



Mock Exam 2

BUSINESS

9609

Paper 3 Case Study

1 hour 45 minutes

MARK SCHEME

Maximum Mark: 60

Published

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P3 Mock 2 - MS

1 Analyse how SWF might benefit from introducing a quality assurance system.

[8]

Knowledge

Definition of quality assurance: based on setting agreed quality standards at all stages of production in order to ensure customer satisfaction is achieved.

Accept:

- TQM as particular form of QA
- Giving responsibility to workers for checking quality

Benefits:

- Makes everyone responsible for quality
- Motivational impact of self-checking and efforts to increase quality leads to increased productivity
- System can be used to trace back quality problems
- Reduces the need for expensive final inspection – no need for quality inspectors

Application

- Could avoid issues such as the poisoning caused by inadequate cleaning of production valve
- A failure of SWF was in not identifying the problem of the production valve

- Importance of quality in a food industry context
- Maintaining SWF's reputation for good quality products
- Impact on sales to national supermarket group that SWF supplies
- Link to mission statement which refers to meeting customers' needs and expectations

Benefit of QA can be explored in context of the possible consequences of SWF's failure to assure quality of milk:

- Possible loss of government contract to supply milk to schools
- Impact on sales of non-milk products such as ice cream and butter
- Payment of compensation to those affected by sub-standard products

Analysis

- Building of chains of arguments linked to Knowledge and Application points raised above
- Impact on long term reputation and therefore sales and profits
- Avoid payment of compensation in poisoning outbreak will reduce profits
- Loss of contract to government would reduce sales and profits
- Motivation leading to higher productivity will lead to higher profits / enable SWF to offer more competitive prices.

- Less rework of goods produced leading to a reduction in costs

2 Assess the likely impact on SWF's profitability of the changing external environment.

[8]

Knowledge

- The external environment includes consideration of the economic, social, technological, demographic and legal factors that influence SWF.
 - Profitability; rate of return measured by profit margins
- Application
- Use of data in Table 1
 - Technological changes e.g. automation of milking offer solutions to problems
 - Demographic changes resulting in decreasing sales of milk. This is SWF's core product accounting for 70% of sales.
 - Consumer price inflation is lower than feed cost inflation
 - Increasing costs may mean that SWF needs to identify methods of increasing efficiency
 - Changes to minimum wage are likely to impact SWF as employees may be paid near MINIMUM WAGE
 - Changes to government policy important as SWF has contract for supplying milk to schools.
 - Exporting products will be subject to the regulatory regimes of other countries as with country P

Analysis

- Decreasing sales of milk due to demographics means SWF may need to identify alternative markets for using milk such as frozen desserts. Entering these new markets may require substantial investment.
- Consumer price inflation is lower than feed cost inflation – this could put pressure on SWF's profit margins.
- As MINIMUM WAGE increases SWF production costs may increase and this may reduce profits. This may affect all other farming businesses equally
- Technological changes offer solutions to problems to cost pressures but require substantial investment and therefore carry risk
- Increasing costs will mean that SWF needs to identify methods of increasing efficiency.

Evaluation

- Identification of most important external factor and justification
- SWF less affected by MINIMUM WAGE changes as they can automate milking
- Diversification of SWF will have reduced risk
- Impact of cost increases on profitability depend on price elasticity of demand
- The external environment is dynamic and may change in the future and affect profitability differently. What if government changes policy?

Will government increase subsidies to farms?

- Data in Table 1 is forecast. Actual changes may be very different
- Impact of changing environment will depend on the management of SWF and its flexibility in responding to change. Contingency planning may be significant.

3 (a) Refer to lines 37– 48 and Table 2. Calculate, for the purchase of the automated milking machinery, the:

(i) accounting rate of return (ARR)

[2]

ARR = Annual return/Capital cost x 100

Return = \$940 000 or 940 000

Annual return = \$188 000 or 188 000

ARR = 9.4%

(ii) net present value (NPV) at a discount rate of 10%.

[2]

Year	Net cash flows (\$000s)	Discounted cash flows (\$000s)
1	200	182
2	710	589.3
3	780	585
4	650	442
5	600	372
Cumulative inflow		2170.3
Less Yr 0	(2000)	(2000)
NPV		170.3

NPV = \$170 300

(b) Recommend to SWF whether the new automated milking machinery should be purchased. Justify your recommendation.

[12]

Knowledge

Understanding of factors influencing decision:

- NPV
- ARR
- Payback
- Importance of finance required/cost of investment
- Benefits of automation
 - – Increased productivity
 - – Lower labour costs
 - – Consistent quality
- Disadvantages of automation
 - – Labour redundancy
 - – Training of workers
- – Initial cost
- Use of strategic choice techniques such as force field analysis

Application

Use of results to investment appraisal/case study information. OFR

- NPV \$170 300 so worth considering
- ARR 9.4% – a good return on investment?
- Calculation of payback; 3yrs 5.72 months (Allow 5.7 or 5.8 months)
- Discounted payback; 4yrs 6.5 months
- 100 employees may lose jobs. Contradicts the stated core values of SWF regarding employees
- Other firms too small to take advantage of machinery – SWF gains competitive advantage
- Calculation of cost per farm = \$100 000
- Reference to industry being competitive. Price important.
- Application of strategic choice techniques

Analysis

- Cost savings would make SWF more competitive in market enabling price to be reduced leading to higher sales.
- Impact of redundancies on motivation and therefore productivity of firm
- Impact of redundancies on reputation and sales of SWF
- Reaction of unions/ employees could lead to industrial action and disruption to production during transition. This could impact reputation and future sales

Evaluation

- Identification and justification of most important factor.
- How many employees will leave due to natural wastage?
- Would consumers care about redundancies or do they just want cheaper milk – Some evidence of ethical considerations as sales of organic produce is increasing
- This is a competitive industry, feed costs are increasing and sales decreasing – SWF must change to remain competitive.
- This is a significant investment that has to be financed. Does SWF have sufficient funds? Will a loan be required? What is the rate of interest for borrowing?

4 (a) Refer to the table in Appendix 1. Calculate:

(i) the centred quarterly moving average for quarter 3, 2018. [1]

4 period MA = 8 period moving total/8

= (23 + 36 + 50 + 36 + 36 + 50 + 36 + 25)/8

= 292/8

= 36 500 litres or 36.5 thousand litres

(ii) the seasonal variation for quarter 3, 2015. [1]

Sales – 4 period moving average trend

= 40 – 30

= 10 000 litres

(b) Refer to the table and graph in Appendix 1. Calculate SWF's forecast sales for Quarter 3 in 2019. [2]

Predicted trend from inspection of graph: 40.8

Add average seasonal variation Q3 = 11.97

Forecast = 52.77 thousand litres or 527 700 litres

(c) Refer to your result from 4(b). Discuss the usefulness of sales forecasts to SWF when making marketing and operational decisions. [12]

Knowledge

- Methods of forecasting sales: TSA, Delphi etc
 - – TSA based on extrapolating from past sales data
 - – Delphi technique based estimates of a panel of experts
- Sales forecasting using Time Series Analysis takes account of seasonal variations and gives a realistic prediction.
- Marketing decisions relate to marketing strategy / marketing mix
- Operational decisions relate to production e.g. stock control, capacity utilisation. May include reference to numbers of workers / types of contract

Application

- Trend clearly shows that sales of ice cream are increasing
- Reference to usefulness of data in Table 1 e.g. change in milk sales by volume etc
- Forecasting enables planning, this method fits ice cream sales pattern well i.e. SWF faces clear seasonal variation and consistent past trends so it is reasonable to assume that the future will be similar, making forecasting valuable for planning. E.g. Volume of

milk required to meet production requirements

- Combined forecasting sales of milk and milk products will inform decisions regarding purchase of animal feed, herd size required – this requires relatively long term planning as herd size may take time to alter.
- Case indicates possible changes to the market; demographic change and change in tastes will impact accuracy of forecasts based on past data
- Not all products sold by SWF will demonstrate seasonal patterns of demand e.g. milk thus using 4 period moving average not necessary.

Analysis

- Helps ensure efficient use of labour and machinery helping to control costs of production and therefore ensure profitability
- Marketing decisions regarding pricing will be influenced by many other factors such as PED and costs of production
- Advertising likely to be influenced by overall sales so forecasting important but will also be influenced by competitor actions
- Objectives will influence decisions – e.g. if SWF wishes to increase profits may need to cut costs of operations
- How forecasts contribute to market planning and production planning

Evaluation

- More reliable than simple forecasting or just projecting a trend

- Relies on future events behaving as in past so may not be reliable
- Extent to which it is or isn't useful
- Other evidence needs to be taken into account e.g. prediction of competitors' behaviour, likely future government actions, and/or economic changes
- May be advisable to introduce an element of probability to the forecasts – what if analysis?

5 The Board of Directors is to consider changes to the organisational structure of SWF needed during a period of business growth. Recommend changes to the organisational structure of SWF. Justify the changes you recommend.

Knowledge

- Organisational structure shows the lines of authority/chain of command in an organisation – also spans of control/levels of hierarchy/formal communication channels
- Knowledge of different organisational structures e.g. matrix, geographic
- Delayering – e.g. from tall to flat
- Centralisation/Decentralisation

Application

- Current structure appears to be traditional hierarchy based on functional departments. This hasn't evolved with the growth of the business and could lead to potential inefficiencies linked to:

- – SWF has farms throughout country Q and regional differences.
- – SWF produces a range of products – milk, ice cream, cheese – that may require different ways of managing e.g. marketing. Could this be better achieved through a product based structure
- – SWF sells internationally – may require different approach to selling goods.
- – Expansion plans include further extending the product portfolio

Other options include:

- Geographical structure e.g. farms throughout country Q, sales in country P
- Business unit structure e.g. ice cream, milk and option 2
- Matrix structure for new projects such as option 1 or 2
- Remain hierarchical but adopt a flatter structure

Analysis

- Analysis of why the current structure is not suited to SWF
- Analysis of why the structure is not suited to growth of the business or increasing competition which might need more flexible/adaptable structure
- Geographical structure allows for regional/country differences and quicker local decision making – less control from SWF head office though?

– SWF has farms throughout country Q. Regional differences may require managers to respond to local conditions. A centralised, tall structure may prevent SWF responding appropriately. A more decentralised structure might be more appropriate.

- Business unit structure allows specialist managers to focus on different needs of different divisions – might lead to rivalry though?
- Matrix structure improves communication between departments allowing better decisions to be made. This could be linked to change required by strategic options.
- Analysis of benefits of a centralised structure currently used

– Consistency of management

- Analysis of benefits of change to decentralised structure.

Evaluation

- Judgement as to which structure is best suited to SWF with justification
- Recognition of possible limitations on change e.g. impact of layering on motivation, role of unions etc.
- Judgement as to which is most important factor guiding the change e.g. need for more effective coordination.