

Feasibility

Feasibility Study for Renovating an Old Barn into a Tasting Room for K-Dot Winery

A Senior Project

Presented to

Faculty of the Agricultural Education and Communication Department

California Polytechnic State University, San Luis Obispo

By

Kendall Ott

June 2017

© Kendall Ott

Abstract

California is the largest wine producer in the nation. There are more than 4,000 wineries in the state and much of their success comes from tasting rooms. A study will be conducted in the spring of 2017 to determine the feasibility of building a tasting room out of an old barn at an established winery. Tasting rooms can add monetary and aesthetic value to a winery. Knowing how to conduct a feasibility study for the build is crucial to its success. The author will create a feasibility study including a cash flow budget, a capital budgeting statement, and a sensitivity analysis in order to determine whether or not the winery should undertake the remodel for the tasting room. The sensitivity analysis will examine the change in amount of wine sold, an increase or decrease in price, and variable costs. Feedback from wineries and personal references will help the author determine what is essential to the implementation of a tasting room.

Table of Contents

Chapter One	1
Introduction	1
Statement of the Problem	1
Importance of the Project.....	2
Purpose of the Project	2
Definitions of Important Terms	3
Summary	4
Chapter Two	6
History of Wineries and Wine-making.....	6
History of Wine Tasting.....	7
History of a Feasibility Study.....	8
Cash Flow Budget.....	8
Capital Budgeting.....	9
Cost Approach.....	9
Net Present Value	10
Sensitivity Analysis	10
Chapter Three	11
Procedures for Data Collection.....	11
Procedure for Data Analysis.....	14
Overall Costs	14
Variable Costs.....	15
Summary	17
Chapter Four	18
Development of the Study.....	18
Revenue and Costs.....	18
Sensitivity Analysis	23
Summary	26
Chapter 5	27
Summary, Conclusions and Recommendations.....	27
Summary	27
Conclusion.....	27
Recommendations	28

References Cited	29
Appendix	31

List of Tables

Table 1: Weighted Average Profit per Bottle.....	19
Table 2: Tasting Room Building Costs	21
Table 3: Net Present Value for Basic Capital Budge	24
Table 4: Net Present Value for a Decrease in Quantity Produced and Sold	25
Table 5: Net Present Value for a Price Decrease	26

Chapter One

Introduction

California is the predominant leader of the wine industry in the United States. It produces about 90 percent of the nation's wine, and it holds about 3,675 of the 8,400 total approximated wineries in North America. The wine and viticulture industry in California continues growing. Many new wineries spring up each year in hopes of producing something spectacular. A sizeable portion of a winery's sales comes from the tasting room. Offering a tasting room at a winery boosts the overall sales of the company and allows people to taste and enjoy all of the different varietals of wine the company has to offer. Once the tasting room is established, it is vital the tasting room be well maintained, properly managed and aesthetically appealing so guests will want to return.

Statement of the Problem

More often than not, wineries that try to expand without a tasting room fail due to the growing demands and expectations of consumers. In the increasingly competitive wine industry, implementing a tasting room changes the game in regards to sales and net income of a winery. The problem is many people do not know how to conduct a feasibility study to see if investing in a tasting room would be beneficial for his/her winery. A tasting room captures the audience where people can learn about different types of wine, where they come from, and they can create a personal experience with a particular winery. A majority of a winery's sales

come from a tasting room, so it would be financially beneficial to have a successfully functioning tasting room.

Importance of the Project

This project is important because tasting rooms have proven to be a substantial amount of a winery's income. Without one, the winery's profitability could suffer. A precise feasibility study will show exactly what is needed in order to build and maintain a fully functioning tasting room which could boost the overall sales of a winery. Approximately one-third of all sales in a winery come directly from a tasting room – whether it is for tasting fees, directly selling bottles to tasters, or tasters signing up for the club member subscriptions. Having a tasting room is vital to the success and reputation of a winery, and it is often overlooked in small to moderate size wineries.

Purpose of the Project

The purpose of this project is to conduct a study determining whether or not building a tasting room would increase the winery's overall sales and revenue. The tasting room will be well maintained, properly taken care of and aesthetically appealing. All costs will be broken down so the reader can see exactly what is needed in order to renovate an old barn into a tasting room. This will show why a tasting room is mandatory for a successfully operating winery, and prove how effective a well-operated tasting room can be.

Objectives of the Project

The objectives to accomplish this project are:

1. To research what it takes for a tasting room to become successful;
2. To layout all items needed for a successful tasting room;
3. To determine costs required for capital needed to renovate an existing barn;
4. To determine labor costs;
5. To host a personal interview with an owner of a moderately sized winery;
6. To analyze financial data to determine if renovating an old barn into a tasting room is feasible, even with changing variables.

Definitions of Important Terms

- **Winery:** An establishment for making wine.
- **Wine Varietal:** A wine bearing the name of the principal grape from which it is made.
- **Wine:** The fermented juice of grapes, made in many varieties, such as red, white, sweet, dry, still, and sparkling, for use as a beverage, in cooking, in religious rites, etc., and usually having an alcoholic content of 14 percent or less.
- **Vineyard:** A plantation of grapevines, normally used for describing wine grapes.
- **Case of Wine:** A normal case of wine contains 12, 750 mL bottles. Used in reference for amount of wine a winery produces (i.e. 20,000 cases of wine per year)
- **Moderate Size Winery:** A moderately sized winery is considered to produce 10,000-50,000 cases per year.

- **Barrels:** A cylindrical wooden container with slightly bulging sides made of staves hooped together, and with flat, parallel ends. Used for wine storage and aging, as the oak from the barrel adds flavoring to the wine.
- **Wine Glass:** A specific drinking glass, usually having a foot and a stem, used for drinking wine. Glasses with different sizes and shapes can make the wine taste differently.
- **Crushing:** The step in the winemaking process introducing the pulp of the berry to the skins through gentle crushing. The pressure applied allows the juices access to the yeast, tannins and skin.
- **Tannins:** Reddish colored compounds occurring in wine leading to an astringent/bitter taste in wine.
- **Fermentation:** As yeast enzymes, it turns the sugar into ethyl alcohol in grape production.

Summary

Tasting rooms have been proven to be extremely beneficial to a winery – not only in sales, but they can increase the overall winery reputation as well. Studies have shown people enjoy hearing the story and background of the wine they are consuming. Individuals are more likely to buy wine from a winery they personally tasted and enjoyed, or from a friend's recommendation. A tasting room allows for a personal connection to the company, and for people to enjoy all of the different varietals the winery has to offer. A successful tasting room leads to an increase in sales, a great reputation, customer loyalty, and a larger customer base

due to word of mouth. Tasting rooms contribute about one-third of all sales to a winery, which shows the reader investing in the renovation could be beneficial in the long run. This project will focus on a feasibility study of the K. Dot Winery where an older barn currently exists. The barn will be considered and analyzed as the location of a future tasting room site.

Chapter Two

Literature Review

Before the objectives can be met, background information must be provided. A literature review will help show the history and backgrounds of this project. Wineries have been around for a long time, and with a winery, comes a tasting room. It is important to look at how tasting rooms began and how they changed over the years to get a more accurate representation of what this project is directed toward. A feasibility study will be conducted. In this feasibility study, capital budgeting methods such as cash flow statements, net present value, and a sensitivity analysis will be used in order to determine if building a tasting room is a feasible venture. Furthermore, the author will look at the overall costs of renovating the building and the operating cost. All of this information will help the reader understand exactly what is essential for conducting a feasibility study for building a tasting room.

History of Wineries and Wine-making

Wine was first made in China with fermented fruit and honey around 7000-6600 BC (Hirst, 2014). The Europeans in the Mediterranean then made wine from fermented grapes, and wine became popular in Europe. Wine making was a precise husbandry that led to the development of different varietals and techniques. The wine industry developed a reputation in Europe, and as the production increased, it became more popular. Wine taverns opened as a means of drinking and enjoying wine with friends. It was soon preferred over water in daily meals, and people started to favor darker and stronger wines (Wine in Moderation, 2014). However, water and milk were often disease ridden and contaminated at this time, so people

preferred wine due to the alcohol which acted as an immediate disinfectant (Asimov, 2013).

Improved techniques emerged in the 17th and 18th centuries which led to finer glassware, corks, cork screws and glass bottles that helped make the wine taste better and last longer. By then, the French wine market was booming and the world became entranced by wine.

Exporting wine was a new way of revenue, and wine taverns continued to grow and emerge all over Europe and America.

History of Wine Tasting

The Enlightenment in the 18th century led to safer and better water solutions, so drinking wine no longer became a need. If someone were to drink wine, it was because they wanted to. Winemakers had to step up their game if they wanted people to choose their wine over water or other substitutes (Asimov, 2013). The biggest challenge was keeping the wine fresh and tasting good. Wine was subjective to contaminants such as dirt, air and other substances, so the winemakers needed to find a way to make the wine long lasting (Asimov, 2013). With improved production techniques, like glass bottles and cork stoppers, winemakers could make wine last for a longer period of time and not spoil so quickly. This in turn helped the flavoring, and people began to seek out wine for their enjoyment. Wine making has become a way of making a wine taste different from everyone else's wine. Each winemaker has their own special taste and technique. Wine tasting allowed people to taste and enjoy different types of wines and ultimately, the winemaker wanted everyone to buy their wine because it tasted the best. This technique is still used today. People go wine tasting in order to find a wine they like, and the winemakers goal is to have them purchase the wine or sign up for their club membership.

History of a Feasibility Study

A feasibility study is an analysis of the viability of an idea (Hofstrand, 2009). This means a feasibility study is used to determine if a proposed business venture is worth pursuing. It looks at the cash flows of a business and it also includes a sensitivity analysis with changing variables. First, a company must decide if they can take on the venture financially. The investment must generate enough income so it takes care of the expenses accrued. Ideally, a business should never take on a business venture if they will lose money from it. The feasibility study is an important step in determining the long-term success of a potential investment (Kenkel, 2008). Ultimately, if the cash generated by the investment does not exceed the cost of the expenses incurred to undertake the investment, the business should not invest in it (Kenkel, 2008). If the expenses outweigh the generated cash flows, it will be considered infeasible. An investor will need to make sure the investment is worth-while.

Cash Flow Budget

A cash flow budget is the summary of projected cash inflows and outflows for a business over a given period of time (Kay, Edwards, Duffy, 2008). Cash flow budgets were introduced in the mid 1970's, so they are a relatively new form of financial statement (Financial Statement Analysis, 2010). The cash flows are always affected by a big investment or purchase, because the company will normally have to borrow the necessary funds for the purchase. The cash flow budget is comprised of three components: operating, financing, and investing activities (Financial Statement Analysis, 2010). If an investment provides positive cash flows, it does not necessarily mean it provides a positive profit (Mitchell, 2011). There are numerous financial

statements used to keep track of information, but the cash flow budget is the best statement to examine financial feasibility.

Capital Budgeting

Capital budgeting determines whether or not projects or investing in a long-term venture are worth pursuing. This is very important in accepting or denying a projected business venture. Capital budgeting takes the present value of future cash flows and compares them with the investment costs. An investment should only be made if the present value of the cash flows is greater than the investment (Mitchell, 2011). A dollar today is worth more than a dollar in the future, so inflation must be accounted for in figuring out the capital budgeting (Mitchell, 2011).

Cost Approach

A cost approach is an evaluation method of real estate showing the price someone should pay for a piece of property. These costs should not exceed what someone would have to pay to build an equivalent building. In the pricing, the market price for the property is equal to the cost of land plus construction, less depreciation (Avercamp, 2013). The cost approach is best if used with new pricing. This accounts for all expenses accrued to build the building such as, material, labor, taxes and any other costs. Appraisers, business owners, and insurance companies all use the cost approach to determine the value of buildings (Mitchell, 2011). Contacting the local contractors has been proved to be the most efficient and accurate way of the cost method, but since it is time consuming, rarely occurs (Appraisal Institute, 2000).

Net Present Value

The author must determine the net present value (NPV), internal rate of return (IRR), modified internal rate of return (MIRR), and the payback period in order to see if building the tasting room is worth the investment (Mitchell, 2011). The NPV is the difference between the present value of cash inflows, and the present value of cash outflows. NPV discounts the revenues and expenses back to the present value. This will show if earnings outweigh costs. The internal rate of return measures the profitability of potential investments. The IRR is the discount rate at which NPV equals zero. The IRR often overstates the profitability, which is where the modified internal rate of return comes in. The MIRR tends to show a more realistic evaluation of the profitability. The MIRR assumes the reinvestment rate at the cost of the capital. The projects payback period shows us how long it would take the business to repay the investment costs.

Sensitivity Analysis

Any change in an important input variable will have an effect on net present value (Mitchell, 2011). These variables include interest rates, quantity sold and price points, and they will fluctuate throughout the investment's life. A sensitivity analysis takes the changing variables into consideration, and shows what happens to the net present value when certain variables fluctuate. A correct sensitivity analysis will hold all variables but one constant, and it will analyze the impact of the changing variable on the net present value (Ehrhardt and Bringham, 2013).

Chapter Three

Methodology

Procedures for Data Collection

Owners of K-Dot Winery want to remodel an existing barn on their property and turn it into a tasting room, office space, and wine storage space. The existing barn is 50 X 100 feet, totaling 5,000 SF. The tasting room will only occupy 50 X 40 feet, and the leftover space will be used for barrel and case storage. In the tasting room, K-Dot Winery wants to have two offices, a full kitchen, and a gender-neutral bathroom. They would also like to add a conference in their storage area, but they are only considering the tasting room for this feasibility study. K-Dot Winery would also like to build a driveway leading into the tasting room and a parking lot that will hold approximately 20 cars. Due to the endless possibilities of renovating and designing a 2,000-square foot area, K-Dot is using the basic measurement information. The ceiling height is a standard 10-foot ceiling, with wood framing, wood siding, and concrete floors. They would also like to implement heating and cooling due to the fluctuating temperatures in Paso Robles.

The information used was provided by Craftsman Book Company online, which examines cost indexes for each part of the building. A zip code was needed because prices fluctuate from state to state, and building in California is a tad more expensive than building in any other state. The author used the zip code 93405 which is within San Luis Obispo County. All parts of the tasting room, including flooring, siding, heating and cooling, and basic costs were examined. Each aspect and pricing was listed by the Craftsman Book Company. Most builds

require permits in the state of California, but K-Dot winery has already purchased necessary permits prior to this study; therefore, those costs will not be included.

In addition to the basic needs, the tasting room will also need additions in order to make it fully functional. These additions include a wine cooler, a tasting bar top, seating, wine glasses, cabinets, couches, a coffee table, and a few more items. The author found these costs on the table called *Tasting Room Equipment and Furnishings* provided in “The Feasibility of a Co-Operative Winery,” (Kenkel, 2008). The offices would also need desks and chairs, but K-Dot Winery decided not to include these in the study, as they are not a part of the tasting room. The study conducted by Kenkel was in Oklahoma, so the author had to add in an extra \$10,000 because California has higher costs than Oklahoma, and it has been a few years since the study. This adjustment also accounted for inflation, a higher quality bar and additional decorations to keep the tasting room looking classy and professional.

The main purpose of a tasting room is to add additional revenue to the winery. It will allow for direct to consumer sales, return customers, and wine club sales. First, the author must look at what the profit is from each case of wine sold. Discovering the profit of a case of wine, the author looked at the average price of two varietals produced by K-Dot Winery: Petite Sirah and Cabernet Sauvignon. The author used this average to account for all bottles of wine sold. In order to make a profit, K-Dot Winery must sell each case for more than it costs to produce them. K-Dot Winery produces about 15,000 cases per year. However, they do not sell all of their cases; typically 2,000 cases will be held for future reserves.

Once the building is completely renovated, K-Dot Winery should examine the costs of keeping the tasting room functional. There are both fixed costs and variable costs. The fixed costs include property taxes and a yearly liquor license. The variable costs include utilities and labor costs. Fortunately, a loan was not taken out for this study because K-Dot had enough liquid cash saved up to renovate the barn right away. The first fixed cost is the property taxes. This will be different than a normal property due to the fact K-Dot Winery owns many acres where they keep their grapevines. They will be taxed on the whole property, not just where the tasting room will be set up. Property taxes are estimated on a total percentage of the total value of the tasting room. Typical property tax in California range from 1.15-1.20 percent. For this study, K-Dot Winery will use 1.15 percent of the costs used to build the tasting room to account for their property taxes. The second fixed cost is a yearly fee tasting rooms are required to pay to the Alcoholic Beverage Control called their liquor license. In California, a type 2 license is required for wine growers and wineries to sell alcohol on their premises. The cost of the liquor license varies depending on how many gallons of wine the winery produces (License Fee Schedule, 2010).

The variable costs for running the winery include labor costs and utilities. Both costs fluctuate, so here are not any set expenses relating to these. The staffing is based on how much wine the winery produces and wants to sell, and the utilities are based on how busy the tasting room becomes. For both variable costs, K-Dot Winery uses 20 percent of the total quantity sold. This will allow the variable costs to be consistent and reliable.

Procedure for Data Analysis

A yearly cash flow spreadsheet was made with a breakdown of all revenues and expenses listed previously. A building is depreciated over the course of 39 years. This study was conducted calculating only the first 6 years out of the 39 years. To get the amount of revenue for K-Dot Winery, the amount of wine sold was multiplied by the profit for each bottle sold. The amount held for reserves was subtracted from the amount of wine produced by the winery. This resulted in the total quantity. A weighted average of the profit at which the wines are sold is being used, as there are two varietals being examined in this study—Petite Sirah and Cabernet Sauvignon. The author assumes out of the 15,000 cases produced, 2,000 are held for reserves. Of the 13,000 sold, half of them (6,500) were Petite Sirah and the other half (6,500) were Cabernet Sauvignon. The weighted average profit per case was used to calculate the overall profit K-Dot Winery will receive from selling their wine. Multiplying the average profit per case times the total quantity sold will result in the overall potential revenue of the winery.

Overall Costs

First, K-Dot Winery must calculate the overall costs of renovating the tasting room. This information was gathered from the online Craftsman Book Company. This estimate includes a foundation required for normal soil conditions, excavation for foundation and piers on a prepared building pad, floor, wall, interior and exterior finishes, roof cover, interior partitions, doors, windows, trim, electric wiring and fixtures, rough and finish plumbing, built-in appliances, supervision, design fees, permits, utility hook-ups, the contractor's contingency, overhead and profit. However, K-Dot Winery would like to make it more decorative and

appealing to customers, so the costs examined in this study are slightly higher than the basic costs given by the Craftsman Book Company. The sums of all costs given were added up, and this gave a total cost of the remodel for K-Dot Winery. The additional costs needed to make the tasting room operable and open to the public were also added, including the driveway and parking lot. This gave to capital required for the renovation of the barn.

Luckily, K-Dot Winery saved up the capital in order to remodel the tasting room. The first fixed cost examined was the property taxes. This was calculated by multiplying the cost of the remodel by 1.15 percent. This value remained the same throughout the study. The final fixed cost is the yearly liquor license required for serving alcohol in the tasting room. This fee was also added to the yearly statement of cash flows, and it stayed the same throughout the entire study. Overall, the fixed costs were calculated to be 40 percent of the revenue received by the winery.

Variable Costs

The next costs examined were the variable costs. These costs added up to be 20 percent of the overall revenue received by K-Dot Winery. The variable costs include things such as electricity, water, labor costs, and gas. These costs can vary wildly based on the hours of operation and use frequency. However, K-Dot will use a flat percentage to keep the study simple. Utilities are hard to measure, so a rough estimate was calculated based on how many days the winery will be open to the public. Labor costs are also hard to determine, so a rough estimate is also given for these costs in the statement of cash flows.

The total costs were then divided by the average profit made per bottle of wine. The resulting number gives K-Dot a reference of how many cases need to be sold each year in order to cover the costs of the remodel. The wine industry typically uses cases as a form of measurement, not bottles. One case holds 12 bottles of wine. The resulting number is the minimum amount of cases per year that K-Dot Winery needs to sell in order to cover the costs of the remodel and to breakeven.

Net Present Value

The net present value was the next thing to examine in this feasibility study due to the ever-changing interest rates affecting the value of money in the future. The first step was to take the revenue brought in by the tasting room each year and subtract the total costs for that year. The NPV took the present value of costs subtracted from the present value of the revenue. The whole study is based off of the NPV values at the end of each year for the winery. If the NPV is negative, it will not be worth it to remodel the barn into a tasting room.

Sensitivity Analysis

Since there are numerous variables that could affect the net present value, a sensitivity analysis will need to be examined to foresee any major changes in the net present value. After the basic net present value was calculated, the author went back and changed a variable to see how it affected the net present value. The author looked at two variables in the sensitivity analysis—a change to the amount of wine produced, and a change to the price of the wine. The amount of wine produced is important because there could be a pest outbreak or a drought that wipes out half of the grape crop a few years down the road. Out of 15,000 cases produced,

K-Dot Winery assumes about 13,000 cases will get sold in a good year. However, the sensitivity analysis looks as if during a challenging year, the maximum amount of wine they produce and sell is 6,000 cases. The prices of each bottle of wine are also important as the demand for wine could plummet or if the quality of the wine became poor. These issues could cause a lack of consumers purchasing wine. The average price per case in the basic net present value study is \$240/case. The sensitivity analysis looks at the prices if they fall substantially to only \$100/case. The interest rates could also be highly variable in the future, so the author also looks at changes in interest rates in the future. The values of 6, 7, 8, 9, 10, 11, 12, 13 and 14 percent were used to determine how these interest rates would affect the basic net present value of the amount of wine sold. However, the NPV could also increase or decrease because all numbers in this study are rough estimates and they could change in the future.

Summary

The net present values calculated from the sensitivity analysis were placed in three different tables. The basic net present value cost, the quantity of wine sold, and the price at which the wine is sold at. These charts will show how the sensitivity analysis will affect the net present value. These values will help determine if the remodel is a feasible option for K-Dot Winery. A best and worst-case scenario was also calculated. The best-case scenario examines the lowest interest rate with the highest net present value, and the worst-case scenario looks at the highest interest rate and the lowest net present value. If these tests show the net present value is greater than zero, than K-Dot Winery should invest in the remodel.

Chapter Four

Development of the Study

K-Dot Winery will use the data gathered from the chapter three to determine if renovating the barn into a tasting room will be a financially feasible option. The first step will be to set up the spreadsheets that will be used. The cash flow sheets, tasting room construction costs, sensitivity analysis and break-even analysis will be the main spreadsheets. Chapter Four will show how these spreadsheets are put together and analyzed. For every spreadsheet, the basic variables previously discussed will be used. However, some variables are subject to change later in order to compile the sensitivity analysis. Final spreadsheets will be shown in the Appendix.

Revenue and Costs

To start, the revenue brought in by the tasting room must be calculated. The weighted revenue per bottle of wine sold must be found in order to find the revenue. This study is only looking at the two main varietals K-Dot Winery produces—Cabernet Sauvignon and Petite Sirah. K-Dot Winery produces other varieties but they are seasonal and Cabernet Sauvignon and Petite Sirah are their highest production varieties and they will be in the tasting room throughout the entire year. Table One shows the weighted average profit per bottle of wine sold.

Table 1: Weighted Average Profit per Bottle

	Selling Price	Cost to Produce	Profit per Bottle	Portion of Sales
Cabernet Sauvignon	\$30	\$8	\$22	65%
Petite Sirah	\$20	\$4	\$16	35%
Weighted Avg. Price per Bottle				\$20

The Cabernet Sauvignon accounts for 65% of the tasting room sales whereas the Petite Sirah accounts for 35% of the tasting room sales. Going off of this, K-Dot Winery makes \$22 when they sell a bottle of Cabernet and \$16 when they sell a bottle of Petite Sirah. The profit is found by subtracting the cost to produce the bottle of wine and the selling price of the bottle of wine. When the portion of sales is multiplied against each profit per bottle, a weighted average price of \$20 is reached, which correlates to \$240 per case because there are 12 bottles in a case. This weighted average price can change over time, and this will be analyzed in the sensitivity analysis.

Furthermore, the quantity sold is also included in the revenue. The quantity sold can also change over time. For this study, a base total of 15,000 cases are produced each year. However, the most that the winery will sell each year is 13,000 because cases will be kept for library wines and for special events. This study will look at the number of cases sold each year. K-Dot Winery has established itself thus far without a tasting room, so the majority of their sales were in the broad market. After opening a tasting room, their sales will convert to being

mostly through the tasting room. The study will average \$240/case sold each year, so \$240 multiplied by 13,000 cases is \$3,120,000 in revenue when the winery sells the full amount of 13,000 cases.

The next step in this study is figuring out what the costs are for converting the barn into a tasting room. A spreadsheet will be created to show the building costs using the Craftsman Book Company online. The full spreadsheet of the construction costs is shown in the Table 2 on the following page.

Table 2: Tasting Room Building Costs

Tasting Room Costs	Quality	Quantity	Adjustment	Lump Sum Value
Exterior Wall: Wood Siding	Very Good	2000 sq. ft.	1	\$350,000.00
Floor Cover: Stained Concrete	Very Good	2000 sq. ft.	1	\$8,000.00
Ceilings: Decorative Panels	Very Good	2000 sq. ft.	1	\$35,000.00
Roof: Shingles	Very Good	2000 sq. ft.	1	\$9,000.00
Interior Construction: One Story, Molding, wall finishes, interior doors, windows, etc.	Very Good	2000 sq. ft.	1	\$120,500.00
Heating/Cooling (HVAC)	Very Good	2000 sq. ft.	1	\$37,000.00
Plumbing: Single-Family	Very Good	8 units	1	\$12,500.00
Painting/Light Fixtures	Very Good	N/A	1	\$8,344.00
Appliances				
Refrigerator	New	1 unit	1	\$2,500.00
Wine Cooler	New	1 unit	1	\$1,250.00
Dishwasher	New	1 unit	1	\$1,500.00
Sinks	New	3 units	1	\$2,500.00
Bar: Top, Cabinets	Very Good	1 unit	1	\$20,000.00
Decorative Accents				
Bar Stools	New	10 units	1	\$1,500.00
Couches and Chairs	New	3 units	1	\$5,000.00
Stemware	New	150 units	1	\$525.00
Tables	New	3 units	1	\$537.00
Miscellaneous Costs				\$5,000.00
Property Taxes				\$11,109.84
Labor Costs				\$120,000.00
Total Construction Costs (Adjusted for San Luis Obispo County in 2016)				\$751,765.84

For this study, K-Dot Winery wants to remodel an existing barn on their property and turn it into a tasting room, office space, and wine storage space. The existing barn is 50 X 100 feet, totaling 5,000 SF. The tasting room will only occupy 50 X 40 feet, and the leftover space will be used for barrel and case storage. In the tasting room, K-Dot Winery wants to have two offices, a full kitchen, and a gender-neutral bathroom. They would also like to add a conference in their storage area, but they are only considering the tasting room for this feasibility study. K-Dot Winery would also like to build a driveway leading into the tasting room and a parking lot that will hold approximately 20 cars. Due to the endless possibilities of renovating and designing a 2,000-square foot area, K-Dot is using the basic measurement information. The ceiling height is a standard 10-foot ceiling, with wood framing, wood siding, and concrete floors. They would also like to implement heating and cooling due to the fluctuating temperatures in Paso Robles.

The renovation costs were gathered from the online Craftsman Book Company. This estimate includes a foundation required for normal soil conditions, excavation for foundation and piers on a prepared building pad, floor, wall, interior and exterior finishes, roof cover, interior partitions, doors, windows, trim, electric wiring and fixtures, rough and finish plumbing, built-in appliances, supervision, design fees, permits, utility hook-ups, the contractor's contingency, overhead and profit. However, K-Dot Winery would like to make it more decorative and appealing to customers, so the costs examined in this study are slightly higher than the basic costs given by the Craftsman Book Company.

The sums of all costs given were added up, and this gave a total cost of the remodel for K-Dot Winery. The additional costs needed to make the tasting room operable and open to the

public were also added, including the driveway and parking lot. Along with the main renovation costs, K-Dot Winery would like to add decorations and other necessities for the tasting room to be fully functional. These additions include a wine cooler, a tasting bar top, seating, wine glasses, cabinets, couches, a coffee table, and a few more items. The author found these costs on the table called *Tasting Room Equipment and Furnishings* provided in “The Feasibility of a Co-Operative Winery,” (Kenkel, 2008).

Property taxes are also examined, and this study is examining them to be 1.15% of the construction costs to assess the value of the property. 1.15% of total construction costs is \$11,109.84. After adding all of these fixed and variable costs together, the total renovation cost for K-Dot Winery is \$751,765.84. As mentioned earlier in the study, K-Dot Winery has the capital ready to go so they do not need to take out a loan.

The last part of the cash flow budget is to figure out the cash for K-Dot Winery. The first two years will be negative in the accumulated cash flow line due to the cost of the renovation. This means that after the first two years, K-Dot Winery will start to make money.

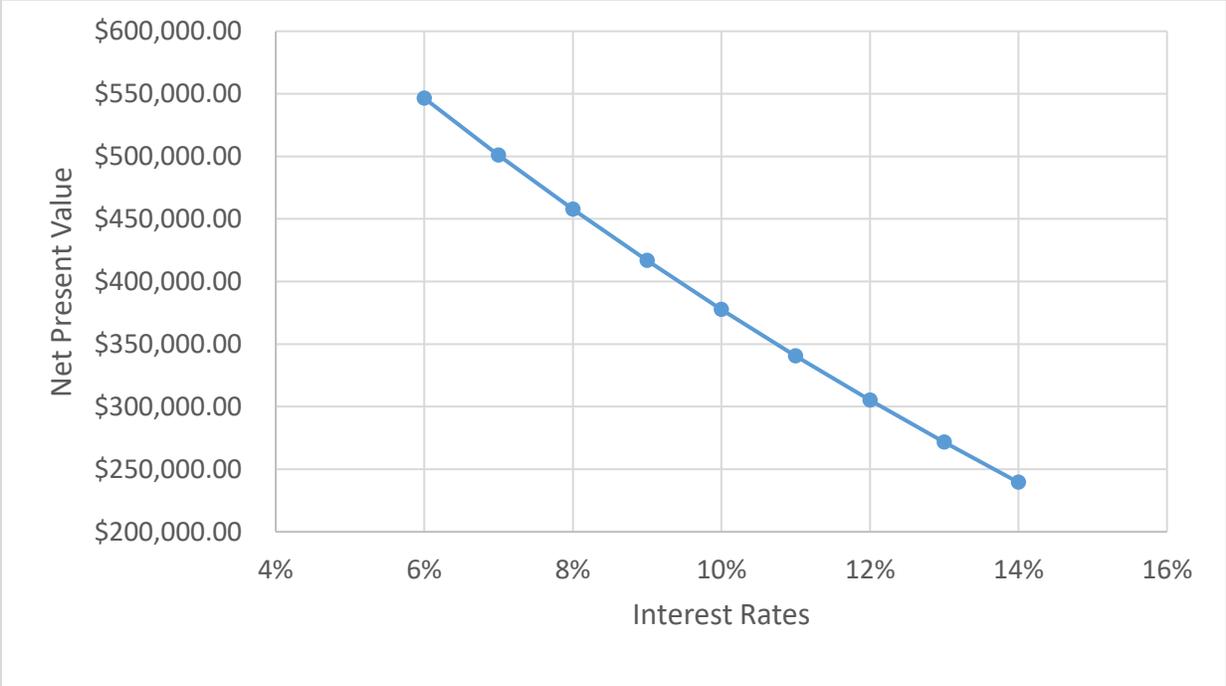
Sensitivity Analysis

Interest rates can have a huge effect on the value of money, and money in the future will not equal the same dollar value in today’s dollars. The study will look at the net present value for the investment of renovating the barn into a tasting room. The study will use the net present value as a base and compare the changes in the variables. The changes in the sensitivity analysis are shown by changing one variable at a time while keeping all other variables constant. The net present value will change each time a variable changes and this will

allow K-Dot Winery to decide if they want to move forward with this renovation because it will show best and worst case scenarios. This study will examine changes in two different variables—the amount of wine produced changing and the price per case changing.

The first step will be to look at the basic capital budget. The examined effect of net present value with interest rates in increments of one percent from 6.0-14.0%. At the lowest interest rate of 6%, the net present value of the investment is \$2,341,417.71; on the other hand, the highest interest rate of 14% results in a net present value of \$1,589,175.33. Table 3 below shows the net present value for the basic capital budget.

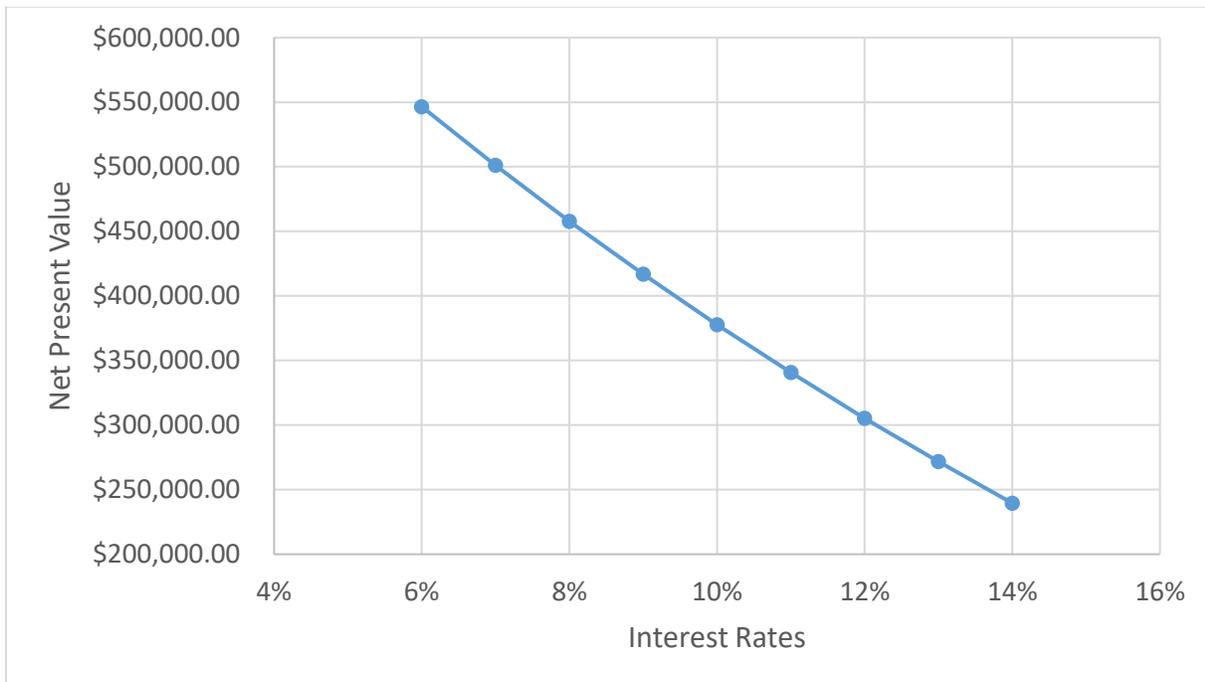
Table 3: Net Present Value for Basic Capital Budge



The first variable that changes is the amount of wine produced. This could be due to a lack of rainfall or a pest outbreak that can wipe out the winery’s crop. This analysis looks at the possibility of K-Dot Winery only producing and selling a maximum 2,500-6,000 cases out of their

15,000 normal case production. The net present value for this analysis will remain positive, mainly because the winery had the liquid capital to renovate the tasting room right away and they did not need to take a loan out. At the lowest interest rate of 6%, the net present value of the investment is \$546,511.54; on the other hand, the highest interest rate of 14% results in a net present value of \$239,508.53. This drastically decreases the net present value, but it remains a positive figure. A table of the effect of quantity produced and sold is shown below.

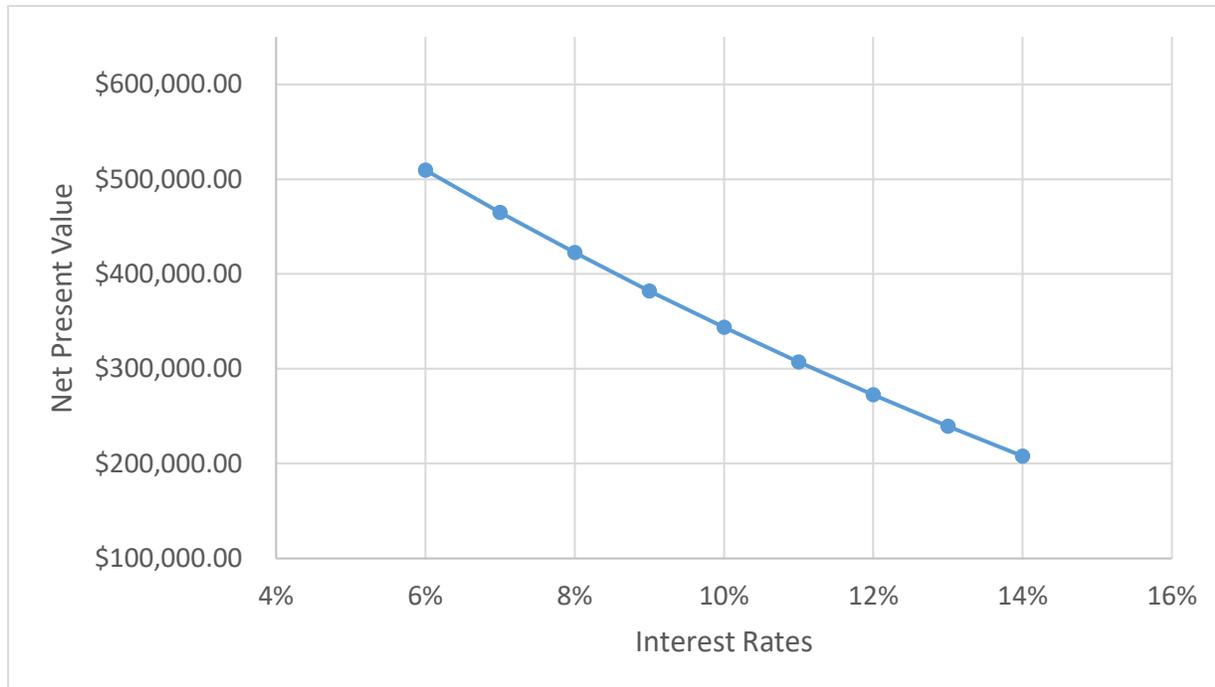
Table 4: Net Present Value for a Decrease in Quantity Produced and Sold



The final sensitivity analysis that K-Dot winery will look at is to see what would happen if the price per case decreased drastically—from \$240/case to \$100/case. The lower price per case could be due to a decreased demand for wine. Again, this analysis shows that the net present value will decrease, but it remains positive. Out of the three situations analyzed, this analysis proves to decrease the net present value the most. At the lowest interest rate of 6%,

the net present value of the investment is \$509,618.72; on the other hand, the highest interest rate of 14% results in a net present value of \$207,923.60. Table 5 below shows the effect of a price decrease in the net present value is shown below.

Table 5: Net Present Value for a Price Decrease



Summary

Looking at all of the sensitivity analysis', the net present value is always positive. This shows renovating the barn will result in profit, and K-Dot Winery should renovate. The best-case scenario is looking at the basic capital budget with the lowest interest rate of 6% which equals \$2,341,417.71. The worst-case scenario is looking at the price change with the highest interest rate at 14% which equals \$207,923.60. In a real-life situation, the winery will most likely have to take a loan out which would make the net present value negative in certain circumstances; however, for this study K-Dot Winery already has the cash ready to renovate.

Chapter 5

Summary, Conclusions and Recommendations

Summary

Before K-Dot Winery can renovate the tasting room, the winery must come up with the total costs for the project. The total cost for the 2,000-square foot project was \$751,656.84. As mentioned before, K-Dot Winery saved up enough capital to pay for the renovation immediately which meant they did not have to take out a loan.

After the tasting room was open to the public, they would begin to obtain revenue. K-Dot Winery produces 15,000 cases yearly, and they hope to sell 13,000 cases annually. At \$240/case, selling 13,000 cases is equivalent to \$3,120,000.00. This would be the best-case scenario. K-Dot Winery also conducted a sensitivity analysis to look at the net present value. Changes of this net present value were examined during the sensitivity analysis which changed two main variables in this study—the amount of wine produced and sold as well as the price per case changing.

Conclusion

When the amount of wine produced and sold changed, the net present value fluctuated between \$546,511.54 and \$239,508.53 between the interest rates of 6% and 14%. When the price per case was changed from \$240/case to \$100/case, the net present value fluctuated between \$509,618.72 and \$207,923.60 between the interest rates of 6% and 14%. The sensitivity analysis proved that renovating the tasting room would be a success for K-Dot

Winery because the best and worst-case scenarios both showed a positive profit. Renovating the barn into a tasting room would bring significant value to K-Dot Winery and it will increase the revenue tremendously.

Recommendations

Under this study, the author recommends K-Dot Winery go forward with the renovation for the tasting room. The net present value remains positive in both best and worst-case scenarios. Along with opening a tasting room, there are numerous other ways K-Dot Winery can increase their revenue. They can sell their library wines (the 2,000 cases held back each year for aging) at a higher price than their estate Cabernet Sauvignon and Petite Sirah.

Tasting rooms also create brand loyalty, and K-Dot Winery can develop a wine club after the first year or so. Wine clubs add perpetuity and it is a guarantee a certain amount of the wine will be sold each year. Moving forward, the author recommends completing research into loans so the winery will not have to lose so much capital at once for the remodel. More research could be conducted to make sure the tasting fees are equal to or supersede the amount of wine lost during pouring because that could be a large variable cost that was not accounted for in this study.

References Cited

- Avercamp, H. (2013). Income Statement (Profit and Loss Statement) | Explanation | AccountingCoach. Retrieved February 15, 2016, from <http://www.accountingcoach.com/income-statement/explanation>
- Avercamp, H. (2013). Cash Flow Statement | Explanation | AccountingCoach. Retrieved February 18, 2016, from <http://www.accountingcoach.com/cash-flow-statement/explanation>
- Ehrhardt, Michael C. and Eugene F. Bringham. (2011). Financial Management: Theory and Practice. 13 ed. Mason, Ohio: South-Western. http://213.55.83.214:8181/Bussiness%20Ebook/Financial%20books/Financial_Management_Brigham_13th_Edition.pdf
- Fickle, L. A., & Folewell, R. J. (1996, April). Small Winery Investment and Operating Costs. Retrieved February 5, 2016, from http://www.agribusiness-mgmt.wsu.edu/agbusresearch%5Cdocs%5Cwine_grapes%5Ceb1996_05.pdf
- Firstenfeld, J. (2006, January 6). The Start-Up Winery, Part I:. Retrieved February 7, 2016, from <http://www.winesandvines.com/template.cfm?section=features>
- Franson, P. (2010, June 17). Wine Tasting Room Success Stories. Retrieved February 8, 2016, from <http://www.winesandvines.com/template.cfm?section=news>.
- Fonash, E. G. (n.d.). Economics of a Small Premium Winery. Retrieved February 8, 2016, from <http://www.smallfruits.org/bunchgrapes/production/economicsofasmallpremiumwinery.pdf>
- Julie, F. (2009, December 14). Developing a Business Plan for Your Winery. Retrieved February 6, 2016, from <http://southcenters.osu.edu/sites/southc/files/site-library/site-documents/dirmark/developbusinessplanwinery.pdf>
- Hirst, K. (2014, December 16). Wine and its Origins. Retrieved February 8, 2016, from <http://archaeology.about.com/od/wterms/qt/wine.htm>

Hofstrand, D. (2009, October). What is a Feasibility Study? | Ag Decision Maker. Retrieved March 8, 2016, from <https://www.extension.iastate.edu/agdm/wholefarm/html/c5-65.html>

Kay, Ronald D., William M. Edwards, Patricia A. Duffy. 2008. Farm Management, Sixth Edition. New York City: McGraw-Hill.

Kelley, K. M. (n.d.). Winery Tasting Room Essentials (Farm and Food Business). Retrieved February 5, 2016, from [http://extension.psu.edu/business/farm/resources/publications/tasting room.pdf/view](http://extension.psu.edu/business/farm/resources/publications/tasting_room.pdf/view)

McMillan, R. (2013, March 9). How Much Do Tasting Rooms Make? Retrieved February 4, 2016, from <http://svbwine.blogspot.com/2013/03/how-much-do-tasting-rooms-make.html>

Mitchell, T. (2011, June). Feasibility Study for Building a Tasting Room in Napa Valley. Retrieved February 6, 2016, from <http://digitalcommons.calpoly.edu/cgi/viewcontent.cgi?article=1081&context=agbsp>

Southern Illinois University. (n.d.). Winery Start-Up and Business Plan Workbook. Retrieved February 7, 2016, from <http://www.marylandwine.com/marylandwine/uploads/File/startup/WineryStartUpProfile.pdf>

Vivre, A. D. (n.d.). History & Tradition Of Wine - Wine In Moderation. Retrieved February 11, 2016, from <http://www.wineinmoderation.eu/en/content/History-Tradition-of-Wine.4/>

Zucca, G. (n.d.). Direct to Consumer Sales in Small Wineries: A Case Study of Tasting Room and Wine Club Sales. Retrieved February 4, 2016, from http://academyofwinebusiness.com/wp-content/uploads/2010/04/Direct-to-consumer-sales-in-samll-wineries_paper.pdf

Appendix

Basic Capital Budget Cash Flow Sheet

A. Operating Cash Flows	Yr 0	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6
Unit Sales (in cases)	2500	5000	7500	9000	11000	13000	13000
Price/Case	\$240	\$240	\$240	\$240	\$240	\$240	\$240
Total Revenue	\$600,000.00	\$1,200,000.00	\$1,800,000.00	\$2,160,000.00	\$2,640,000.00	\$3,120,000.00	\$3,120,000.00
Operating costs	\$360,000.00	\$720,000.00	\$1,080,000.00	\$1,296,000.00	\$1,584,000.00	\$1,872,000.00	\$1,872,000.00
Depreciation	\$4,519.08	\$9,038.16	\$13,557.24	\$18,076.32	\$22,595.40	\$27,114.48	\$31,633.56
EBIT	\$235,480.92	\$470,961.84	\$706,442.76	\$845,923.68	\$1,033,404.60	\$1,220,885.52	\$1,216,366.44
Taxes on Operating Income(Less)	\$80,063.51	\$160,127.03	\$240,190.54	\$287,614.05	\$351,357.56	\$415,101.08	\$413,564.59
Depreciation(Plus)	\$4,519.08	\$9,038.16	\$13,557.24	\$18,076.32	\$22,595.40	\$27,114.48	\$31,633.56
Operating Cash Flow	\$159,936.49	\$319,872.97	\$479,809.46	\$576,385.95	\$704,642.44	\$832,898.92	\$834,435.41

B. Net Cash Flows							
Net Cash Flow	\$(751,765.84)	\$319,872.97	\$479,809.46	\$576,385.95	\$704,642.44	\$832,898.92	\$992,835.41
Accumulated Cash Flow	\$(751,765.84)	(\$431,892.87)	\$47,916.60	\$624,302.54	\$1,328,944.98	\$2,161,843.90	\$3,154,679.31

Sensitivity Analysis: Amount of Wine Produced and Sold Cash Flow Sheet

A. Operating Cash Flows	Yr 0	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6
Unit Sales (in cases)	2500	2500	3200	3900	4500	4950	6000
Price/Case	\$240	\$240	\$240	\$240	\$240	\$240	\$240
Total Revenue	\$600,000.00	\$600,000.00	\$768,000.00	\$936,000.00	\$1,080,000.00	\$1,188,000.00	\$1,440,000.00
Operating costs	\$360,000.00	\$360,000.00	\$460,800.00	\$561,600.00	\$648,000.00	\$712,800.00	\$864,000.00
Depreciation	\$4,519.08	\$9,038.16	\$13,557.24	\$18,076.32	\$22,595.40	\$27,114.48	\$31,633.56
EBIT	\$235,480.92	\$230,961.84	\$293,642.76	\$356,323.68	\$409,404.60	\$448,085.52	\$544,366.44
Taxes on Operating Income(Less)	\$80,063.51	\$78,527.03	\$99,838.54	\$121,150.05	\$139,197.56	\$152,349.08	\$185,084.59
Depreciation(Plus)	\$4,519.08	\$9,038.16	\$13,557.24	\$18,076.32	\$22,595.40	\$27,114.48	\$31,633.56
Operating Cash Flow	\$159,936.49	\$161,472.97	\$207,361.46	\$253,249.95	\$292,802.44	\$322,850.92	\$390,915.41

B. Net Cash Flows							
Net Cash Flow	\$(751,765.84)	\$161,472.97	\$207,361.46	\$253,249.95	\$292,802.44	\$322,850.92	\$390,915.41
Accumulated Cash Flow	\$(751,765.84)	(\$590,292.87)	(\$382,931.40)	(\$129,681.46)	\$163,120.98	\$485,971.90	\$876,887.31

Sensitivity Analysis: Price per Case Change Cash Flow Sheet

B. Operating Cash Flows	Yr 0	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6
Unit Sales (in cases)	2500	5000	7500	9000	11000	13000	13000
Price/Case	\$100	\$100	\$100	\$100	\$100	\$100	\$100
Total Revenue	\$250,000.00	\$500,000.00	\$750,000.00	\$900,000.00	\$1,100,000.00	\$1,300,000.00	\$1,300,000.00
Operating costs	\$150,000.00	\$300,000.00	\$450,000.00	\$540,000.00	\$660,000.00	\$780,000.00	\$780,000.00
Depreciation	\$4,519.08	\$9,038.16	\$13,557.24	\$18,076.32	\$22,595.40	\$27,114.48	\$31,633.56
EBIT	\$95,480.92	\$190,961.84	\$286,442.76	\$341,923.68	\$417,404.60	\$492,885.52	\$488,366.44
Taxes on Operating Income(Less)	\$32,463.51	\$64,927.03	\$97,390.54	\$116,254.05	\$141,917.56	\$167,581.08	\$166,044.59
Depreciation(Plus)	\$4,519.08	\$9,038.16	\$13,557.24	\$18,076.32	\$22,595.40	\$27,114.48	\$31,633.56
Operating Cash Flow	\$67,536.49	\$135,072.97	\$202,609.46	\$243,745.95	\$298,082.44	\$352,418.92	\$353,955.41

C. Net Cash Flows							
Net Cash Flow	\$(751,765.84)	\$135,072.97	\$202,609.46	\$243,745.95	\$298,082.44	\$352,418.92	\$353,955.41
Accumulated Cash Flow	\$(751,765.84)	(\$616,692.87)	(\$414,083.40)	(\$170,337.46)	\$127,744.98	\$480,163.90	\$834,119.31