MBA 670 Project 4 Individual Analysis

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[Baldwin]

[Baker and Bolt]

[USA, Germany, China]

[Capsim Global]

[MBA 670-Section 9047]

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1. **What strategy were you implementing? What type of product (speed, accuracy, service life, and price) did you design in Round 1? Explain how your settings for speed, accuracy, service life, and price in Round 1 were driven by the chosen strategy.**

The chosen strategy was a Global Broad Differentiator by Baldwin. In round 1, Team Baldwin designed a product, which was called Baker. The purpose of the Baker product was to target the High-tech market (Liu, 2020). The purpose of this would have given Team Baker a global presence in multiple markets.

When creating the product in R&D, Baker had a speed of 5.3. This would allow for a projected forecast that customers preferred based on the estimated completed deadline.

The accuracy was same as the speed i.e. 5.3 to ensure consistency and the customers preferred it. The service life was intended to be created with the market expectations in mind. The 20,550 was service line which was an adequate number that allowed Team Baldwin to assess a reasonable price for the Baker product.

Baldwin set the price for the Baker at $39. Due to the chosen strategy selected, Team Baldwin wanted to ensure that it appealed to many potential customers while also remaining competitive within the market. This played a significant part in determining the Baker product's speed, accuracy, service life, and price.

2. **How did you create a sales forecast in each round? Explain. For Round 1 only, how did you use the sales forecast for capacity planning?**

Below is the all calculation, how team Baldwin calculated the sales forecast for its Product Baker in Round 1.

Units Sales Forecast for USA Market High-Tech Segment for Baker Product

Section 4	Marketing - United States of America: High Tech	
4.1 Customer Buying Criteria		
	Expectations	Importance
Positioning	Speed 7.4 Accuracy 7.4	39%
Age	0 Years	32%
Service Life	17,000 - 23,000 Hours	19%
Price	$25.00 - $45.00	10%
4.2 Demand Information		
2023 Total Market Size		3,195
2023 Total Units Sold		3,195
2024 Demand Growth Rate		13%

Total Units Demand last year in round 0 = 3195 Units

Growth Rate high tech USA market = 13%

Total Growth of Units = Units Demand last year in round 0 * Growth Rate

$$= 3195 * 13\%$$

=415 Units growth

Total Units Demand in round 1 = Demand in last Round + growth Units

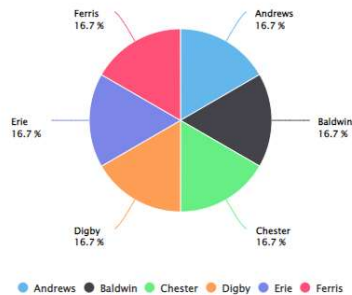$$= 3195 + 415$$

= 3610 Units

Baker sold in USA-High tech in round 0 = 533 Units

Market Share in % = units sold/total units demand * 100

$$= 533/3195 * 100$$

= 16.7 %

4.3 USA Market Share

Sales Forecast in Next round 1= Total Units demand in round 1 * Market Share of a product

Baker

$$= 3616 * 16.7\%$$

= 604 Units

Units Sales Forecast for USA Market Low-Tech Segment for Baker Product

Section 3 | Marketing - United States of America: Low Tech

3.1 Customer Buying Criteria		
	Expectations	Importance
Price	$15.00 - $35.00	55%
Age	3 Years	19%
Positioning	Speed 4.8 Accuracy 4.8	17%
Service Life	14,000 - 20,000 Hours	9%

3.2 Demand Information	
2023 Total Market Size	5,838
2023 Total Units Sold	5,838
2024 Demand Growth Rate	6%

Total Units Demand last year in round 0 = 5838 Units

Growth Rate Low tech USA market = 6%

Total Growth of Units = Units Demand last year in round 0 * Growth Rate

= 5838*6%

=350 Units growth

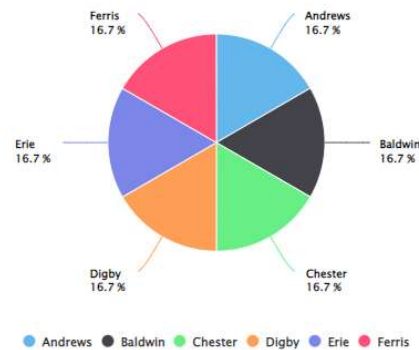Total Units Demand in round 1 = Demand in last Round + growth Units

= 5838+350

= 6188 Units

Baker sold in USA Low-tech in round 0 = 973 Units

Market Share in % = units sold/total units demand * 100

= 973/5838*100

= 16.7 %

4.3 USA Market Share

Sales Forecast in Next round 1= Total Units demand in round 1 * Market Share of a product Baker

= 6188*16.7%

= 1033 Units

3. **What was the level of automation in your plant? Why? Discuss the role of contribution margins, if any, in your decisions regarding automation.**

Baldwin company automation level was very good during the all 4 rounds and it was increasing with each round passed. For product Baker, automation level in round 1 was 3, in round 2 and 3 it was 4.5 and it decreased in round 4 to 4.3. For Product Bolt, automation level was in round 2, 4.5. In round 3, it was 5 and in round 5 it was 6.5. For product Bolt, automation always increased with each round. Baldwin gave huge importance to automation because it will help in improving efficiency that would allow for a smoother workflow. The workflow would improve, but it would also allow for increased production (Kaber & Endsley, 2004). This

number consistently increased throughout the rounds, which provided Team Baldwin with adequate representation that both baker and bolt, the products were actively, just not at their original expectations. An ideal number would be about 25%-30% for the contribution margins. However, if it so happens that the number is below that, there should be a cause for concern.

Frequently, the production would need to be reduced to decrease the organization's cost, and prices should be increased to offset the difference (Vagia, Transeth, & Fjerdingen, 2016).

4. **Are you running a second shift? Why or why not? Did you have inventory issues in any round? Explain.**

Team Baldwin has run the second shift in each round from 1-4. The second shift was needed for the Baldwin to maintain its production and inventory level. Baldwin Company has expanded its product line by adding product Bolt. In addition, company has also expands its operations globally by targeting into the United State, Chinese and German markets. This indicates that the number of employees that were initially working in first shift was not enough for Baldwin due to the amount of work and company was forced to add a second shift (Blair-Loy, Hochschild, Pugh, Williams, & Hartmann, 2015).

It was expensive to have a second shift but company was in growth and expanding to other markets. It was very important to meet the demand level for the market and therefore, second shift important to add and justified. In addition to manage capacity, there were other benefits of second shift as it was best for the management to see any variations between the first and second shifts. There may be variations from the second shift, and the Baldwin administration will devise plans to mitigate these variations. Having two comparable values also creates room for the system's credibility as data is not analyzed independently. Instead, it uses comparison sets. Running a second shift enabled the Baldwin to increase productivity as they will be confident in the data set and forecasts.

5. **Which country (or countries) and customer segment (or segments) were you targeting with your product and why? Describe any two marketing decisions that you implemented over the four rounds to enable your desired targeting. If you introduced a region kit, describe how that affected your sales.**

Team Baldwin targeted all the markets of Capsim global which are the United States, Germany, and China markets. Our chosen strategy had focused on both Low-Tech and High-tech customers. The reason why is that it saw the best return on investment for the baker and Bolt to target every market than to specific region or market (Yoon, Kim, Chung, & Son., 2023).

Baldwin tried to be more competitive in terms of pricing in its marketing decisions. It was

important for the company to achieve the economies of scale and transfer it to its customer. So, managing competitive prices was one of the decisions for Baldwin it took in marketing. Second marketing decision, Baldwin too was to introduce the regional kits to boost sales for both products. In round 4, for product baker, region kit was introduced for two regions Germany and Chinese market.

Section 2 | Research & Development

2.1 Product List

Name	Speed	Accuracy	Service Life	Region Kit	Age	Revision Date	Design Score
Able	6.8	6.8	19,000	USA, Germany, China	1.7	May 10, 2027	63
Baker	6.8	6.8	20,000	Germany, China	1.9	June 29, 2027	72
Bolt	9.2	9.2	20,000	USA, Germany	0.9	December 19, 2027	45
Cake	6.4	6.4	21,000		7.1	November 25, 2020	35
Daze	6.4	6.4	21,000		7.1	April 2, 2029	19
Eat	6.4	6.4	21,000		7.1	November 25, 2020	35
Fast	9.3	9.3	19,000	China	1.3	November 29, 2027	39
Foot	6.8	6.8	17,000		1.0	December 13, 2027	35

No kit was introduced for the USA market. For Product Bolt, Region kit was introduced for regions USA and Germany and no kit for China.

6. **Remembering what you have learned in MBA 620 and by referencing the financial accounting ratios (link to Learning topic from MBA 620), calculate the net profit margin ratio at the end of Round 4. What does this ratio tell you about the profit being generated?**

Calculation of Net Profit Margin Ration for Round 4 for USA Region:

$$\text{Net profit Margin Ratio} = \text{Net Income/ Net Sales} * 100$$
$$= \$12589/ \$137128 * 100$$
$$= \textbf{9.18\%}$$

Calculation of Net Profit Margin Ration for Round 4 for Germany Region:

$$\text{Net profit Margin Ratio} = \text{Net Income/ Net Sales} * 100$$
$$= \$8825/ \$90238 * 100$$
$$= \textbf{9.78\%}$$

Calculation of Net Profit Margin Ration for Round 4 for China Region:

$$\text{Net profit Margin Ratio} = \text{Net Income/ Net Sales} * 100$$

$$= \$ 2812/ \$18533 *100$$

$$= \mathbf{15.17 \%}$$

Combined Net income and Net Sales for USA, Germany and China

$$\text{Total Net income for all regions} = \$12589 + \$8825 + \$2812$$

$$= \$24226$$

$$\text{Total Sales for all regions} = \$137128 + \$90238 + \$18533$$

$$= \$245899$$

Combined Net Profit Margin ratio for round 4 all regions

$$\text{Net profit Margin Ratio} = \text{Total Net Income/ Total Net Sales} * 100$$

$$= \$24226 / \$245899 * 100$$

$$= \mathbf{9.85\ \%}$$

9.85 % represents the total net profit margin ratio for all three markets USA, Germany and China combined. The number indicates that it is below the average 10% that is typically associated with an average net profit margin for a business. While a return is being made, it is significant to point out that only a tiny percentage of the revenues are profitable. It shows the amounts that are being spent to produce the products as well. This number is also an indicator of where financial resources and other aspects of the company need to focus its goals and objectives. It allows a company to adjust and address those issues and concerns. The net profit margin ratio also shows a company's bottom line and other expenses, such as taxes and one-off oddities (TROY, 2023).

7. **Examining the balance sheet at the end of each round calculate the current ratio for each. Has the current ratio increased or decrease from round to round? Explain the major cause of the changes from round to round. Also, calculate the working capital for each round. Has your company had sufficient working capital in each round? If not, why not?"**

Calculation of Current Ratio:

$$\text{Current Ratio Formula} = \text{Current Assets/ Current Liabilities}$$

$$\text{Current Assets} = \text{Cash} + \text{Accounts Receivable} + \text{Inventory}$$

$$\text{Current Liabilities} = \text{Accounts Payable} + \text{Current Debt}$$

Round 1

Current ratio = Current Assets/Current Liabilities

= $22836 / $7241

= 3.15

Round 2

Current ratio = Current Assets/Current Liabilities

= $37803/$8599

= 4.40

Round 3

Current ratio = Current Assets/Current Liabilities

= $72420/$39659

= 1.83

Round 4

Current ratio = Current Assets/Current Liabilities

= $72371/$81602

= 0.89

Team Baldwin Current Ratio in round 1 was 3.15 which mean Baldwin Company has $3.15 of Current Assets to pay its $1 Current Liabilities. In round 2, Baldwin Current ratio was 4.40 which were higher than the previous round 1. In round 3, its current ratio was 1.83 and in round 4 it was 0.89. The current ratio of the Baldwin has dropped from round 3 and it further dropped in round 4 as well.

The major reason for improvement of current ratio from round 1 was huge ending cash balance of $24,524. In round 3, company's current debt was increased a lot totaling amount $ 27,200. Company Baldwin did worst in terms of current ratio in round that was 0.89, and there were two reasons for this low number. First, company ending cash balance was 0 and secondly Baldwin current debt was highest $ 66288.

Working Capital = Current Assets – Current Liabilities

Round 1: Working Capital = $22836-$7241

$\qquad = \$15595$

Round 2: Working Capital = $37803-$8599

$\qquad = \$ 29204$

Round 3: Working Capital = $72420-$39659

$\qquad = \$ 32761$

Round 4: Working Capital = $72371-$81602

$\qquad = \$ -9231$

Baldwin Company has excessive Working Capital in first 3 rounds of the Capsim Global and has positive balance but in round 4, its balance was -9231. The major reason for this less working capital was 0 cash balance in the end of round 4,

8. **Adequate cash flow is required for a company to support operations, invest in the future, pay down long-term debt and reward shareholders with dividends. Analyzing the Statement of Cash Flow for each round identify the change in cash flow from the previous round and identify the major cause of this change.**

Round1:

In round 1, Baldwin beginning cash balance was $9,999. Its ending cash balance was $1,519. Cash flow from Operations generated negative ($5,080) in cash flow for the period, Cash for from investing activities also generated negative ($15,200) and cash flow from financing activities generated $11,800.

Round2:

In round 2, Baldwin beginning cash balance was $1,519. Its ending cash balance was $24,524. Cash flow from Operations generated negative $34,318 in cash flow for the period; Cash flow for from investing activities also generated negative ($28,875) and cash flow from financing activities generated $18,219

Round3:

In round 3, Baldwin beginning cash balance was $24,524. Its ending cash balance was $36,645. Cash flow from Operations generated $16,340 in cash flow for the period, Cash for from investing activities generated negative ($53,200) and cash flow from financing activities generated $49,534.

Round4:

In round 1, Baldwin beginning cash balance was $36,645. Its ending cash balance was $0. Cash flow from Operations generated $2,309 in cash flow for the period; Cash for from investment activities generated negative ($51,060) and cash flow from financing activities generated $13,194.

Team Baldwin was having ample cash flow from Round 1 to Round 3 as it always ends its ending cash balance with positive figure but in round 4, company was short of cash and ends its year with 0$ as its closing balance. There were two major reasons for this cash shortage.

1) Baldwin Company purchased huge inventory and it stuck 33,615 in inventory

2) Baldwin Company paid huge amount of $ 24,537 as a dividend to its shareholder. Prior to round 4, company never paid such huge amount in dividend.

9. **At the end of Round 4, how aware are consumers of your product in each country? How accessible is your product to the consumers in each country? How did your awareness and accessibility change from Round 3 to Round 4, and did that have any impact on your sales?**

Round 4: Product Baker Accessibility and Awareness

USA – Low Tech

Baker – Customer Accessibility 55% /Customer Awareness 100%

USA – High Tech

Baker – Customer Accessibility 83% /Customer Awareness 100%

Germany – Low Tech

Baker – Customer Accessibility 38% /Customer Awareness 94%

Germany – High tech

Baker – Customer Accessibility 34% Customer Awareness 94%

China – Low Tech

Baker – Customer Accessibility 16% Customer Awareness 59%

China – High Tech

Baker – Customer Accessibility 7% / Customer Awareness 59%

Round 4: Product Bolt Accessibility and Awareness

USA – High Tech

Baker – Customer Accessibility 83% /Customer Awareness 100%

Germany – Low Tech

Baker – Customer Accessibility 38% /Customer Awareness 54%

Germany – High tech

Baker – Customer Accessibility 34% Customer Awareness 54%

From Rounds 3 to 4, the overall customer accessibility improved for every country and customer's awareness is consistent from round 3 to 4. This likely played a significant role in increased sales volume. All three countries' target markets improved their products' ability to be seen and attained by their customers.

10. Did your team's decisions in Rounds 1-4 always align with the chosen strategy? If you found yourself deviating from your strategy, explain why. In hindsight, what decisions would you have made differently? Explain.

Team Baldwin's decisions in rounds 1-4 always aligned with the chosen strategy. Our team strategy was to follow broad differentiation strategy which Baldwin Company has followed effectively and has made profit as company is serving its product in all regions e.g. USA, China and Germany. In round 4, Baldwin faced some operational issue related to cash and company has to take the emergency loan of $27,030 to manage its all operations smoothly. Starting from round 1 till round 4, company has always ends its financial year with Net Profit but Baldwin Company had little tough time in Chinese market, where it sold fewer units as it forecasted potential units. For example in round 4, Baker units forecast for the Chinese region high tech segment was 164 units but company only sold 70 units and for low tech Chinese segment its potential sold units were 924 units but only sold 410 units which shows deviation of more than 50% for the forecasted and actual sales.

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