



Mock Exam 3

BUSINESS

9609

Paper 3 Case Study

1 hour 45 minutes

MARK SCHEME

Maximum Mark: 60

Published

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P3 Mock 3 - MS

1 Analyse the likely impact on AEV's profit of intervention by governments in the car market.

[8]

Knowledge

- Definition of profit: revenue less costs
- Understanding of types of government intervention:
 - – Regulation. Rules that businesses have to abide by in a market and constrain business activity
 - – Indirect taxation (to correct market failure). Increase costs of supply to business
 - – Subsidies/government grants. Reduce the costs of production and encourage an increase in output
- Understanding of impact of subsidies on AEV, e.g. increase in AEV sales related to indirect tax on diesel cars

Application

- Ban on sale of diesel cars from 2030 will give AEV a competitive advantage over non-electric cars in the market OR government regulations on diesel cars and ban will increase competition in electric vehicle market
- Increase in fuel duty on petrol in 2019 will benefit AEV
- Benefit is in long term as some regulations will come into force in 2030

- AEV vehicles with zero emissions will not be subject to the regulations
- AEV has received \$1 bn in government grants since 2010
- Government action to increase availability of charging points for electric cars
- 30% tax on imports of cars in country C

Analysis

- Diesel ban will reduce competition for AEV resulting in a potential increase in sales of electric vehicles and increase in AEV's profits as a result
- Announcement of changes will influence trends in the market leading to a rise in electric vehicle sales immediately
- Increase in fuel duty will make vehicles using petrol/diesel less competitive in the market. This will boost AEV sales, as electric vehicles will be relatively less expensive to run
- Country C tax on imports will increase the selling price of AEV cars reducing demand and profit
- Subsidies received by AEV from government may have conditions attached which impact AEV operations
- Subsidies received by AEV provides finance for investment to develop products, manufacturing and workforce
- Subsidies enable expansion of output by reducing costs and therefore increase sales and potentially profit

2 'AEV is unable to meet this demand due to a lack of capacity and supply constraints'. Other than expansion of CellX, discuss ways in which the Operations Management Department of AEV could solve this problem. [8]

Knowledge

Definition of capacity: maximum output achievable with current resources

Identification/understanding of options

- Outsourcing production
- Improve efficiency – increase labour productivity, e.g. by motivating employees more effectively
- Reduce labour turnover
- New manufacturing base
- Find new suppliers
- Take over supplier
- JIT manufacturing/lean production (more efficient use of existing resources)
- Increase capital intensity at CellX

Application

- Workers already facing compulsory overtime
- Increase in production required is significant. Current production is 100 000 units per year

- Akira is worried about labour turnover. This is a contributory factor that reduces output
- Source materials for batteries from countries other than country C
- Take over supplier in country C
- Invest in new manufacturing plant in country
- Negotiate with trade union as 80% of workforce is unionised
- Outsourcing production of batteries/cars

Analysis

- Outsourcing could risk loss of control over quality of components such as batteries. This could further impact reputation of AEV
- Outsourcing involves no major capital investment and therefore aids AEV's cash flow
- Establishing a new manufacturing base will be expensive and affect AEV's cash flow and result in greater coordination problems – diseconomies of scale
- Reducing labour turnover will ensure that AEV keeps experienced workers and thus enable an increase in output
- JIT manufacturing/lean production enables a more efficient use of resources thus increasing output per worker
- JIT can reduce storage of inventory and allow a more efficient use of space for production leading to an increase in output

Evaluation

- Depends on the cost of outsourcing
- Difficult working conditions may make reducing labour turnover challenging
- As batteries depend on rare materials it may not be possible to source the materials from elsewhere
- Given the increase in production required expansion of CellX may be only viable approach but this will take time and not alleviate the immediate capacity problems faced
- Supplier constraints likely to be faced by all manufacturers of electric vehicles so gaining control of supplier may be the best option
- Some options may in theory enable an increase in capacity but do not necessarily address the supply constraints faced
 - – JIT manufacturing
 - – Improvements in efficiency
 - – Reduction in wastage

3 a) Refer to Appendix 1. Calculate for 2019:

(i) the dividend yield

[1]

dividend yield = dividend per share/share price × 100 and/or
dividend per share = total dividend/number of shares

dividend per share = $10/70 = (\$)0.143$

$$\text{dividend yield} = 0.143/130 \times 100$$

dividend yield = 0.11% or 0.1% or 0.1098% ans

(ii) the price earnings ratio

[1]

price earnings ratio = share price/EPS

EPS = profit for the year/total shares issued

$$\text{EPS} = 48/70$$

$$\text{EPS} = (\$)0.69 \text{ or } 0.7 \text{ or } 0.686$$

$$\text{Price earnings ratio} = 130/0.69$$

Answer between = 185.7 to 191.2

(iii) the return on capital employed (ROCE).

[2]

ROCE = Operating profit/capital employed \times 100

Capital employed = 3 + 2.5 = 5.5(\$ bn)

$$\text{ROCE} = 0.06/5.5 \times 100$$

$$\text{ROCE} = 1.09\%$$

(b) Refer to 2(a) and any other information. Recommend whether potential investors should purchase shares in AEV. Justify your recommendation.

[12]

Knowledge

- Investors will be interested in the return on their investment
 - – Capital gains from increase in share price
 - – Dividend paid for ownership
- Understanding of relevant factors in decision
- Assessment of future profitability of AEV
- Current performance, e.g. profit of AEV, ROCE, PER, dividend yield

- Return of alternative investments

Application

- Price earnings ratio of 188 is very high and suggests that shareholders will take many years to gain a return on their investment but also suggests that market has confidence about future profitability of AEV
- Low ROCE of only 1.09%
- Dividend yield is very low – 0.11%
- Proposed increase in dividend to be paid in 2019 from 2018
- Share price has risen by 30% in last year
- Regulatory changes should benefit AEV and therefore its profits
- Market capitalisation of AEV is high relative to assets of the business
- AEV profits have become positive in last year
- Current ratio has decreased and is quite low (below 1.5) so may suggest concern about liquidity
- AEV has used significant cash over last year (\$200 m)
- Successful R & D to improve battery technology
- Production delays and quality problems

Analysis

- AEV faces many difficulties in increasing profits and profitability – problems in operations to meet demand and need to increase finance to fund expansion. This means that investment is risky for potential investors
- Akira committed to growth strategies. This will reduce dividends in the future as any profits likely to be retained for investment
- Profitability is low suggesting lack of dividend payments
- Markets are changing in AEV's favour. This will increase future potential for profits and therefore returns to investors

Evaluation

- Justification of most important factor
- This is a risky investment as AEV profits are low and returns are long term
- Is the market capitalisation unrealistic and purely based on potential rather than actual performance?
- Dividend yield is very low: 0.11% – how does this compare with other investments?

4 (a) Refer to Table 1. Calculate the difference in labour turnover between 2017 and 2018.

[4]

Labour turnover = Number of employees leaving over period / Average number of employees during period × 100

Labour turnover 2018 = $165/1300 \times 100 = 12.69(\%)$

Labour turnover 2019 = $250/1500 \times 100 = 16.67(\%)$

Change in labour turnover = 4% (points) (increase of 31.5%)

Within range of 3.9% – 4%

(b) Discuss the importance of human resource management to the success of the planned expansion of the CellX manufacturing centre.
[12]

Knowledge

Definition of human resource management: the strategic approach to the effective management of an organisation's workers so that they help the business gain a competitive advantage.

Understanding of role of HRM

- Need for workforce planning
- Motivation of employees
- Importance of cooperation between management and the workforce to success
- Recruitment, selection and training

Application

- High labour turnover of 16.7% is a problem for AEV operations
- High union density
- Workforce planning to recruit 2000 workers with appropriate skills
- Need to double output per employee to meet target

- Reference to issues of employee dissatisfaction
 - – Long hours
 - – Compulsory overtime
 - – Unrealistic production targets?
 - – Employee health and safety
- Quality problems may be linked to employee dissatisfaction

Analysis

- If labour turnover continues to increase this will impact AEV's ability to meet the growing demand for vehicles. Delays in delivery of vehicles will impact reputation and future sales as customers will go elsewhere
- Quality problems will also harm sales in the long term. Employee concerns need to be addressed to improve product
- Determination of employment contracts in order to control costs

Evaluation

- Justification of most important issue
- Success of expanded CellX depends crucially on employees. HRM is critical in terms of planning and execution of the expansion
- There are other factors that will also determine success, e.g. supplies of raw materials from country C for the batteries

- Depends on availability of finance

5 Discuss the significance of product development to AEV's future success.

[12]

Knowledge

- Definition of product development within Ansoff's Matrix framework, i.e. new product for existing market
- Definition of product development: the development and sale of new products or new developments of existing products
- Definition of research and development: scientific research and technological development. This will contribute to product development
- Benefits of product development:
 - – Competitive advantage
 - – Developing products to meet customer expectations

Application

- Significance of improvements in battery technology to gaining competitive advantage. R&D's contribution to increasing energy density
 - Reference to data in Fig. 1
- R & D: \$400 m in 2019 increased from \$150 m in 2015
- R&D has helped reduce battery costs by 75%
 - AEV4 model important to take AEV from a niche producer to a mass producer

- Reference to developing electric truck
- Move to profitability in 2019 is a result of R&D

Analysis

- As battery costs fall then price can be reduced increasing the competitiveness of AEV relative to competitors
- Electric vehicle sales face constraint of range of vehicles on battery charge making them less desirable than alternatives due to difficulty of driving long distances
- Increasing energy density will improve the product and can be used in promotion of AEV products to gain customer interest
- Development of AEV4 broadened AEV's market appeal resulting in increased sales and profit
- Enhance reputation as an innovative company increasing brand loyalty and sales

Evaluation

- Product development essential in this market as without it product unable to compete with existing technologies
- Cost of research is high and not guaranteed to be successful
- First mover advantage may be important
- Dynamic nature of the car market requires AEV to be constantly developing its products to maintain a competitive edge

- Other factors will be important to future success, e.g. government policy

