

Feasibility Study for Establishing a Restaurant in Jeddah

Said Ali ElQuliti^a, Abdourahman Gamil Elalem^{b*}

^a*Prof., Department of Industrial Engineering, King Abdul Aziz University, Jeddah 21523, Saudi Arabia*

^b*Brioche Resturant, board member, Jeddah 23433, Al Kayyal, Saudi Arabia*

^a*Email: saidalihassan@yahoo.com*

^b*Email: alalim.aj@gmail.com*

Abstract

The primary purpose of this paper is to express an in-depth and comprehensive feasibility study for a gourmet restaurant in Jeddah since a feasibility study is crucial to the success of any business project. This study targets to explore the success of establishing a gourmet restaurant in Jeddah and to answer the question whether this business idea will continue successfully. We propose that the gourmet restaurant will comprise a signature store made brioche bread, as a novel idea. The business type needed, data regarding the gourmet restaurant industry and the history and development of brioche bread are basic information required. The feasibility study contains six categories: business strategy, market feasibility study, technical feasibility study, location and site selection study, social and an environmental feasibility study, and economic feasibility study. The market study addresses the requisite information on demand and supply, as well as the detailed information about competitors. The technical study contains the necessary machinery, production capacity, needed raw material and inputs, computer system(s) and human resources plans. Accordingly and based on quantitative selection criteria, the most suitable site was chosen. This study also identifies the impact on society and environment. The economic feasibility study recognizes the financial resources needed to channelize and operate the business and calculates all the economic performance indicators for the project.

Keywords: Feasibility Study; Restaurant; Brioche.

1. Introduction

This paper presents a feasibility study for a gourmet restaurant in the heart of Jeddah city. This study will assist in supporting the viability of the business plan. Additionally, it can identify possible complications ahead of time thus, eliminating them from occurring by planning for precautions.

* Corresponding author.

The paper will also enable the creation and testing of the business structure of the gourmet restaurant. The gourmet restaurant will serve sandwiches and international cuisine alongside baked store made bread specifically Brioche. Brioche is a French bread dark with golden crust that contains a high proportion of fat, primarily butter and egg yolks that gives the bread a soft crumbly and flaky texture. The conceptual idea of the restaurant alongside the creative cuisine and several marketing ideas allows clarity to the business scheme, which ultimately with the support of this study will align investors and stakeholders on a detailed plan and the science behind it.

1.1. Project Idea

The gourmet restaurant with its signature item being the Brioche bread, consists of a dry and a wet kitchen as well as a bar overlooking the ground floor seating area. It has a spacious seating area divided between two floors with high seating, coach seating and normal set tables. Our current focus is selling gourmet dishes and drinks, a market study will determine the eatables where both the demand and supply are calculated based on studying the common trend in the market. This feasibility study is going to be for Saudi market and the focus market area will be the western region, targeting Jeddah with a medium business scale.

At the onset, the restaurant will have a soft opening and will be testes on varied menus to determine the final products prior to its grand opening. Social media networks, for e.g. Snapchat, Instagram, Twitter and Google etc. are our primary choice for marketing purposes.

1.2. Objectives

The ultimate objective of a feasibility study is to ensure a project is sustainable, technically feasible and economically justifiable. This is indispensable to determine whether the project is worth the investment and its risk factors. This paper addresses these main objectives:

1. Description of the sandwich industry, analysis of the current market and assessing future demand and market potential;
2. Detailed description of competition and targeted customers;
3. Development of a marketing plan;
4. Determine the needed material, labor, transportation and technology;
5. Projection about capital needs and how these needs would be met, what would be the ROI (Return on Investment);
6. Defining the structure of business and its organizational needs;
7. Development of human resources plan;
8. Determining the social and environmental feasibility of studies;
9. Selecting the suitable site and location.

2. Literature Review

There are numerous successful gourmet restaurants, but understanding of the business proper planning is the key

to success. For a new gourmet restaurant, a business plan works as the roadmap towards examination of all aspects of the business and preparing for triumph and profit [3].

2.1. Previous Feasibility Studies

A catering company in Pennsylvania, USA contacted the business consultancy firm named Ground Floor Partners to conduct a feasibility study for a planned restaurant. The selected location was in an old building in an historic district undergoing extensive revitalization. The consultancy firm made a feasibility study based on the detailed plans for the restaurant, the local and regional demographics, traffic patterns, local competition, and projected financials. The study concluded that the long-term opportunity was prosperous [4].

As part of a feasibility study for a Le Diner Restaurant, a new system was also evaluated. The feasibility study for the Le Diner Restaurant included operational, technical, economic and schedule feasibility. The purpose of the study was to decide whether the problems they are currently facing with the system is worth solving. The operational feasibility study tests the operational range of the new information system. A technical feasibility study checks the technical requirements of the new proposed system for the restaurant which will eventually increase employee satisfaction. Economic feasibility analyses the new system costs and incomes and compares the benefits with the lifetime costs. Schedule feasibility is a collaboration between time and costs. It is the probability that the project will be completed within the timeframe, thus the restaurant management must establish a firm timetable for the project [5].

A feasibility study of a new sit-down restaurant in Ventura was considered for a project feasibility and food industry was briefly discussed as it is the most known industry in the world. Ventura is a city in southern California that has been renewing its image to attract more people to the downtown area. The city is considered a beach town with many people visiting the beach every spring and summer. Sit-down restaurants typically offer full menus, which include appetizers, entrees, sides, desserts, and all types of beverages. Such restaurants usually have a host that greets people as they walk in and set them to their table. They also have well trained chiefs and waiters. The quality of the waiter's experience affect customer satisfaction. Also, the restaurant have different things that differentiate itself from other sit-down restaurants, the experience should become a form of entertainment for the visitors. The study can assist people planning to open a restaurant in an area with similar demographics as Ventura [6].

Another research paper analyzed the literature concerning restaurant feasibility study located in China. The literature analyzed the different aspects of starting up a restaurant business, which include market area, consumer spending pattern, competition analysis, site evaluation and financial statement. Thorough investigation the market area was identified, for the consumer-spending pattern. The survey result shows some aspects of the customer profile of the market area of the restaurant. The competitive analysis was conducted for 45 restaurants through observational research and five specific competitors were identified and studied. Through observation of the site analysis was conducted and a site was chosen. In addition, a pro forma financial analysis was conducted to determine the financial future of the restaurant [7].

A document was created by the government of Pakistan under the Ministry of Industries and Production. The purpose of this document is to facilitate potential investors in Fast Food Restaurant for the small and medium enterprise authority by providing them with a general understanding of the business. The pre-feasibility study is important to facilitate potential entrepreneurs. The study included a project brief, plan for a successful restaurant, required machinery and equipment, Land and building requirements, Human resources requirements, financial analysis and key assumptions. Fast food was defined as food which is prepared and served quickly at outlets and is a multi-billion dollar industry which continues to grow rapidly all over the world. A fast food restaurant is a restaurant characterized by both food and service, food is supplied quickly and minimal service is provided. Most fast food restaurants are part of a franchise operation that are shipped for overseas [8].

Another feasibility study about a restaurant includes a scope, a simple methodology, market potential, recommended considerations and size, first year revenue, economic and demographic, supply analysis and requirements for success. The restaurant is planned to be in the Peacock & Lewis clubhouse development team by the Village of North Palm Beach, USA. North Palm Beach has an adequate population base, substantial disposable income and a noticeable lack of food and beverage spending. Thus, it is an economic environment that would support a new restaurant to be established. The study provides recommendations regarding the size of the components of the restaurant facilities, financial aspects for a five-year period, collect and analyze economic and demographic data and providing comparison data to related restaurant and operations [9].

2.2. *Gourmet Food and Brioche*

The proposed project will be a gourmet restaurant. The term gourmet is associated with good quality beverages and foods. Gourmet Restaurants are usually of high prices because of the high care, authenticity, quality and expenses that are incurred during preparing the meal and the restaurant experience as a whole. In the food or restaurant industry, the term gourmet is used for "specialty" and "premium" restaurant. The retail of gourmet products has been promoted from the hourglass market phenomenon i.e. when the consumer demand for a product is strong at either the high end or the low end and weak in the middle. Historically, high-end products like luxury chocolate had a thinly defined position. The target audience was affluent consumers who were able to afford high end products. Currently, gourmet products are becoming mainstream because most consumers are better educated and have larger global exposure. This exposure to a finer palette in foods and drinks in cafes and restaurants cause most consumers to choose better. In addition, markets are advertising gourmet foods and drinks as more affordable luxuries that may be enjoyed more frequently. Even in times of turbulence in the economy, gourmet foods have shown to deal well because consumers are using these small indulgences as comfort food [4].

The gourmet restaurant plan is to target baking homemade brioche bread that can be examined by researching the history of this unique French bread. The past of Brioche (a sweet and buttery French bread) is vast and filled with noteworthy encounters. While modern restaurants only use Brioche buns in burgers, there is a record of Brioche being enjoyed for hundreds of years as a Viennoiserie. A Viennoiserie is a mix between pastry and bread made with a yeast dough kneaded with butter, eggs, and milk. For centuries, the French, from their royalty to philosophers, have enjoyed Brioche as a delicacy. Brioche was first created by the Norman Vikings, who

brought their own breed of cows to northern France. The Normandy cow's milk is known for its creamier butter, and in order to save it from becoming spoilt Brioche was invented, as its creation needed higher quantities of butter and eggs than normal bread. Initially, Brioche was eaten by peasants who churned butter, butter being a byproduct of dairy farming; and was mostly consumed by dairy farmers.

The transition in the status of Brioche happened when the 16th century archbishop commanded prohibition on consumption of local Normandy butter.

Thereby elevating its status to be associated with wealth and power, making butter and its coveted (an enormous) consumption by the elite class, and the ensuing Brioche and its popularity. Brioche, is the precursor to the Pain Benit (blessed bread), which was distributed at religious gatherings [5].

3. Market Study

Market research, which includes social and opinion based research, is the systematic gathering and interpretation of information about individuals or organizations using statistical and analytical methods of applied social sciences to gain support in decision-making.

Market study is one of the key factors used in maintaining a competitive edge over competitors, and is essential towards identifying qualitative techniques such as focus groups, in-depth interviews, and ethnography, as well as quantitative techniques such as customer surveys, and analysis of secondary data [10].

In this segment, the demand and supply are identified based on the population of Jeddah. After that, the gap is calculated in order to determine the product mix and the production capacity of the restaurant.

Demand is an economic principle that describes a consumer's desire and willingness to pay a price for specific goods or services. Some basic factors affecting the demand side are remarkable growth in population, huge number of pilgrims visit the country every year, and growing health awareness [11]. Last known population of Makkah region is about 8,338,321 (year 2016) 8,550,114 in 2017 [12]. The population growth rate is 2.54%/year, and then Jeddah's population in 2017 would be 4,287,163.

The population of Jeddah is breaking-down based on the demographics of Makkah region, we multiplied the total population of Jeddah with the willing percentage column (We assumed that the demographics of Jeddah is equal to Makkah region).

A survey has been submitted to a similar Restaurant with 241 responses, questions were include: age, gender, occupation, currency of approaching a similar restaurant, currency of approaching a specific restaurant, attraction factors to a specific restaurant, meals taken at similar restaurants, important factors for preferring a specific restaurant, money spent at a restaurant, and accompanying persons to the restaurant. Figure 1 presents responses for some of these questions.

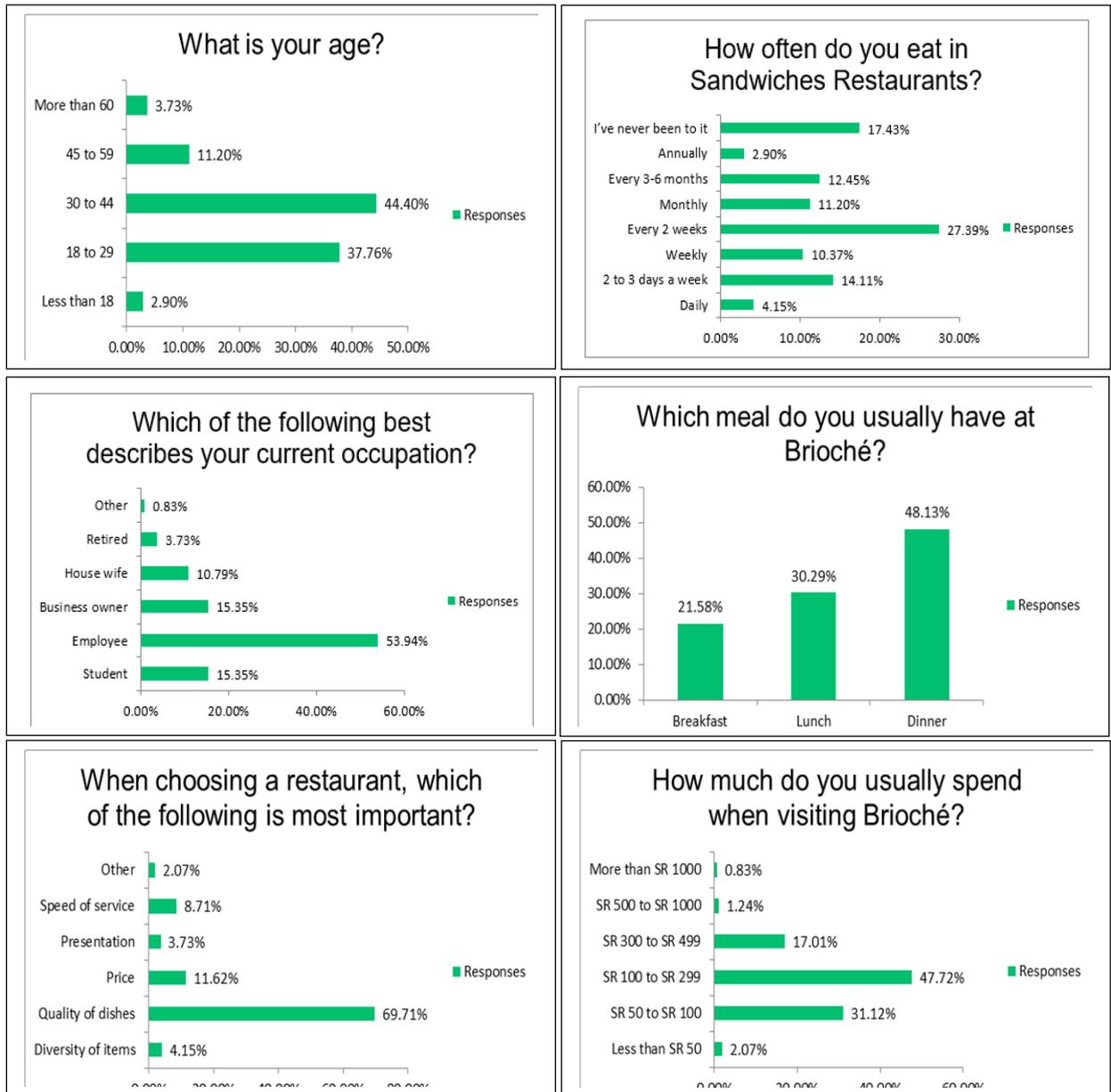


Figure 1: Responses of customers for the questionnaire.

From Figure 1 and the results of the questionnaire, we can conclude:

- Customers come to the restaurants are mostly of ages from 20 to 59 years old,
- No preference according to gender, employees represent the most percentage of customers,
- The majority come to the restaurant every 2 weeks,
- Visitors come for the three meals but majority come for dinner, and
- The majority of customers spend about 100-300 SAR per visit.

Table 1 presents the response from another survey about the percentage willing to eat in similar restaurants according to the age percentages; the percentage is multiplied by the population size of each segment visits to come up with the anticipated market size/week. The anticipated market size is counted as one quarter of the total

population of the region that is considered as an encouraging factor.

Table 1: Number of people willing to eat in similar restaurants.

Age	Population Size	Willing %	Number of People
20 to 29	171,627	45%	78,012
30 to 44	427,724	36%	153,981
45 to 59	260,884	17%	43,481
Total			275,474

From the survey, we know that people willing to eat sandwiches 1 time every two weeks, then the number of customers per year = $275,474 \times 26 = 7,162,324$. Some basic factors affecting the supply side are high income rate, willing to eat outside.

A considerable number of restaurants were visited and the number of customers are identified. Then alternative goods were checked by comparing menu items in different restaurants and evaluating the similarities and differences. In addition, we compare the degree of commercial activity and consumer behavior by checking the environment and interiors, and how the customer reacts to it in comparison to other restaurants in the industry as shown in table 2. The commercial activity factor is measured relative to Sandwich Gallery which is considered with factor a, all other restaurants are compared to it. A restaurant with factor of 2 means that its commercial activity is twice that of Sandwich Gallery.

Table 2: Commercial activity factor.

Name	Commercial Activity Factor
Sandwich Gallery	1
Casper & Gampinies	2
Breking bread	1.6
Toasted	1.4
Others	14
Total	20

From the secondary information, we know that the average daily customers of Sandwich Gallery (one of the similar brands) is SAR is 400 customer / day. Then the total amount of supply = $400 \times 365 \times 20 = 2,920,000$ customer per year.

A market gap is defined as an unfulfilled consumer need or a group of potential customers who are not yet

purchasing any goods or services [13]. The bright side to having a gap in the market is that it allows opportunities for companies to have great expansion in their customer base by three ways: increasing awareness, creating targeted offers and advertising campaigns to reach the untapped market. From the anticipated market size and the supply side, it is clear that here is a business opportunity to open a new restaurant. The fact that no one of the similar restaurant closed any in the recent period in Jeddah much supported the idea in a great extent. The anticipated capacity is estimated by considering some of the similar brands and by consulting with respective expertise as given in Table 3. Figure 2 shows some products of the restaurant [14].

Food industry is considered one of the largest industries in Saudi Arabia, and especially in Jeddah food is considered an entertainment destination as well as a necessity for living. The market is huge yet the average quality vs. price in the market is low. Majority of the food retailers and service providers does not provide superb authentic experiences. Either too low in class or too high in price [15].

Table 3: Anticipated capacity and the product mix.

Type	Item	%	Capacity / Year	Price / SAR	Unit
Main Dish	Club Sandwich	15%	8,213	40	Sandwich
	The Proper Burger	35%	19,163	45	Sandwich
	Smoked Beef Brisket Sandwich	50%	27,375	66	Sandwich
Appetizers	Brioché Bruschetta	25%	13,688	20	Plate
	Fusion Quinoa Salad	25%	13,688	30	Plate
Dessert	Pistachio Cheesecake	50%	27,375	40	Plate
Drinks	Soft Drinks	90%	49,275	5	Piece
	Cup of Coffee	10%	5,475	10	Cup

People in Jeddah are willing and able to consume food and use it as a joy. But, sandwiches aren't considered a gourmet or fancy food anywhere in Jeddah except the sandwich gallery.

The general idea of a sandwich falls into either ill executed Panini's (a sandwich made with Italian bread, usually toasted) or very cheap cafeteria sandwich. Usually, it is not considered a real meal.

As per the latest few years, trend leaned into better quality food, and local food makers who are either directly involved owners or wannabe chefs. The introduction of master Arabia Arabian chef contributed into increased value of an Arab chef.

Therefore, the market needs better quality food, Better variety, local ownership and an idea based food that does not cost much. In addition, many will compare it to Riyadh, Dubai or even Europe and the states.



Figure 2: Some products of the restaurant

4. Technical feasibility study

4.1. Process Description

A description of the process flow is necessary to identify the production steps and hence the needed machinery. The first phase of the production program is assembling and weighing, then mixing the production ingredients. The factors that will influence the weighing and mixing of the ingredients include friction, dough temperature and water temperature. During the second phase, the ingredients are mixed and the yeast cells are distributed evenly in the dough. The methodology of mixing the ingredients in the restaurant is known as continuous mixing methodology. The methodology will require conventional equipment that will prepare a liquid sponge by using coil tanks that are refrigerated and accordingly there will be no individual sponges in the mixture. The fermentation of the dough will take place in the third phase, and the fermentation process will accelerate the leavening of the dough. The temperature of the mixture will be equalized through punching, and this will be the fourth stage of the production program. The mixture will be molded in the fifth stage, and then the dough will be placed in the oven.

The products will be used as the main ingredient in all the sandwiches. The daily amount of dough at the restaurant will rely on the restaurant's marketing strategies and market requirements. All the needed machinery for the restaurant depend on the identified process of the dough making. The next section will describe all the technical details of the production lines and identify the area, labor, and layout.

4.2. Selection of Machinery

The machinery are selected by comparing products from many suppliers and choose the best according to quality, prices, and services [16], see Table 4. Table 5 presents the capital expenditures for the restaurant.

Table 4: Selection of Machinery.

Equipment	Unit Cost (SAR)
Dough Mixer	36,000
Proofer	12,000
Rational 5 senses white efficiency Oven	126,000
Coffee Maker 2 outlets semi-automatic	30,000
Refrigerator	71,000
Fraser	25,000
Blender	5,325
Sous Vide Machine	4,100
Fusion chef pearl professional sous vide immersion circulator 220V	3,745
Induction heater	2,984
Mixer	2,900
Total	319,054

Item Description	Quantity	Unit Cost (SAR)	Total
Construction Cost	-	700,000	700,000
AC	1	100,000	100,000
Electrical Items	200	450	90,000
Cooking Kitchen Equipment	1	47,500	47,500
Server	1	44,850	44,850
Lighting	1	30,000	30,000
Plumbing	1	20,000	20,000
CCTV + Network + Sound System	1	20,000	20,000
Hot Cobain 20	1	15,000	15,000
Kitchen Equipment	1	15,000	15,000
Fan	2	7,500	15,000
Espresso Machine	1	9,000	9,000
Electrical Switches, Plates and sockets	1	7,380	7,380
Apple ipad	4	1,750	7,000
Fire safety system	1	6,000	6,000
Shilves, Trolley and ice machine	1	5,000	5,000
Fridge and washing Machine	1	3,674	3,674
TV set	1	3,229	3,229
LED-SWITCH	1	3,000	3,000
Digital scale and bread molds	1	3,000	3,000
Electric Sockets	2	1,275	2,550
Phone	1	1,500	1,500
Mini Bus	1	50,000	50,000
Car	1	30,000	30,000
Total			1,228,683

1. Dough Mixer, Figure 3:

Power: 1 Kw – 12 A 380V.

Capacity: 22 KG per load.

Labor: 1 (computer programmer).

Area: 50 cm x 70 cm

Price: 24,000 SAR



Figure 3: Dough Mixer.

2. Proofer, Figure 4:

Power: 10 A 380V.

Capacity: 38 KG per Load

Labor: 1

Area: 60 x 60 cm

Price: 12,000 SAR



Figure 4: Proofer.

3. Rational 5 senses white efficiency Oven, Figure 5:

Power: 69 A 380 V

Capacity: 10 GN1/1 per load

Labor: 1, (computer programmer).

Water inlet required Min 1.5 barrel.

Water drainage outlet required

Labor =: 1

Area: 60 * 60 * 180 cm

Price: 126,000 SAR



Figure 5: Rational 5 senses white efficiency Oven.

4. Coffee Maker 2 outlets semi-automatic, Figure 6:

Power Required 220V 20 Amp

Yield: 30 gm per second per nozzle

Water inlet: 1 par min

Water Drainage outlet required

Labor needed: 1

Area: 90 cm x 40 cm

Price: 30,000 SAR



Figure 6: Coffee Maker 2 outlets semi-automatic

5. Other Equipment

Table 6 presets other equipment with quantities and prices.

Table 6: Other equipment and prices.

Item Description	Quantity	Unit Cost (SAR)	Total (SAR)
Large Refrigerator	3	20,000	60,000

Table 7 represents the variable costs of raw material.

4.3. Raw Material

Table 7: Variable costs of raw material.

Order Name	Ingredient	Quantity (g)	Unit Cost	Cost of Ingredient
Brioché	Brioché bread	55	0.01	0.55
	Fresh mozzarella	30	0.10	3.00
	Mohammarah	25	0.02	0.50
	Mint pesto	10	0.03	0.30
Bruschetta	Chopped olives	12	0.03	0.36
	Parmesan cheese	7	0.05	0.35
	Balsamic cream	6	0.05	0.30
Quinoa	Cooked quinoa	20	0.02	0.40
	Green apple	200	0.01	2.00

Salad	Green bell pepper	170	0.01	1.70
	Red bell pepper	170	0.01	1.70
	Yellow bell pepper	170	0.01	1.70
	Mango	100	0.02	2.00
	Lime	163	0.02	3.26
	Coriander	10	0.01	0.10
	Sugar	40	0.01	0.40
	Salt	8	0.01	0.08
	Chilli powder	12	0.02	0.24
	Pineapple	150	0.01	1.50
	Quinoa	10	0.05	0.50
	Water	2000	-	1.00
	Dijon mustard	50	0.04	2.00
	Hellmans mayo	530	0.01	5.30
	Mustard seeds	50	0.03	1.50
	Salt	20	0.01	0.20
	Black pepper corn	9	0.05	0.45
Club	Brioché bread	120	0.01	1.20
	Club sandwich Sauce	30	0.01	0.30
Sandwich	Iceberg lettuce	40	0.02	0.80
	White chicken breast	50	0.02	1.00
	White cheddar	10	0.04	0.40
	Pasterami	10	0.10	1.00
	Turkey murtadella	10	0.07	0.70
	Tomato	10	0.01	0.10
	Brioché bread	95	0.01	0.95
	Buger sauce	45	0.02	0.90
The Proper	Minced beef	250	0.06	15.00
Burger	Caramellised onion	40	0.01	0.40
	Tomato	50	0.01	0.50
	Lolobondo lettuce	25	0.04	1.00
Smoked Beef	Brioché bread	300	0.01	3.00
Brisket	Smoked brisket	150	0.06	9.00
Sandwich	Coleslaw	30	0.01	0.30
	Bbq sauce	20	0.01	0.20
	Philadelphia cheese	50	0.04	2.00
Pistachio	Bottled egg	200	0.01	2.00
Cheesecake	Flour	10	0.01	0.10
	Corn starch	10	0.01	0.10
	Vanilla paste	10	0.10	1.00

	Sugar	300	0.01	3.00
	Yogurt	100	0.01	1.00
	Cooking cream	350	0.02	7.00
	Lemon	15	0.01	0.15
	Cheese cake	270	0.02	5.40
	Pistachio paste	10	0.40	4.00
	Brioché bread	200	0.01	2.00
	Butter	20	0.02	0.40
	Orange blossom water	20	0.01	0.20
	Cheese cake sauce	10	0.12	1.20
	Pistachio cream	30	0.06	1.80
	Cheese cake biscuit	20	0.01	0.20
	Raspberry	5	0.08	0.40
	Pistachio	15	0.06	0.90
Cup of Coffee	Raw Coffee	7	0.40	2.80
	Water	0.1	-	0.20

4.4. Enterprise Resource Planning (ERP)

Utilization of business management software aided by tools such as QuickBooks (for accounting purposes) for the creation of Touch Bistro (the Points Of sales “POS” solution for the restaurant) specifically designed to support, collect store and manage data and needs of the restaurant industry. QuickBooks is a popular online accounting software which helps you in getting accounting information organized, saving time and simplifying your day-to-day activities. You can find your sales, purchases, expenses, and customer & vendor profiles online all in one place. The Quickbook accounting software online lets you easily track the incoming and outgoing funds in your business [17]. This application provides table, outdoor catering/takeaway support, custom restaurant layouts, menus, bill splitting, sales reports, unlimited order and cash register printers.

TouchBistro is an iPad-based point of sale (POS) solution for restaurants of all types. Specifically designed to meet the unique needs of the restaurant industry, TouchBistro comes complete with food service specific features and advanced management capabilities. For fine dining and traditional restaurants, staff have the ability to bring the POS system to each table, to allow patrons to check out. The mobile functionality of the POS allows staff to bring a register directly to patrons instead of requiring them to leave their table to pay bills or place orders. TouchBistro software can manage split-checks and parties of various sizes. Receipts can be printed, if desired, or signed on screen and emailed. Detailed sales reports within the system can help provide management with insight into which items are selling the best. To help cope with rushes, the POS can be removed from the counter, and move with your staff down the line. Touch Bistro is sufficiently equipped with food service specific features and advanced management capabilities, suited for an inimitable experience starting from service staff’s capability to POS system printed receipts which can be signed on screen and also emailed [18].

4.5. Human Resources

Human resources comprises workforce of an organization, business sector, or economy and is the human capital, on which an industry or business depends heavily to augment its goals, and missions. The business in its nascent years needed high skill workers on the lines of chefs, architects and engineers for its proper set up and thereafter graduated to hire long term employees; to be followed by hiring of workers dependent on the production capacity, availability of machinery, nature of the products and the overall project. Business expansion would also yield in the future jobs in the fields of separate packaging, administration and account departments. Table 8 represents the needed human resources and salary expenses. Saudi Arabian Ministry of Labor and Social Development's guidelines and Saudization measures (nationalization program by the Saudi Arabian government) are considered when determining the human resources positions and the salary scales (in line with the business practices).

Table 8: HR and Salary Expenses

Designation	No.	Monthly Salary (SAR)	Yearly Salary (SAR)
CEO	1	14,950	179,400
Executive Chef	1	9,750	117,000
Assistant Manager	2	3,900	46,800
Sous Chef	2	3,127	37,527
Accountant	1	2,500	30,000
Driver	1	2,182	26,182
Purchasing Officer	1	1,964	23,564
Cleaner	2	1,897	22,764
Bartender	1	1,527	18,328
Commis	5	1,527	18,327
Waiter	5	1,527	18,327
Total	22	44,852	538,219

5. Site Selection

An integral part of the project initiation plan is the site selection. It determines financial viability, risk potential and the sustainability of the project. In order to select an appropriate, site a detailed assessment of the project needs is required when evaluating site options. Many factors affect the site selection decision making process such as environmental and technical factors. The restaurant has been designed with the application of industrial planning and engineering aspects, taking into consideration architectural and engineering criteria suitable for the conditions prevailing in the Kingdom of Saudi Arabia, in accordance with local and international standards and regulations.

5.1. Site Layout

The site layout will include kitchen space, storage rooms for raw materials and finished products, parking space, fire water tank, canteen, mosque, guardroom, septic tank, pump room and an electricity room. Table 9 and Figure 7 illustrate a summary of the space requirement for the restaurant and the proposed layout. The space for each area is decided based on the needed area for kitchen operations and the seating area is based on the expected average number of client visits.

Table 9: Restaurant Layout.

Description	Requirement (m2)
Cleaning/Washing area	6
Storage/Receiving area	10
Service area	10
Food preparation area	15
Meal Cooking area	15
Dining area	120
Toilet area	14
Office	4

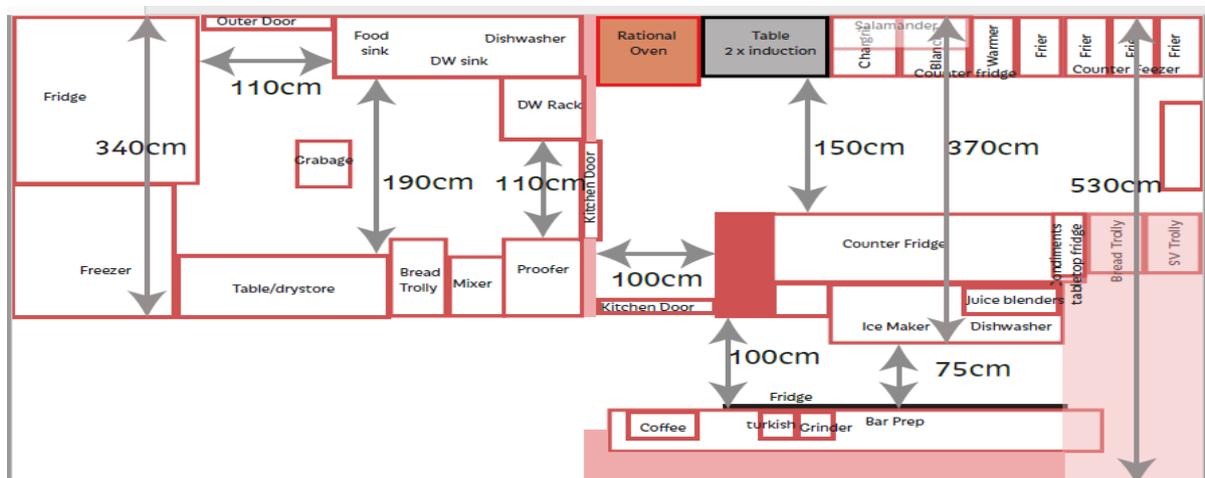


Figure 7: Restaurant Layout.

5.2. Site Selection

The specific requirements of kitchen, storage of food and foodstuff require different designs pertaining to corresponding buildings, taking into consideration the following factors:

- Knowing the concept and business;

- Customer's characteristics;
- Minimum required size;
- Access and parking;
- Building amenities;
- Budget.

Site assessment will consider three candidate sites in Jeddah depending on the market scan and foot count of the area:

Site A: Jeddah – Tahlia Street:

Tahlia Street is a central shopping destination in midtown of Jeddah, comprising upscale department stores as well as many restaurants.

As it is a shopping destination, rentals are higher than average, Figure 8.

Table 13

Motives	<ul style="list-style-type: none"> - New shop - Rent = SAR 1,600 per square meter per year. - Near to hotel, resturnats and coffee shops area. - 2 floors
Total Area (m²)	219

Infrastructure services:

1. Road services,
2. Water services,
3. Janitorial services,
4. Sewage services.



Figure 8: Site A.

Site B: Jeddah – Prince Sultan Street:

Prince Sultan Street is a commercial location in the northern area of Jeddah. It contains office buildings, shopping boutiques and restaurants. As it is a commercial location, rentals are higher than average, Figure 9.

Table 14

Motives	- Rent = SAR 1,378 per square meter per year. - On main street. - 2 floors
Total Area (m²)	450

Infrastructure services:

1. Road Services,
2. Electricity Services,
3. Water Services,
4. Janitorial Services,
5. Sewage services.



Figure 9: Site B.

Site C: Jeddah - Al Kayyal Street

Al Kayyal Street is a residential area within midtown Jeddah. It contains large residential houses and many boutique shops and restaurants, Figure 10.

Table 15

Motives	- Rent shop for extended periods starting from SAR 1600 per square meter per year. - Near to Schools, resturnats and business area. - New shop - 2 floors
Total Area (m²)	200

Infrastructure services:

1. Road Services,

2. Electricity Services,
3. Water Services,
4. Janitorial Services,
5. Sewage services.



Figure 10: Site C.

Weighted Scoring Method

A weighted scoring method is a tool that provides a systematic process for selecting alternatives based on many criteria. To use this model, first decide what criteria are important and then decide the relative importance of these criteria. This will give the weight column shown in Table 10. Note that the weights should total 100%. You then assign a score from 0–10 to each criterion for each alternative. After assigning the weights and scores for each alternative, calculate the weighted score by multiplying the weight for each criterion by its score and adding the resulting values [19]. In this case, site C has the highest weighted score.

Table 10: Weighted Score Method for Site assessment.

#	Criteria	Score			
		Weight	Site A	Site B	Site C
1	Capital Cost	9	6	3	8
2	Infrastructure	7	5	4	7
3	Availability of Utilities	7	4	6	7
4	Urban Environment	9	7	6	8
5	Aesthetic Environment	9	7	6	8
6	Accessibility and Parking	9	7	8	7
7	Town Planning	8	6	6	8
8	Public Presence	9	6	8	7
9	Size and Room for Growth	6	5	5	6
10	Site-Related Costs	4	3	2	4
11	Climatic Conditions	8	7	5	8
12	Near to the commercial area	8	8	7	8
13	Near to the residential area	7	7	6	7
Weighted Score		100	78	72	93

6. Social and Environmental Feasibility Study

Most of the population in Jeddah is mainly a middle class population characterized with high socio-economic characteristics among others. Some positive social impact of the project are the following: creating new job opportunities, introducing the market to new local chiefs, creating a local based restaurant that is not an international franchise and exported products and offering a new restaurant for neighbours and those customers roaming the region. Other indirect benefits include encouraging the acceptance of local chiefs rather than the need to recruit overseas talent. Creating a positive social impact analysis increasingly reduces the risk of the project and strengthens general social support.

An environmental feasibility study considers both human and environmental health factors, it is a comparative process that determines all potential solutions to health factors. The goal is to find the operational option, preferably one that permanently eliminates or lessens contamination or health risks. Based on the industry of food services, our impact will be on air, water and materials. The impact into the air will be coming from the cooking steam that will be minor as the restaurant is considerably small in size, we will maintain an elevated chimney to prevent smoke from flying in the air inhaled by pedestrians.

While the impact on water will be through the water waste, as a lot of water waste is included in the cooking and cleaning of restaurants. As a cautionary measurement, we planned to buy a washing machine to reduce the water waste. Materials will be recycled such as excess food and plastic and glass products. Additionally, some efforts will be made by putting some instructions on our bags and walls on how to save the environment and how to minimize hazard that may come from ignorance of instructions and give our customers awareness how to keep the environment clean. Also from our social media, we will give our customers some information for how to keep the environment clean.

The gourmet restaurant will not distress any severe environmental impact such as the following: Climate change, Environmental degradation, Environmental health, Environmental issues with energy, Environmental issues with war, Overpopulation, Pollution, Cutting and moving trees, Toxicants and Waste. The restaurant will try to limit its environmental footprint by working with a recycling organization to pick up the food waste and plastic materials on a semi-daily basis; it is one of the values to be earth friendly.

7. Economic Feasibility Study

The purpose of the economic feasibility assessment is to determine the economic benefits of the proposed project.

Net profit margin is the ratio of net profits to revenues for a company or business segment typically expressed as a percentage. Net profit margins show how much of each dollar collected by a company as revenue translates into profit. Total revenue or total sales includes all the money a company earned from its operations during the period and is typically the first number listed on the income statement.

Net income represents the amount of revenue left over after all expenses have been paid for the period. This is

always located at the bottom of the income statement hence the nickname “the bottom line.”

Net margin = net profit / revenue.

Return on equity (ROE), sometimes called "return on net worth" is a measure of profitability that calculates how many dollars of profit a company generates with each dollar of shareholders' equity.

ROE = Net Income / Shareholders' Equity.

Return on Asset (ROA) is a measure of percentage of profit that a company earns in relation to its overall assets.

ROA = Net Income / Total assets [20].

Table 11 presents the profitability margins for the years 2018, 2019 and 2020.

Table 11: Profitability margins.

Profitability Margins	31-Dec-18	31-Dec-19	31-Dec-20
Net Income Margin	14%	23%	27%
Return on Equity	0.44	0.62	0.50
Return on Assets	26%	27%	30%

Payback Period (PBP) is the length of time required for an investment to recover its initial outlay in terms of profits or savings. It is calculated by dividing the cost of the investment by the annual net cash flow to determine the expected payback period of years. Uneven cash flows occur when the annual cash flows are not the same amount each year.

PBP = Year before cash being positive + (Last negative cash flow / Cash flow to firm at that year).

The net present value (NPV) or net present worth (NPW) is a measurement of the profitability of an undertaking that is calculated by subtracting the present values (PV) of cash outflows (including initial cost) from the present values of cash inflows over a period of time.

Internal rate of return (IRR) is a metric used in capital budgeting measuring the profitability of potential investments. Internal rate of return is a discount rate that makes the net present value of all cash flows from a particular project equal to zero. IRR must be > Bank interest rate by a significant number. IRR is calculated by excel using the formula: XIRR (PV,Date).

The profitability index is an index that attempts to identify the relationship between the costs and benefits of a proposed project [21]. Table 12 presents the economic feasibility measures for the project.

Table 12: Economic feasibility measures.

Economic Feasibility		
Measure	Unit	Value
Payback Period	Years	1.7
Discounted Payback Period	Years	1.8
Net Present Value	SAR	28,454,392
IRR	%	26%
Profitability Index	X	11.8x

8. Conclusions

After the execution of market, technical, site selection, environmental, social and economic feasibility studies, it is concluded that the thorough project description supported by all parts of a complete feasibility study encourages the incorporation of a gourmet restaurant. The market analysis has been implemented, and demand and supply have been estimated which favored the project. Products, quality, prices and anticipated production capacities are determined.

The needed machinery, equipment, raw material, human resources and site layout with all associated costs are determined in the technical feasibility study part. Three suitable sites are chosen, criteria for selection are identified and the weighted score method is used to select the best place. The project will concentrate upon its inception in Jeddah, initially on one branch in Rawdah district and based on profitability, will continue to open new branches on other locations.

Some positive social impacts of the project are the following: creating new job opportunities, introducing the market to new local chiefs, creating a local based restaurant that is not an international franchise and exported products and offering a new restaurant for neighbours and those customers roaming the region. Other indirect benefits include encouraging the acceptance of local chiefs rather than the need to recruit overseas talent. Creating a positive social impact analysis increasingly reduces the risk of the project and strengthens general social support. With respect to the environmental feasibility, the gourmet restaurant will not distress any severe environmental impacts. The gourmet restaurant will not distress any severe environmental impact the restaurant will perform all the necessary cautionary measurement with respect to possible minor impacts on air, water and materials. Firm instructions and awareness will be given to both employees and to customers how to keep the environment clean. Lastly, a comprehensive financial model and economic performance indicators are developed to calculate the economic feasibility of the restaurant. All the economic indicators: Payback Period, Discounted Payback Period, Net Present Value, Internal Rate of Return and Profitability Index confirm that the idea of the new project is highly recommended. Thus, as a conclusion, the business model projected through this feasibility study, promises incredible potential for its sustenance, moreover a gourmet restaurant catering high-end food and beverages can also become a beacon of profitability to the Saudi Arabian economy.

9. Recommendations

The following points summarize the basic recommendations from the present study:

1. To pursue for the investment project as all the sections of the feasibility study encourage establishment of the project.
2. Conduct a study on home and online delivery for more exposure.
3. Conduct a thorough study for expansion on other locations in Jeddah and other cities of Saudi Arabia.
4. Open new branches outside Saudi Arabia such as Dubai and other Arab Gulf countries.
5. Add new main dishes according to the customer preferences that will maximize profits.

References

- [1]. Saudi Arabia's Vision, January 2018, Access Date January 18 2018, from: <http://vision2030.gov.sa/en>
- [2]. General Authority for Statistics homepage. <https://www.stats.gov.sa/ar/5308> , [Nov. 12, 2017].
- [3]. Kim, Jihoon. (2013). Business Plan for a Korean Fine-dining restaurant in Las Vegas, University of Nevada, Las Vegas. Access Date January 1 2018, from <https://digitalscholarship.unlv.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=3045&context=thesesdissertations>
- [4]. Ground Floor Partners. (2018). Restaurant/Bar (Feasibility Study). Access Date January 15 2018, from <https://groundfloorpartners.com/restaurantbar-feasibility-study/>
- [5]. Essays, UK. (November 2013). Feasibility Study On Le Diner Restaurant Computer Science Essay. Access Date January 15 2018, from <https://www.ukessays.com/essays/computer-science/feasibility-study-on-le-diner-restaurant-computer-science-essay.php?cref=1>
- [6]. Wassil, John. (2011). The feasibility of a new sit-down restaurant in Ventura. Access Date January 15 2018, from <http://digitalcommons.calpoly.edu/cgi/viewcontent.cgi?article=1074&context=agb>
- [7]. Hui Guo, Hui. (2006). A Feasibility Study for a Quick-Service Restaurant in Chengdu, China. Access date January 1 2018, from <http://www2.uwstout.edu/content/lib/thesis/2006/2006guoh.pdf>.
- [8]. Government of Pakistan (2016). Pre-Feasibility Study (Fast Food Restaurant). Access Date January 1 2018, from <http://www.commerce.gov.pk/wp-content/uploads/2017/05/Fast-Food-Restaurant.pdf>
- [9]. Private Club Associates. (2016). RESTAURANT FEASIBILITY STUDY. Access Date January 1 2018, from <https://www.village-npb.org/DocumentCenter/View/1669>
- [10]. Wonderflow BV, Comparison of traditional market research techniques VS consumer feedback analysis, Amsterdam, December 10th 2015, <https://www.wonderflow.co/wp-content/uploads/2016/02/test.pdf>
- [11]. Richard V. Eastin and Gary L. Arbogast, Demand and Supply Analysis: Introduction, University of Southern California (USA). Accessed at: https://www.cfainstitute.org/programs/cfaprogram/courseofstudy/Documents/prerequisite_economics_material%20-%20demand_and_supply_analysis.pdf
- [12]. City populations worldwide." Internet: <http://population.city/saudi-arabia/jeddah/> , [Nov. 12, 2017].
- [13]. M. Kleinaltenkamp, et al., Fundamentals of Business-to-Business Marketing, Springer Texts in

Business and Economics, Springer International Publishing, Switzerland, 2015. DOI 10.1007/978-3-319-12463-6_2

- [14]. Schrader, I. (2015). Brioche: The Powerful History of a Buttery Pastry. Access Date January 1 2018, from: <https://breadthroughhistory.com/2015/05/25/brioche-the-powerful-history-of-a-buttery-pastry/>
- [15]. Market Research. (2018). Gourmet Food Market Research Reports & Industry Analysis. Access Date January 1, 2018, from: <https://www.marketresearch.com/Food-Beverage-c84/Food-c167/Gourmet-Food-c487/>
- [16]. Iseland Catering Equipment Co. website. Visited on 12 January 2018. <https://usedrational.co.uk/>
- [17]. QuickBooks – US Edition software, saifee Computers webpage, visited on 5 January 2018. <http://www.saifeecomputers.com/>
- [18]. TouchBistro Restaurant POS Software, Software Advice webpage, visited on 2 January 2018. <https://www.softwareadvice.com/>
- [19]. Mike Pycraft, et al., Operations Management, Pearson Education, South Africa Edition, 2000.
- [20]. William G. Sullivan, Elin M. Wicks, and C. Patrick Koelling, Engineering Economy, Edition 16, Pearson, 2014.
- [21]. J. K. Yates, Engineering Economics, Taylor & Francis Group, 2016, ISBN 978149875085