

OPERATIONAL CASE STUDY February 2018 EXAM ANSWERS

Variant 4

The February 2018 exam can be viewed at

These answers have been provided by CIMA for information purposes only. The answers created are indicative of a response that could be given by a good candidate. They are not to be considered exhaustive, and other appropriate relevant responses would receive credit.

CIMA will not accept challenges to these answers on the basis of academic judgement.

SECTION 1 - BRIEFING NOTE

SPECIALIST WEB RETAILER GRAPH

What the graph shows:

The graph shows us that specialist web retailer A has a higher fixed fee per week than specialist web retailer B. This is because the line for web retailer A touches the y axis at G\$2,000, which means that if no items were sold the fee would be G\$2,000, whereas the line for web retailer B touches the y axis at G\$1,000. However, specialist web retailer A has a lower commission per item than specialist web retailer B. This is because the slope of the line for A is less steep than that for B.

This means that web retailer A is the more expensive of the two retailers when demand is lower and less expensive when demand is higher. The demand crossover point is 2,000 units as at this point both web retailer A and web retailer B will charge around G\$2,200 per week.

The decision:

If we have a risk neutral approach to decision making we would use expected value to make the decision. This is because a risk neutral decision maker is not affected by the degree of risk (variability) in a set of outcomes and so is indifferent between choices with the same payoff. The information provided by the market research company shows that the sum of the demand levels multiplied by the probabilities is 2,545. Therefore, a risk neutral decision maker would choose specialist web retailer A, as at a demand level of 2,545 this retailer is the cheapest.

Limitations of using expected values for decision making:

The limitations of using expected value for decisions of this type are as follows:

- The expected value is dependent on the estimate of the probabilities which are subjective. Although the market research company is an expert in the market, it is unlikely to be totally accurate.
- As the expected value is a weighted average it is not suited to one off decisions, such as this.
- The expected value gives no indication of the dispersion of possible outcomes around the expected value, that is, the risk. It can be seen from the graph that specialist web retailer A has a much narrower range of possible costs compared to specialist web retailer B.

MARKETING MIX

Product

The “Heart of Glass” range is satisfying different needs to our usual products as the core product is different. The core product is, in essence, the benefits the customer perceive that they gain from owning and using the product. The core product for our usual customers is enhancement of food and drink while for the “Heart of Glass” customers it is likely to be the pretence of belonging to a time and lifestyle portrayed in the TV programme. The distinction is important because the actual product (brand, design, quality, materials, packaging, and so on) is constructed around the core product. Although we will apply the same standard of quality materials and manufacture, the design and packaging for this range will be distinct and different from our existing range.

Although our usual products have an excellent reputation for style and design, other crystal manufacturers are able to produce very similar products. This is not the case with the “Heart of Glass” range as we have exclusive production rights. One point that is worthy of note is that some of our designs have sold consistently well in the market for over half a century and this is unlikely to be the case with the “Heart of Glass” range. This product range is probably going to enjoy a short product life cycle as it is based on a TV programme.

Place

Many individual customers will visit the department stores, the independent stores, and our own factory shop, in order to inspect, compare and hold the products and to receive advice and guidance from the sales staff. The skill and expertise of the staff in these specialist departments are part of the mix needed to complement the products themselves. With the new range this will not be possible as the “Heart of Glass” sales will be through the specialist website. This is acceptable because the preference for an item will be based almost entirely on how it looks rather than its ability to enhance food and drink.

The “Heart of Glass” series has at least another two series commissioned and it is likely that the TV production company will sell the right to broadcast in other countries. As we have exclusive rights to sell this range it is likely that we will sell it in other countries too. We currently sell 20% of our products internationally and therefore already have a distribution network in place for any likely expansion.

Price

All of our products are premium priced and the “Heart of Glass” range will be no different. However, the “Heart of Glass” range has the advantage that customers cannot replicate as we have no competition for this range. We could exploit this, together with the short product life cycle and aim to price skim this product at its launch.

Promotion

Most of our promotion is done through personal selling, either through the relationships that we have built up with the buyers at the department and independent stores that stock our products, or to a lesser extent through our own shop and website with the individual customers. Usually our advertising is through specialist life style magazines, our website or word of mouth. This “Heart of Glass” range will require little personal selling as the majority of sales will be made via the specialist website. The products are in effect advertised for us via the product placement in the television programme.

SECTION 2

From: Finance Officer
To: Tonya Shah, Sales & Marketing Director
Subject: Re: New customers and budgets

NEW CUSTOMERS

Assessing creditworthiness:

Before any potential customer is granted credit, we need to assess the likelihood that they will pay. The finance department does this by collecting information that assesses the level of risk that they will be able to honour their debts. We use a variety of different sources of information: for example, we might analyse the customers' published financial statements or possibly use a credit reference agency. We will source this information ourselves as we do not need the potential customer's approval.

In respect of the potential customer you will need to ask them for permission to approach their bank for a bank reference. You will also have to ask them to provide us with the details of and permission to approach a couple of companies that currently grant them credit. We will then ask these companies for a trade reference.

We will also need information from you. Part of the decision to grant credit will be based on your analysis of the company. Your sales staff will visit all of these customers and can let us know if they seem prosperous and honest.

Setting credit limits:

Once we are satisfied that it is safe to give credit to the customers we can then determine the value of goods that we can allow them to buy on credit and how long we allow them to pay. In other words, the credit terms. Obviously, the more value and time we allow the greater the risk to us. These two factors will depend upon the risk profile of each customer. The large department store chain will probably be allowed our usual credit terms (30 days) immediately as they will probably be the most financially stable.

The smaller customers may have to accept smaller credit limits and shorter credit terms initially. Some may even be cash on delivery customers for a period. Once they have proved that they pay on time and in full we can probably extend the terms. This is one of the reasons that we monitor all our credit customers carefully.

Monitoring credit customers

New customers will be monitored by the finance department. As mentioned, we do this in order that we can increase credit (and therefore boost our own sales) and to set up an early warning system.

We calculate the receivable days for all customers and this gives us an indication that customers are paying within the agreed time but it is the age analysis of outstanding debt that is our main tool to monitor credit customer. This is an internally generated report that shows what each customer owes us by the age of the debt. We investigate any invoices unpaid that are outside of terms and take action as necessary.

PURPOSE OF BUDGETING

Coordination:

Sales quantity is usually our principle budget factor as it sets the limit that we can expect to achieve in the budgetary period. It is the starting point for all of the other budgets. Once we have the budgeted sales quantity we know how much to produce. Until we know how much to produce we do not know how much material and labour we will use and consequently how much to buy. Therefore, knowing the amount of additional sales means that we need to coordinate the activities of all of the different production activities. In addition, we will need to coordinate with our sales and distribution partners to ensure that the goods produced reach the customers on time.

Planning:

Our operations are substantially affected by the demand for the “Heart of Glass” range. This means that we have less spare capacity than usual, which necessitates more careful planning in order to ensure that we have resources in place when we need them. For example, we will need to prepare in advance for any outsourcing work; we will need to agree the amount of work, the cost of the work and put in place systems to ensure that the quality is acceptable at each stage of operations. These are all complicated negotiations that need to be done in advance. This requires planning.

These additional sales will change the cash inflow that we can expect, whereas the factors of production and distribution to achieve the sales, will change the cash outflow that we can expect. This many lead to cash deficits or surpluses, both of which will need planning for.

Utilisation of resources:

It is possible that because of the increase in production needed to fulfil the sales demand for the “Heart of Glass” range that we will be unable to satisfy demand for all our products. At this point we may need to make a decision to make one product or another, based on the best use of our available resources. Without knowing sales quantities we will not be able to make these decisions in a timely manner.

Control and evaluation:

Our budgets are based upon expected performance: we know how long it should take to manufacture a crystal bowl and how much an hour of labour costs. We can compare actual costs to flexed budget costs throughout the budgetary period and take action if required when the expected cost is higher or lower than it should be. Budgets are used as benchmarks of expected performance throughout the budgetary period and not just at the end as you suggest.

Communication and motivation:

Throughout King Crystal we have budget holders who are responsible for their area of operations: purchasing, furnace, annealing, packing and so on. If we know the sales quantity in advance we can let these budget holders know what is expected of them. Without a clear target of what is expected of them staff can become demotivated and work below their optimal level, with your sales figures we can ensure that this will not happen.

SECTION 3 – BRIEFING NOTE

THE PROPOSED PRODUCTION SCHEDULE

Explanation of the schedule:

The principle behind the schedule produced by Gregor is that we should maximise the contribution that can be gained from each hour of a single scarce resource, in this case each hour of master glassblower time. This is because the contribution that we can generate in total is restricted by this shortage, as our production capacity is less than sales demand.

The schedule has been produced by first calculating the contribution for each product and dividing it by the MGB time taken to make each product. This gives us the contribution per hour of MGB which has been ranked in descending order of benefit so that we can prioritise those products that maximise our return for each hour. This will ensure that we maximise the total contribution that we will earn this week from the resource that we have available.

The number of labour hours needed to meet the minimum and maximum demand has been calculated by multiplying the minimum and maximum demand units by the MGB hours needed to make each product. The number of labour hours needed to meet the minimum demand has then been allocated to the products. We have allocated these in rank order and are 12 hours short of being able to meet minimum demand.

How we can use the schedule to determine the maximum that we would be prepared to pay for the artisan master glassblower's time:

If we employ the artisan next week we would firstly prioritise 12 hours to fulfil the minimum demand requirement and make "Heart of Glass" sets until we can make the full 1,100 needed.

After that, if we assume that all decisions are made on a purely financial basis, we would make the products in the ranked order up to the maximum demand level. The first ranking product is vases but as this is already at maximum we will make as many glasses as we can with the remaining artisan labour. However we will not be able to meet maximum demand for either the glasses or the "Heart of Glass sets".

As already stated, if we were to employ the artisan we would first use him to make up the minimum demand for the "Heart of Glass" sets. As each labour hour spent making "Heart of Glass" sets earns us a contribution of G\$340, this plus our usual labour cost per hour is the maximum that we would consider paying the artisan. This figure is known as the shadow price and is the contribution we could earn if we had one more hour of a scarce resource. This means that even if we paid the artisan G\$80 an hour we would still earn a healthy contribution.

The shadow price would change once we had made the minimum number of "Heart of Glass" sets as we would then consider using the artisan to make glasses. The contribution per hour for a glass is G\$388 and therefore the shadow price, the amount that we would consider paying the artisan is G\$388 plus the normal hourly rate for a master glassblower: significantly above the artisan rate. This is higher than for "Heart of Glass" sets as glasses earn more contribution for each MGB hour.

MASTER GLASSBLOWER OVERTIME

I cannot agree to change the time sheets of the workers in order that we appear to be complying with the law regarding the level of overtime worked as this would breach King Crystal's corporate and social responsibilities and would also be unethical.

CORPORATE AND SOCIAL RESPONSIBILITY (CSR)

This is the idea that as a company we take account of the wider stakeholders involved with and connected to our business and not simply the shareholders. Thus CSR is comprised of four levels: Economic, Legal, Ethical and Philanthropic and three of these apply in this case.

Economic:

This is the extent to which King Crystal contributes to the local economy. Obviously, we employ local workers who will spend their wages locally and help the local economy as well as earn a good return for our shareholders. The extra wealth generated by this overtime will not effect this substantially.

Legal:

This is the understanding that we at King Crystal adhere to any legal obligation. By asking our workers to work more than 10 hour's overtime we are breaking the law and not applying good CSR.

Ethical:

We at King Crystal must ensure that we behave well and do the right thing. Even if it were not bound in law the danger of working too long in a physically stressful environment that could lead to accidents and danger, simply to save a relatively small amount of money, would not be considered important.

CIMA'S CODE OF ETHICS:

As a member of CIMA I am bound by an ethical code namely that I act with: integrity, professional behaviour, professional competence, objectivity and keep information that I gain through my professional role confidential.

If I were to falsify the time sheets as requested I would be breaching this code. Firstly, I would not be acting with integrity as I would be lying to the authorities. In addition, asking me to keep information from my line manager and Finance Director I would be, in effect, allowing them to be deceived.

Regarding professional behaviour, I am bound to adhere to all the relevant laws and regulations. If I were to acquiesce to your request I would be breaking the law that states that glassblowers cannot work more than 10 hours overtime.

Finally, as you indicated that I might receive a better bonus in exchange for changing the timesheets, I would be acting in my own self-interest rather than ethically if I did as you asked. This would breach the principle of objectivity.

SECTION 4 - BRIEFING NOTE

SALES VARIANCES

Sales price variances:

Every variance is favourable which means that we managed to sell every type of product at a higher price than standard. Each of the product types: vases, bowls, glasses and jugs sold for G\$1 more than standard and the “Heart of Glass” set for even more than this.

A possible reason for these favourable variances is that since the “Heart of Glass” television series, our brand visibility and therefore the prestige of all our products has increased and the sales team have increased our prices. The “Heart of Glass” sets have increased by more than the other products because they are an exclusive design and cannot be purchased from any other supplier. The fact that demand for the sets exceeds our ability to supply them means that the price we can charge is higher than standard due to their relative rarity value.

The sales mix variance G\$94,540 favourable:

The sales mix variance indicates the increase or decrease in profit due to the actual total volume of products being sold in a different proportion to the budgeted mix. We must have sold proportionately more of the high profit margin products and proportionately less of the low profit margin products to achieve this favourable variance.

As can be seen from the data we have sold more jugs and “Heart of Glass” sets than the actual quantity in budgeted mix. So, either one or both of these has to be a high profit margin product because the mix variance is favourable. Although we have chosen to focus on the production and sales of the “Heart of Glass” sets we can only choose to do this because of the extraordinary popularity of the television series. At the moment the demand for our products outstrips our ability to make them and it seems that we have elected to manufacture for sale the higher profit margin products in greater quantity than budgeted.

The sales quantity variance G\$178,140 adverse:

The sales quantity variance quantifies the effect on our profit of selling a lesser quantity in standard mix than budgeted. We sold 20,500 products which is less than the 26,800 budgeted. If the difference between the two totals is multiplied by the standard profit, this shows that our profit is G\$178,140 less than budgeted.

However, the reasons for this can be explained as follows: firstly we based the budget on the assumption that we could persuade all of the glassblowers to work the maximum overtime allowed. As each role is specific to experience and expertise there is limited scope for substituting one grade of labour for another and so if some of the glassblowers did not want to work the maximum overtime, we could not make as many products as we could sell. In effect it is the glassblowers’ available hours rather than sales demand that dictates the level of sales at the moment. In addition, the stock outs of various lines of products means that we were unable to supply customers with the products that they wanted to stock. This will have contributed to the lower volume of sales.

FINANCIAL REPORTING OF BRAND AND LICENCE

Both the brand name and treatment of the exclusive right to produce the “Heart of Glass” range are governed by IAS 38 Intangible assets.

An intangible asset can be recognised where:

- the resource is controlled by us as a result of past events
- it is probable that future economic benefits will flow into King Crystal
- its cost can be measured reliably
- It is separately identifiable (capable of being separated and sold from the rest of the business) or due to contractual or other legal rights.

Brand name:

Our brand name is undoubtedly valuable to us, in that it helps us to generate sales. In that sense, it meets the second criteria above in respect of economic benefits flowing to King Crystal. It also meets the first criteria; our brand is our creation and therefore we control it; no-one else has the right to use the name. However, our brand does not meet the third and fourth criteria. Whilst there are specialist brand valuation companies that we can engage to establish a value for our brand, such a valuation would not be reliable. Our brand is unique and there is no market place for it.

Our brand is not separable from the rest of our business. If we sold our brand we would lose the ability to use the name King Crystal and hence we would no longer have a business. Indeed, we could not sell our brand without selling the skills and expertise that are part of our workforce and our business.

In addition, our brand is internally generated and IAS 38 specifically states that internally generated intangibles such as brands cannot be capitalised. Therefore, given all of the above we cannot reflect the value of our brand on our statement of financial position.

Licence:

The licence on the other hand can be recognised as an intangible asset in accordance with IAS 38. We have an asset that we control, that will allow future economic benefits to flow to King Crystal (in terms of future sales), which can be reliably measured (because we paid G\$50,000 for it) and is due to contractual or legal rights (this is provided by the television company).

We should therefore recognise the asset at its cost of G\$50,000 and amortise it over its useful economic life, which will need to be assessed. Given that this is a contractual right, the longest it can be is 10 years which is the term of the agreement. However, given that this is linked to a television series and that the life of the ‘Heart of Glass’ range is likely to be limited to the length of the television series, we will need to establish how long the series (including repeats) will be shown.

We should also consider at each year end whether there are any indications of impairment in the asset. This could be the cancelling of the television series earlier than anticipated or a slowing down of sales as the market is saturated. Any impairment loss should be written off to profit or loss immediately.