.2 million (total for 3 factories) |

45

Current production capacity and level of sales is 750,000 units per year.

The finance for either option would be borrowed. Although PT is profitable, retained profits are quite low. The directors have recently adopted a policy of paying high dividends to shareholders. "By calculating some ratios from this year's accounts we should be able to convince the bank to lend the finance we will need" said the Finance Director confidently.

#### **Marketing issues**

The Chief Executive is concerned that a high proportion of the company's TVs are being sold through discount shops. "They offer low prices but awful customer service. There is no consumer advice given, they are often in out-of-town locations and they offer no after-sales service. I want PT to control the marketing mix of its own products. We could add value to the product. By offering consumers an excellent retail experience we could charge higher prices. Quality of service could become a unique selling point for us. I want PT to take over the "TV4U" chain of shops. This will cost about \$10m. It offers us a great chance to become a fully vertically integrated TV business". Some of the other directors were less keen. They raised questions about the cost of the shops and whether they had the management skills to operate shops as well as factories. "With either Option 1 or 2 costing so much, could PT afford this takeover?" asked the Finance Director.

#### **Research and development (R and D) issues**

PT's R and D department has created inventions in the last two years but none have proved to be successful. In contrast, its major competitor has introduced a number of new ideas, such as very high definition screens. These product innovations have helped to make demand for the competitor's TVs less price elastic than PT's products.

The R and D Director had his own ideas why his department had failed to produce successful innovations. "The rigid structure of the business, with its many levels of hierarchy, does not work for us. The R and D department needs regular and frequent contact with all other departments to make sure we invent products that consumers might want and that we can produce cost-effectively. My department is too isolated. I recommend that the whole company switches to a matrix, team based structure".

**Industrial relations issues**

The full capacity working had led to workers demanding higher pay or a share of company profits. Many workers belong to the Trade Union of Manufacturing Workers (TUMW) but this is not recognised by PT for negotiations. A union representative is demanding that unless PT managers negotiate with the union to resolve the dispute about pay levels the union members would go on strike. This would be bad news for PT as retailers might stock up with competitors' products. PT's management recognise that this dispute needs to be resolved quickly. 80

**Appendix A: Market research data for PT and its major competitor**

|   | PT TVs | Major competitor's TVs |
|---|--------|------------------------|
| Increase in sales last year when average consumer incomes in Country Y increased by 5%  | 5%     | 10%                    |
| Increase in sales resulting from 10% increase in promotional spending by both companies | 4%     | 8%                     |

85

**Section A**

Answer **all** questions in this section.

- 1 (a) Discuss how PT's management might resolve the pay dispute with the workers. [10]
- (b) Assess the advantages and disadvantages to the Research and Development department of changing the organisational structure of the business. [10]
- 2 Analyse possible reasons why average total costs have increased following the increase in capacity utilisation shown in Table 1. [8]
- 3 Which of the two options for solving the capacity problem would you recommend to PT's Board of Directors? Support your answer by analysing data in Table 2 (including relevant calculations) and any other useful information. [16]
- 4 (a) Using the data in Appendix A calculate, for both PT and its major competitor, the:
- (i) Income elasticity of demand
- (ii) Promotion elasticity of demand. [8]
- (b) Discuss possible changes to PT's future marketing strategy based on these results and other information in the case. [14]
- 5 Assume you are PT's bank manager. Discuss the accounting data and ratios you would need before deciding whether to lend PT the finance needed for expanding production capacity. [14]

**Section B**

Answer **one** question from this section.

- 6 Would you recommend PT to take over the TV4U chain of shops? Evaluate the advantages and disadvantages of this takeover and justify your recommendation. [20]
- 7 Evaluate what you consider to be the most important internal and external factors that could determine the success of PT over the next five years. [20]





