



Assignment 3: A New Brewpub in Buffalo Wild Wings at City of Saugus

AD715 B1 Quantitative and Qualitative Decision-Making

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Table of Content

1. Executive Summary.....	1
2. Introduction.....	2
3. Functional Area #1: Marketing Management.....	3
3.1 Market Review.....	3
3.2 Target Market.....	3
3.3 SWOT Analysis.....	4
3.4 4P's Marketing Mix.....	5
4. Functional Area #2: Innovation Management.....	7
5. Functional Area #3: Operation Management.....	8
5.1 How Many Beers Should Be Produced?.....	9
5.2 When Should We Produce?.....	10
5.3 Where to Sell?.....	13
6. Functional Area #4: Financial Management.....	14
7. Functional Area #5: Human Resources Management.....	16
7.1 SWOT Analysis.....	17
7.2 Fishbone Diagram.....	18
Conclusion.....	19
Reference.....	20
Appendixes.....	22

Executive Summary

This report will provide the main guide for Buffalo Wild Wings, which locate at Saugus MA, about how to operate a brewpub in their store. The craft beer business has a huge potential market in the U.S., and we would suggest that Buffalo Wild Wings invest a brewpub at one of their chain stores, in order to build it as a flag store. The marketing part analyzed the potential demand around the location, narrowed down the target customers, showed the 4P's as well as the SWOT of Buffalo Wild Wings.

In the operation strategy, we suggested buy a new 8 tank (576160 pints) brewpub system to satisfy the in-store demand in next 36 months assumed the increase rate is 5% each year and the future wholesale purpose. After applied the optimization method, the project contribution reaches \$1334058, and the BEP for this investment is 4.32 months.

A well-organized brewpub creates a positive working environment and inspires favorable benefits for employees such as pro-activity and innovation through HRM practices. To guarantee the highest quality of our employees, we keep only one critical worker whose starting salary is ¥ 30000 above the market research level, and reward all desired employees at the end of a year by using the surplus. Being a well-known chain restaurant Although we are inexperienced at hiring and administration at the very beginning, we have an adequate budget to invest and make attempts. The methods we apply are SWOT analysis and Fishbone diagrams, SWOT for a clear evaluation of our brewpub, and Fishbone diagrams are used to analyze why the workers may leave our brewpub, thus directly leading to the improvement.

Buffalo Wild Wings can implement innovative strategies in several ways. They can work with farms around Boston to add more flavor and taste to the beer. They can innovate formulas,

ingredients and brewing methods from the brewing process. And in terms of management, they also provide training programs for production and sales personnel. It helps to work with Boston Farm while aiming to implement new technologies and innovations.

Introduction

The project is focusing on the Buffalo Wild Wings, as a famous sport bar restaurant serving with traditional American foods and wings, located in Saugus, MA. As a chain restaurant which currently operating across the U.S., Buffalo Wild Wing is one of the most famous sports bars for people to visit, having foods and sharing time with friends & families especially on sport game days. Since it is hard to invest a brewpub in every chain restaurant in the network, we recommended investing a Flag Store for Buffalo Wild Wing at Saugus first, with our Brewpub machine. The restaurant we chose is located in a shopping plaza in the city of Saugus, a community with a higher income than other neighborhoods. People living here are more willing and able to spend more on foods as long as it is a good place to go. In this report, we will analyze whether we should invest it or not by going through marketing, innovation, operation, financial and human resources analysis methods and provide our well-concerned suggestion.

The restaurant has 30 tables in total, with average 4 seats on each, gives the restaurant 120 capacities on each round. We assumed that the occupancy rate will be average 80% on every day. By multiplying with 5 times of turnover rates on each day, we have $120 * 80\% * 5 = 480$ customers visiting the restaurant on each day. According to the report which written by Lizzy Freier, 51% of customers will consume alcohols in the restaurant, we have the assumption that Buffalo Wild Wing will sell at least 480 pints of alcohol on each day. We assume average 1.5 pints of alcohol will be consumed for each glass, so $480 * 1.5 * 365 = 264600$ pints will be

consumed in store for each year. We can also expect that there will be a 5% growth rate for our restaurant because of our good product quality and reputations. For the next 3 years the expected amount of alcohol consumption will be, 1st year, 315360, 2nd year, 331128 and 3rd year, 347684 pints.

Functional Area #1: Marketing Management

Market Review

Based on the data from aforeverrecovery.com, “over 65.5 billion beers were consumed in the US in one year, and it weighed over 53% of all alcoholic beverages consumed in the US.” (Aforeverrecovery, 2019) By taking over it into details, the sales of beer contributed over \$86 billion dollars in the US market. According to Lizzy Freier, over 51% of beer consumption is in the restaurants and over 41% of customers will consume beer in the restaurants. (Freier, 2017) As it is one of the largest beverage markets in the US, we cannot ignore how large the potential profits that we could make from here. In order to get into the beer market, investing a brewpub in a selected restaurant is one of the suggestions that we considered. As the data been given in the introduction parts, totally 170,090 pints of alcohols will be consumed in-store and follow up by 5% of growth rate for the upcoming years.

Target Market

Based on the previous analysis, the target market could be specific into 3 segmentation, which is selected by the location, age, and behaviors. Our primary focus on location would be the community who lives in/around the town of Saugus. Local and family would be our slogan at

the beginning of our new business. Since the beer would be served as fresh brewed, it also not able to store for a long time. Focusing on a medium size area would be a good idea before extending our business into a large market. According to the law of MA, people who are older than 21 is the one who will only be allowed to consume alcoholic beverages, our second segmentation must follow by this rule. Combined with the sports bar background of Buffalo Wild Wing, our target customer would be the people who love sports, living around the city of Saugus and over 21 years old.

SWOT Analysis

A SWOT analysis would help us to understand our competency and weakness better, find out where we should keep and where we should work more on it. As the table below shows the analysis for each area.

Strength 1. Enough money to invest 2. Chain restaurant with good reputation 3. Already a well-known brand	Weakness 1. Limitation on brewpub experience 2. Limitation on raw material supplement of craft beer
Opportunities 1. Large potential market 2. Enough population living around 3. Community has higher income than the average	Threats 1. Some competitors around the city 2. Low industry barriers that everyone could get into this market

As a well-known chain restaurant operating across the U.S. for more than 37 years, Buffalo Wild Wings has already built it up as a well-known brand with a good reputation. The strength for Buffalo Wild Wings is quite obvious which the company is big enough to invest a good brewpub in one of its stores without any financial problem. A good brew machine is always the foundation to ensure that we can provide the best quality craft beer around the area.

However, a long history in a chain restaurant cannot guarantee that Buffalo Wild Wings can make success in brewpub business. The craft beer is a brand new area for Buffalo Wild Wings since it hasn't dealt with it before. From the supply chain of the raw materials to the storage of the final products are all the challenges to Buffalo Wild Wings and it still needs to learn a lot on these part. We would consider these are the weakness of investing a brewpub by Buffalo Wild Wings.

Opportunities exist everywhere and the potential market is really large according to the research that we mentioned before. The people living around the location have a higher average income then the national average and the population is also large income.

However, since the opportunities are open to everyone, the competitions will exist with the opportunities together as well. The industry barriers for a brewpub is not that high, which means other competitors will get into the craft beer market easily to share the potential market with Buffalo Wild Wings. There already have some other competitor around the location in the meantime, and we believe that Buffalo Wild Wings will definitely put some focus on them.

4P's Marketing Mix

The 4P's marketing mix analysis method would give us a clear and specific view our of the position of our products, and the way of how could we push it into the market. The following metrics will illustrate each P in details.

1. Products

Good quality of the beer is the way and the only way to ensure that Buffalo Wild Wings can get success in the craft beer business. Beside of this, diversity is another part we considered about. Giving more options and choices to our customers can make sure that the products we provided can fulfill different customers' tastes. Totally 6 kinds of beer will be provided with the different alcohol content percentage and different flavors from light to dark.

2. Price

The price range includes the retail price and wholesale price. \$3.50 to \$4.00 is the range for the retail price and \$1.25 to \$1.28 is the range for the wholesale price. As a new business in Saugus, a competitive price is the first step for us to gain market share. The price is 10% below of other competitors around us but it's still contributing overall 40% profit margin for us due to the innovation of our process. More details could be found in the innovation and financial parts below.

3. Promotion

Our suggestion for the promotion would be based on family and nature. "From nature to the family" would be the slogan of our product. Natural and homemade would be the image of our beer, and our effort would be trying to pass the joyful emotion to our customer when they consuming our beer with their family, on a certain game day and enjoy on the family time.

Free trial in the first month would be necessary since it is a brand new product that Buffalo Wild Wings never launched before. By the meantime, we are not randomly or just giving free beer to everyone. A free sample glass of the craft beer for the customers who ordered alcohol drinks in the restaurant is the fastest and simplest way to introduce our new craft beer to our target segment customers.

4. Place

In-store consumer for the local communities is the primary customers of our brewpub. After fulfilling the demand of the local in-store consumer, the extension to the wholesale market would be the next goal of our marketing extension.

Functional Area #2: Innovation Management

Buffalo Wild Wings had a nationalized local sports bar before competition came in and made the company lag (Taylor, 2018). Notably, the competition was innovative, prompting Buffalo Wild Wings to take an innovative approach to address the downward spiral that it had experienced (millennials ditched the chain and opt for alternative Brew-Pubs). Two ideal and innovative strategies that would bring Buffalo Wild Wings back to the competition ranks are cooperating with farms around Boston and adding more taste to the beer. The strategies will ensure that they do not just maximize production but also keep their clients happy and satisfied with the quality of beer sold.

Improving the taste of the beer is innovative and would really improve overall sales. What makes the beer a consumer preference is the recipe and ingredients used in its making while the lack of complexity in brewing makes it the right venture for the producer. After receiving a supply of the raw materials from reliable farms in Boston, Buffalo Wild Wings will commence the innovative process. The provider of the Turnkey brewing system offers a large inventory of the most common styles to appeal to a broad range of tastes from novices to experts. The client also has an exclusive determination of taste as there is an optional recipe program availed by the brewmaster. Finally, inclusive batch kits are made available to provide the precise ingredients and supplies that are required to brew a perfect batch of beer. For assurance, all the recipes are formulated and standardized in the name of the patented malt extract BrewPub

system. Their preparation is based on the utmost international standards for quality control and assurance of the final products. The estimated production costs per product – a total of 9 products- is based on the price of a delivered complete set of ingredients. Noteworthy about the estimated prices of the ingredients and other materials to be used plus labor, is the fact that they are way affordable and thus the production should not be a burden to the brewers.

The brewing process starts with the sanitation of the tank for ten minutes and mixture of ingredients for another thirty minutes. This is followed by a five-day fermentation process. The fermentation is meant to ensure that the beer gets its alcohol content. The last step is chilling of the beer in the tank to await serving. The minimal size requirements in the production of the beer include a 100 sq ft. of tiled floor space (one that is able to support 1800 lbs. on 3 legs, a standard floor drain, 3/8 inch hot and cold water lines (with valves) and a standard electrical outlets (New Brew Pub- Starting Points., n.d.). The production is well accomplished by two workers who should work in shifts. Additionally, there is provision for a training program for the production personnel, sales force, and manager of the business unit of the Buffalo wild wings. Training will be imperative and a cornerstone for implementing the various technological and innovative practices intended to bring in tasty beer while also maintaining a partnership with farms at Boston.

Functional Area #3 Operation Management

The operation management relates to the Inventory, customer's satisfaction, lead time and supply chain (Kang et al., 2016). In this brewpub case, it transfers to three questions: 1). How many beers we should produce? 2). When we should produce each beer? 3). Where we

should sell our beer. Based on our interview to the restaurant, we had the actual and predicted data of sales demand in FY1 to FY3.

Maximum Capacity	Turnover Rate	Average Rate	Average Number of Order Beer
120	6%	80%	1.5
Year	Project Sales Demand (Assume 5% growth)		
1	315,360 Pints		
2	331,128 Pints		
3	347,684 Pints		

How Many Beers Should Be Produced?

In terms of the data from CraftBeer.com, the demand for craft beer consumption increase 5% at the mid-year of 2018 and Massachusetts is the fastest growing for craft beer consumption in 2017 between 50 states. (Craftbeer.com, 2018), we assume that the demand for our target restaurant will increase by 5% each year in the next 3 years. According to the existing demand, we calculated that the demands for year 1, 2 and 3 is 315360 pints, 331128 pints, and 347684 pints. According to the projections, the new brewpub system contains 40 barrels and the whole capacity is 576160 pints each year. At the first year, we recommend that the restaurant produce enough beer to fulfill the customer demand in the restaurant, which is 27 barrels. At the meantime, if the restaurant makes the high-quality beer and becomes popular at the neighborhood after year 1, we can contact with local liquor stores, such as Guy's Liquor and Nasty Nonni's Wine & Spirits. So the 8 tanks reach the demand for restaurant and future

wholesales channel. It supplies the producer ability to satisfy the customer need and future development.

We suggested the restaurant to buy a new brewpubs system instead of using one. The core system of brewpubs system, malt handling system, is easy to buy at many auctions because it is common to use at many farm scenarios. However, before buying it, the buyer needs to do many investigations to know what it produced before. What it made before have ultimately impact to the products, beer, and the experience of customers (Kinnek, 2016). Besides that, the life range for different equipment is different which must be considered by buyer (Kinnek, 2016). These elements are easy to have problems in used equipment and really important to production which may cause much higher cost than equipment. Therefore, we recommend the restaurant buy the new equipment.

When Should We Produce?

We highly suggest the restaurant use the pull system in operation management. Because the ingredients for making beer is really basic, malting barley, water, yeast, hops with some special favor to make special beer and easy to get at the local market. The pull system supplies raw materials for production when the need happened. The short purchase and delivery time allow the restaurant to decrease the variable cost due to low inventory and waste. For determining the actual need for in-house selling and future wholesale, we set the cut-off point to meet the minimum amount of per tank. For instance, based on our investigation, the demand for Light Wheat beer is significantly higher than other types and Bock Dark beer is obviously lower than others at the restaurant. So we set the cut-off point to Light Wheat is 0.9 and Bock Dark is 0.6. For the rest of the products, our recommendation lists below.

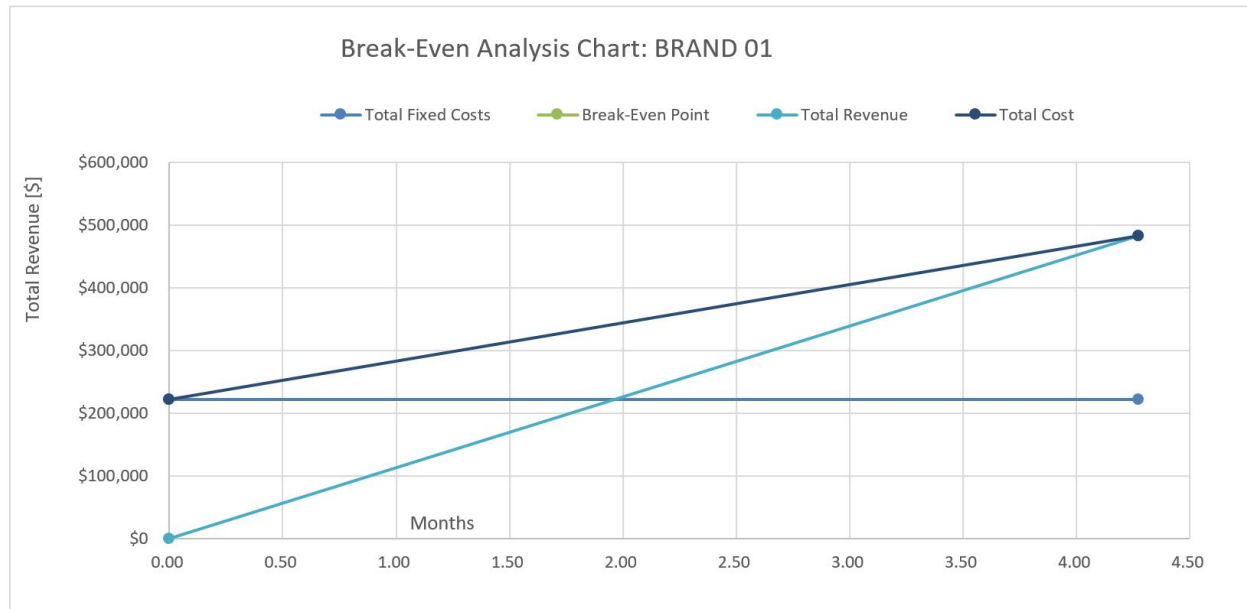
Product Name	Retail or Wholesale	Cut-off Point
Pilsner	[Retail]	0.7
Bavarian Lager	[Retail]	0.8
Light Wheat	[Retail]	0.9
Red Wheat	[Retail]	0.8
Pale Ale	[Retail]	0.7
Bock Dark	[Retail]	0.6
Pilsner	[Wholesale]	0.8
Bavarian Lager	[Wholesale]	0.8

After the cut-off points were set, we input the fixed and variable cost into the simulation model based on our investigation, we can calculate the Break-Even Points, which is to show when the restaurant able to earn enough money to cover its investment. The formula for Break-Even point is below.

$$\text{Break Even Point in Units} = \frac{\text{Fixed Costs}}{\text{Sales Price per Unit} - \text{Variable Cost per Unit}}$$

According to our calculation, when the sale is \$488,424, the break-event point will be 4.32 months.

AD715 B1 Team Giraffe: A New Brewpub in Buffalo Wild Wings at City of Saugus



After calculated the Break-Even Points, we also applied the Optimization Analysis. In the simulation model, we set the project contribution as Object and try to change the price of the products to achieve the max contribution. For the constraints, the market research price of the products can't higher than max market price and lower than min market price. At the meantime, the consumption deviation also can't higher than max deviation (3%) and lower than min deviation(1.5%).

Price Sensitivity		Min	\$3.00	\$3.00	\$2.50	\$2.50	\$2.50	\$2.50	\$1.00	\$1.00	\$1.00	\$1.00
		Base	\$4.00	\$4.00	\$3.50	\$3.50	\$3.50	\$3.50	\$1.25	\$1.25	\$1.25	1.28
		Market Research	\$4.58	\$4.58	\$3.83	\$3.83	\$3.83	\$3.83	\$1.33	\$1.33	\$1.08	\$1.35
		Max	\$6.00	\$6.00	\$5.00	\$5.00	\$5.00	\$5.00	\$1.50	\$1.50	\$1.50	\$1.50
VarCosts Sensitivity		Min	\$0.40	\$0.40	\$0.40	\$0.40	\$0.40	\$0.40	\$0.40	\$0.40	\$0.40	\$0.40
		Base	\$0.53	\$0.53	\$0.50	\$0.50	\$0.50	\$0.50	\$0.41	\$0.41	\$0.41	0.41
		Market Research	\$0.60	\$0.60	\$0.60	\$0.60	\$0.60	\$0.60	\$0.60	\$0.60	\$0.60	\$0.60
		Max	\$0.90	\$0.90	\$0.90	\$0.90	\$0.90	\$0.90	\$0.90	\$0.90	\$0.90	\$0.90
max divided by min		retail	2									
		wholesale	1.5									
Min			49405	54212	24737	21080	21080	28394	143728	175334	2201	
Projected Consumption		[quantity]	669506	72773	79854	36300	30938	41674	168018	204966	4045	
Max			98809	108424	49474	42160	42160	56788	215592	263002	4401	
min consumption deviation			-1.50%									
consumption deviation			-1.50%									
max consumption deviation			3.00%									
Contribution		Projected	\$1,334,058	\$289,709.98	\$317,899.84	\$117,300.23	\$99,956.95	\$99,956.95	\$134,637.88	\$122,820.90	\$149,829.94	\$1,945.66
Fixed Costs (Please enter manually)		Projected	\$221,897									
Profit before Taxes		Projected	\$1,112,167									
Targeted Market size recommended for next cycle:			24.88%	27.30%	12.41%	10.58%	10.58%	14.25%	45.05%	54.95%		

After running the simulation, we have the best price for each product to get the highest projected contribution. And the projected contribution had a slight increase from \$1332405 to \$133,4058. And their prices listed on the chart above. The biggest difference between products

from the best price and current price are Pilsner and Bavarian Lager from \$4 to \$4.58 per unit. However, we found that the best price doesn't cause a crucial increase in projected contribution which means the current price is reasonable.

In terms of the process of brewing the beer, there is a serious problem with Yeasts. Usually, the Yeasts, brewer used, can have two biochemical reactions, Respiration and Fermentation. The way toward these two pathways is basically the same, except the concentration of fermentable sugars is really low and the oxygen is available. If the situation happened, the Yeasts will start the Respiration except for fermentation. And it is really dangerous for brewers because it will turn the beer sour. Therefore, the brewers should keep watch on the level of sugar especially after the fermentation has started (Aquilla, 2014).

Where to Sell?

For the capacity of the new brew system, it includes 8 tanks which is much higher than the in-house demand currently, which only need 6 tanks. So, except satisfied the need of restaurant customers, we also plan to sell the beer to wholesale retailers on the local community. The wholesale market has great potential to craft beer. But it also faces significant difficult to do that, due to there are hundreds of brands in the market and all kinds of packages on the refrigerator on big wholesale retailers. It raises the standard for new product into the market. So we recommend that the restaurant develop the local community market and wholesale store. "The independent beer wholesalers provide access to the market for small breweries, they develop the marketplace for craft beer, and they have a big influence on beer culture, but it all happens behind the scenes" (VERIVE, 2017). On the Yelp.com, we found that there are 136 liquor stores on the Saugus and around areas. We chose three local liquor stores as the primary cooperated target, Guy's Liquor, Nasty Nonni's Wine & Spirits and M&M bottle Liquors.

- Guy's Liquors — The nearest Liquor store to the restaurant located at Saugus. Guy's Liquors has the five stars grading on the Yelp.com by customers. It has many kinds of beer brands but limited brands for craft beer.
- Nasty Nonni's Wine & Spirits — This store has the same conditions as Guy's Liquors. But it bigger than Guy's Liquors and contain more brands than Guy's Liquors. It claims "has one of the largest selections of Wine, Beer, and Spirits in the area". And there is no other store and restaurant sell the alcohol. <https://nastynonnis.com/index.php/>
- M&M Bottle Liquors — Different from Guy's Liquor and Nasty Nonni's Wine & Spirits, M&M Bottle Liquors located at Malden. Although it a little far from the restaurant, but it can help the restaurant to extend sells area. It contains all kinds of liquors include craft beer and imported beer brand.

Functional Area 4: Financial Management

The goal of Buffalo Wild Wings is to make the profit as big as possible. Our recommendation during this phase includes using the marketing and innovation of our product and make reduce the cost of recruitment. The remainder of this part will detail the financial rationale behind our recommendation to implement the new product using the data elements we included in cycle two of our simulated analysis. We will also highlight the projected outcomes resulting from our implementation plan proposal.

We chose to base our implementation plan off of cycle two because it has a low Break-even Point which is about 4.32 months, a high Return on Investment (ROI) which is 5%. In our cycles, we gradually increased the number of employees, decreased the cost of administrative management, decreased marketing costs by decreasing projected spend on trade shows, increased

the price per beer, decreased until the cost per beer, increased the cut-off point for beer products and increased the sales projection according to seasonal difference. Besides, lower the marketing cost, operating cost, and so forth, we found that beers experience different sales and supply-demand due to various factors. Below, is the explanation why we chose cycle two as the basis of our recommendation plan.

When investing in a business, the greatest concern for an investor is payback period or how long it takes until they get back their investment. During the case implementation plan, we assumed a long-term investment of \$40,000. Given cycle two's sales and revenue projection, one might expect the brewing business to create a revenue of \$1,342,440 for the first year, \$1,446,821 for the second year and \$1,615,688 for the third year. The estimated revenue growth is around 10% per year.

Another big area of concern when running a business is the Break-even Point. In the cycle two implementation, the Break-even Point for the brewpub is 4.27 months, which means that after four months' operation of the business, the fixed cost of the business would be covered by the profit of the business. The Total Revenue Ratio is another key measurement that explains the operating status of a company. In cycle two of the simulation, this ratio is 5.38%, which is higher than the other cycles and the Profit/Total Revenue Ratio is 5.27%, meaning about 17% of the revenue is the net profit.

The growth rate is also of key concern to business investors. In cycle two, sales and revenue go up gradually. Cycle two has projected a net profit after tax of \$254,462 (FY1), \$260,065 (FY2), and \$276,620 (FY3) for the next three years. The growth rate per year is 10% (the comparison of FY2 to FY1), and 10% (the comparison of FY3 to FY2). The net present value assuming the discount rate of 5% for the next three years is \$764,990.

Totally, our recommendation is that you follow the implementation plan resulting from cycle two of simulation, as this will maximize the profit ratio and minimize the Break-even point. Our efficiency ratios are consistently lower cycles three, four, and five, and keep in a real small expense for an overall sale of \$4,417,901. From a financial point, our recommendation is to move forward with the brewpub expansion proposal using our recommendation marketing, innovation, operations, and human resource management strategies.

Functional Area #5: Human Resources Management

Buffalo Wild Wings is well-known for its authentic taste of chicken wings and burgers, nowadays it is in pursuit of beer quality. The prominent and unique taste to win over market share. To help facilitate the new creative product, our plan is to keep our brew masterfully focused on his work and thrive to produce the best quality of beer instead of hiring a brewing assistant to adjust the administrative aspects of beer making, therefore the brewmaster can feel less stressful and threatened,

The critical worker shall receive a salary of \$30,000 in the first year, and in the second and third year, the salary will increase by 1% and 2% separately. What's more, to ensure the superior quality of our in-house beer, and to encourage the employee's enthusiasm, we will have an adequate budget as well as offering the excess surplus as a bonus at the end of the year. To maintain the best accessible brewmaster with us, we have a yearly- incremental budget and surplus with us, which does not equal to we gain less profit in the business process because the relationship between profit and surplus is not a simple negative correlation as people commonly assumed.

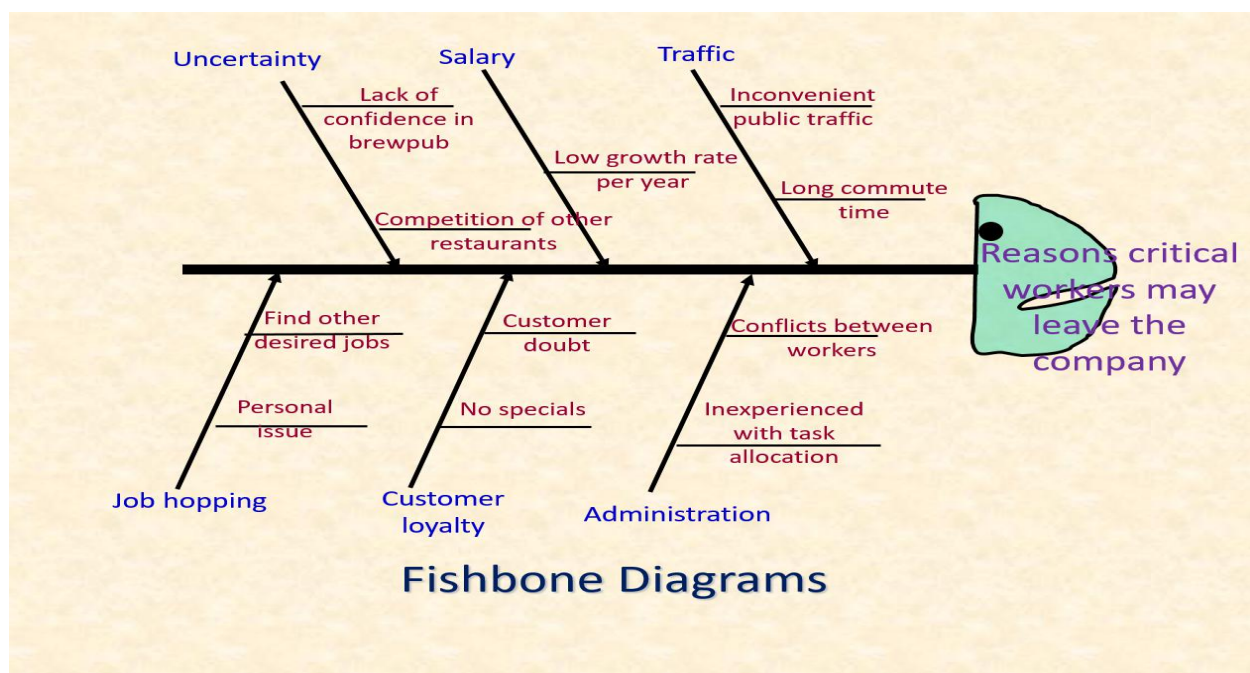
To regulate the process of making beer and improve our strategy to choose our brewmaster and our worker, we concluded the SWOT analysis as follows.

SWOT Analysis

Strengths 1. Magnificent starting salaries for the brewmaster and good salary for the worker. 2. A considerable amount of bonus at the end of the year. 3. Well-trained bartender help attract customers. 4. Different sorts of brewmaster products according to holidays and seasons.	Weakness 1. Low growth of wage compared with competitors. 2. May exist necessity to cut down office employee's salary.
Opportunity 1. Sufficient personnel supply in the Greater Boston area. 2. A talented brewmaster could bring new vitality and positive earning.	Threats 1. Big shopping mall surrounded by, the customers may go to the small restaurants inside the mall due to convenience, the brewmaster and the workers could leave, and it takes time to find someone new. 2. The critical worker and workers might be slightly unsatisfied with the low growth rate of salary.

Fishbone Diagram

To retain the best accessible critical worker as much as possible, we have to consider and analyze the causes may lead employees to leave Buffalo Wild Wings. And here we apply the fishbone diagram to show the main reasons. Fishbone diagram is used to document and categorize causes of a problem, which is also known as the cause-and-effect diagram. A problem is labeled at the head of the fishbone. Here, in this case, we can identify the problem from the case study is the reasons critical workers may leave the company and the potential causes shown as bones. Here we listed from Uncertainty, Salary, Traffic, Job Hopping, Customer Loyalty, and Administration to analyze.



Causes - Fishbone Diagrams

Buffalo Wild Wings is one of the most famous sports bar for families and friends to visit and have foods especially on sport game days, and it is a chain restaurant with a good reputation; nevertheless, the brewpub is a totally new area for Buffalo Wild Wings to make an attempt. The first problem we confront is the faith in our brewpub, which means uncertainty to every worker

in the brewpub. Even if we hire a talented and capable brewmaster, he might still be unconfident about whether we can make it or not. Not to mention the existence of traditional brewpubs around, the competition is clearly fierce. As for the salary, we have an adequate budget and there exists a certain amount of surplus, which will become bonus of excellent workers at the end of the year, therefore we cannot afford a satisfying growth rate for each year, which may also lead to their dissatisfaction. And we are located in Saugus, people always need a car to get to other areas, and the parking permit is also a problem, with a long time of commute, employees may get tired of working here. What's more, the Great Boston area has sufficient personnel supply, which means a high staff turnover. Employees may find other desired jobs easily, the employers may find substitutes better either. As for the customer loyalty, since we are new in brewpub sphere, customers may gather around during football seasons and order a large amount of beer, while we do not have our own specials and loyalty to attract drinkers. Last but not least, the administration. Running a brewpub is totally different from running a restaurant, we may assign tasks with wrong percentages for we are inexperienced about the wine industry.

Conclusion

After analyzed and simulated five functional areas, we predicted the total cost of whole news brewpub system with relatively ingredient and human cost will be \$488,424 and the restaurant will receive their money back at 4.32 months. Based on our prediction and the fast increase on the demand of craft beer industry, we recommend the restaurant, Buffalo Wild Wings invest a new brewpub system.

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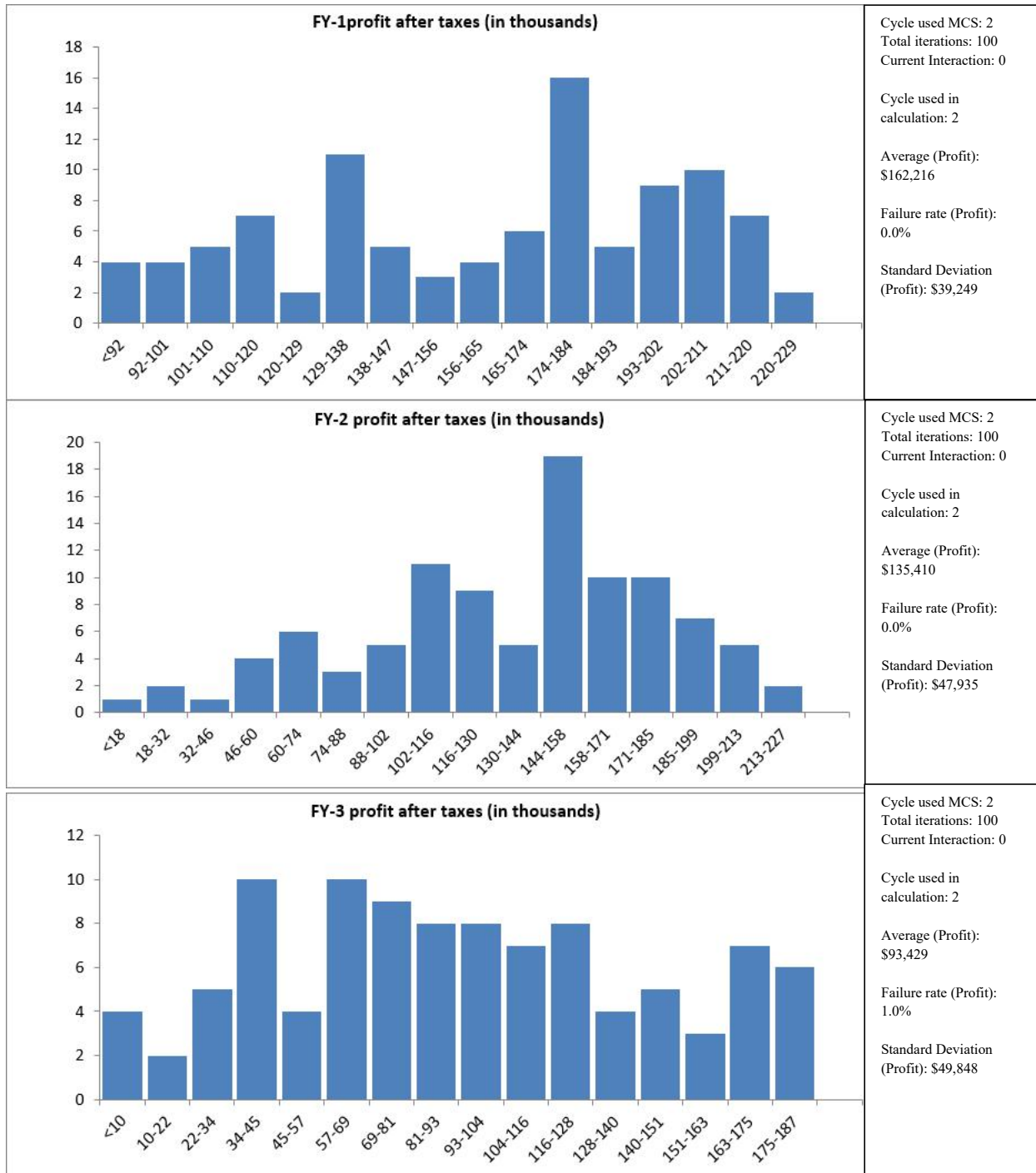
AD715 B1 Team Giraffe: A New Brewpub in Buffalo Wild Wings at City of Saugus

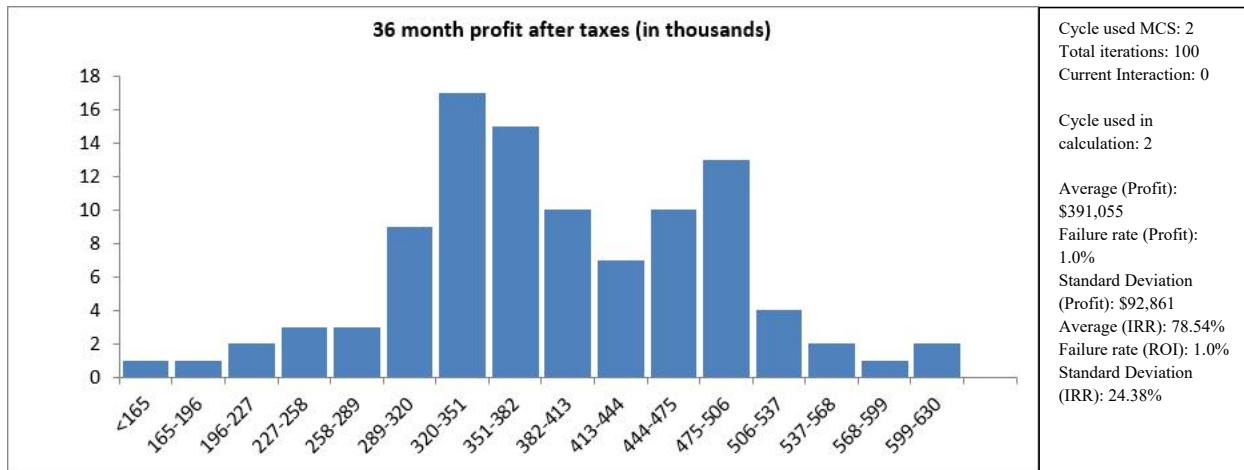
Taylor, K. (2018). Buffalo Wild Wings Was Sucked into A Downward Spiral As Millennials Ditched The Chain — But The New CEO Has A Plan For A Comeback. *Business Inside*.

Retrieved from <https://www.businessinsider.com/buffalo-wild-wings-comeback-plan-2018-2?IR=T>

Appendixes

Appendix 1: Risk Analysis



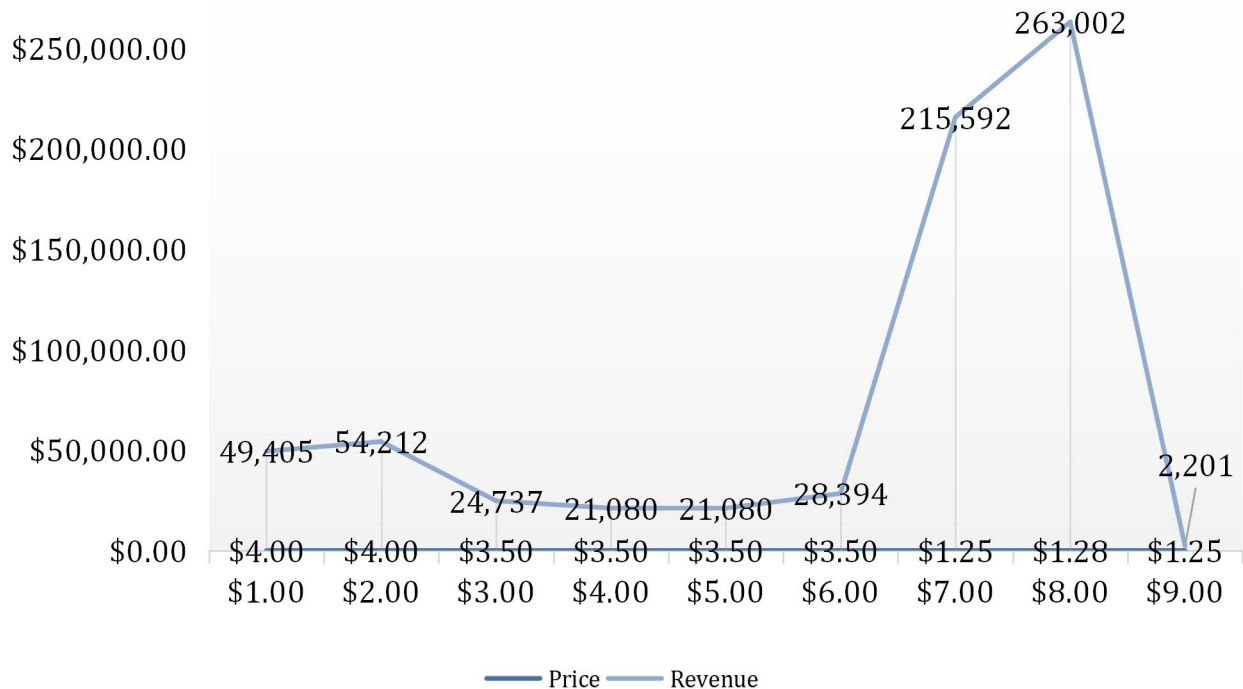


We did the Risk Analysis that based on the best simulation result that we got in the Cycle 2. From the results distribution (Pictures above) we can see that the FY-3 and the 36 Months Profit After Taxes has a higher relatively concentration in the distribution, while FY-1 and FY-2 are more random than them.

Appendix 2: Sensitive Analysis

\$300,000.00

SENSITIVE ANALYSIS

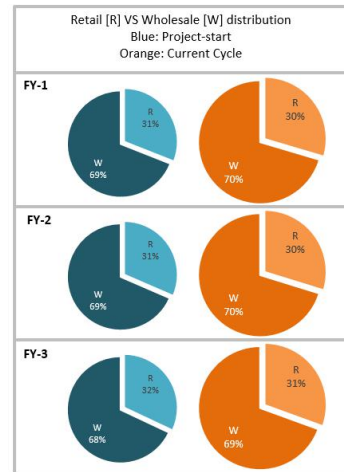


AD715 B1 Team Giraffe: A New Brewpub in Buffalo Wild Wings at City of Saugus

Price Sensivity	Min		\$3.00	\$3.00	\$2.50	\$2.50	\$2.50	\$2.50	\$1.00	\$1.00	\$1.00	\$1.00									
	Base		\$4.00	\$4.00	\$3.50	\$3.50	\$3.50	\$3.50	\$1.25	\$1.28	\$1.28	\$1.28									
	Market Research		\$5.00	\$5.00	\$4.00	\$4.00	\$4.00	\$4.00	\$1.30	\$1.35	\$1.35	\$1.35									
	Max		\$6.00	\$6.00	\$5.00	\$5.00	\$5.00	\$5.00	\$1.50	\$1.50	\$1.50	\$1.50									
VarCosts Sensivity	Min		\$0.40	\$0.40	\$0.40	\$0.40	\$0.40	\$0.40	\$0.40	\$0.40	\$0.40	\$0.40									
	Base		\$0.53	\$0.53	\$0.50	\$0.50	\$0.50	\$0.50	\$0.41	\$0.41	\$0.41	\$0.41									
	Market Research		\$0.60	\$0.60	\$0.60	\$0.60	\$0.60	\$0.60	\$0.60	\$0.60	\$0.60	\$0.60									
	Max		\$0.90	\$0.90	\$0.90	\$0.90	\$0.90	\$0.90	\$0.90	\$0.90	\$0.90	\$0.90									
retail		wholesale																			
max divided by min		2	1.5																		
Min			49405	54212	24737	21080	21080	28394	143728	175334	2201										
Projected Consumption	[quantity]	648532	65873	72283	34632	29512	29512	39752	172473	201635	2861										
Max			98809	108424	49474	42160	42160	56788	215592	263002	4401										
Contribution	Projected	\$	1,335,573	\$	289,841	\$	318,044	\$	117,748	\$	100,341	\$	100,341	\$	135,155	\$	120,731	\$	151,226	\$	2,146
Profit before Taxes	Projected		\$1,111,182																		

Appendix 3: Key Performance Indicators

From Project-Start			FY-0	FY-1	FY-2	FY-3	FY1+FY2+FY3
KPI 1	Actual size of the local market	[units]	7,561,705	103%	106%	110%	
KPI 2	Number of customers- existing business	[customers]	210,240				
KPI 3	Average consumption per existing customer	[units]	1.5				
KPI 4	Size of the penetrated market - without new project	[%]	0%	105%	110%	115%	
KPI 5	Overall increase of the penetrated market - with new project	[%]					220%
KPI 6	Projected structure of the annual sales, new penetr. market	[%]		31.00%	33.00%	36.00%	100.00%
KPI 7	Projected sales, new brand	[units]	709,749	755,539	824,225	2,289,514	
KPI 8	Projected consumption in the existing business, new brand only	[units]	31.0%	31.5%	32.0%	31.53%	
KPI 9	Projected beer consumption (new brand % of all)	[%]	220,022	237,995	263,752	721,769	
KPI 10	Wholesale distribution (new brand)	[%]	66%	69%	73%	68.48%	
KPI 11	Capacity of the new technology (max units/year)	[units]	489,727	517,545	560,473	1,567,744	
From Current Cycle			FY-0	FY-1	FY-2	FY-3	FY1+FY2+FY3
KPI 1	Actual size of the local market	[units]	7,561,705	103%	106%	110%	
KPI 2	Number customers- existing business	[customers]	210,240				
KPI 3	Average consumption per existing customer	[units]	2				
KPI 4	Size of the penetrated market - without new project	[%]	0%	105%	110%	115%	
KPI 5	Overall increase of the penetrated market - with new project	[%]	315,360	331,128	346,896	362,664	1,040,688
KPI 6	Projected structure of the annual sales, new penetr. market	[%]					220%
KPI 7	Projected sales, new brand	[units]		679,702	724,160	798,560	2,202,422
KPI 8	Projected consumption in the existing business, new brand only	[units]		30%	30%	31%	30.00%
KPI 9	Projected beer consumption (new brand % of all)	[%]		201,108	215,632	244,042	660,783
KPI 10	Wholesale distribution (new brand)	[%]		61%	62%	67%	67.00%
KPI 11	Capacity of the new technology (max units/year)	[units]		70%	70%	69%	70.00%
KPI 12		[units]		478,593	508,528	554,518	1,541,639
KPI 13		[units]		476,160	476,160	476,160	476,160



Appendix 4: Sales Projections

Sales Projections: Products sold per month (for FY-1, FY-2, and FY-3)														
Products		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Overall
BR01-01,	FY-1	3,318	3,318	3,406	3,473	3,937	5,061	5,061	4,979	4,979	4,925	3,473	3,473	49,405
	FY-2	3,925	3,925	3,934	3,941	4,404	5,563	5,563	5,583	5,583	5,574	3,941	3,941	55,878
	FY-3	4,038	4,038	4,246	4,192	4,853	5,958	5,958	6,064	6,064	5,913	4,192	4,192	59,709
BR01-02,	FY-1	3,173	3,173	3,154	3,785	4,400	5,467	5,467	6,051	6,051	5,888	3,785	3,817	54,212
	FY-2	3,163	3,163	3,144	3,773	4,379	5,449	5,449	6,021	6,021	5,868	3,773	3,773	53,975
	FY-3	3,455	3,455	3,403	4,041	4,642	5,743	5,743	6,330	6,330	6,381	4,041	4,041	57,607
BR01-03,	FY-1	1,240	1,240	1,240	1,240	2,464	2,480	2,480	3,696	3,696	2,480	1,240	1,240	24,737
	FY-2	1,240	1,240	1,240	1,240	2,480	2,480	2,480	3,720	3,720	3,665	1,240	1,240	25,985
	FY-3	1,240	1,240	2,374	2,480	2,480	3,720	3,720	3,720	3,720	3,720	2,480	2,480	33,374
BR01-04,	FY-1	1,240	1,240	1,240	1,240	1,240	2,480	2,480	2,480	2,480	2,480	1,240	1,240	21,080
	FY-2	1,240	1,240	1,240	1,240	2,475	2,480	2,480	3,713	3,713	2,480	1,240	1,240	24,781
	FY-3	1,240	1,240	1,240	2,400	2,480	2,480	2,480	3,720	3,720	3,720	2,400	2,400	29,520
BR01-05,	FY-1	1,240	1,240	1,240	1,240	1,240	2,480	2,480	2,480	2,480	2,480	1,240	1,240	21,080
	FY-2	1,240	1,240	1,240	1,240	2,475	2,480	2,480	3,713	3,713	2,480	1,240	1,240	24,781
	FY-3	1,240	1,240	1,240	2,400	2,480	2,480	2,480	3,720	3,720	3,720	2,400	2,400	29,520
BR01-06,	FY-1	1,240	1,240	1,240	2,156	2,464	2,480	2,480	3,696	3,696	3,388	2,156	2,156	28,394
	FY-2	1,240	1,240	1,240	2,166	2,475	2,480	2,480	3,713	3,713	3,403	2,166	2,166	28,481
	FY-3	1,240	1,240	2,216	2,480	2,480	3,693	3,693	3,720	3,720	3,720	2,480	2,480	33,161
BR01-07,	FY-1	10,322	10,322	12,714	15,127	17,143	22,038	22,038	26,021	26,021	23,595	15,127	15,127	215,592
	FY-2	12,196	12,196	14,666	17,139	19,156	24,197	24,197	29,137	29,137	26,666	17,139	17,139	242,962
	FY-3	13,322	13,322	16,814	19,368	22,419	27,522	27,522	33,616	33,616	30,047	19,368	19,368	276,304
BR01-08,	FY-1	12,947	12,947	15,446	18,535	21,548	26,773	26,773	32,322	32,322	28,832	18,535	18,535	263,002
	FY-2	12,957	12,957	15,456	18,547	21,530	26,791	26,791	32,295	32,295	28,852	18,547	18,547	265,566
	FY-3	13,905	13,905	16,437	19,519	22,419	27,737	27,737	33,350	33,350	30,819	19,519	19,519	278,214
BR01-09,	FY-1	0	182	0	324	123	182	182	115	115	332	324	324	2,201
	FY-2	0	0	0	314	146	0	0	146	146	372	314	314	1,751
	FY-3	0	0	390	160	227	27	27	0	0	0	160	160	1,151
Total Products per Months	FY-1	34,720	34,902	39,680	47,120	54,560	69,440	69,440	81,840	81,840	74,400	47,120	44,640	679,702
	FY-2	37,200	37,200	42,160	49,600	59,520	71,920	71,920	88,040	88,040	79,360	49,600	49,600	724,160
	FY-3	39,680	39,680	48,360	57,040	64,480	79,360	79,360	94,240	94,240	88,040	57,040	57,040	798,560
														2,202,422
														Overall