A Proposed Investment on a University Campus

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Abstract

College days are probably the most memorable years of a man or woman's life. The students' unions' associations and entertainment building usually houses rooms for meetings and seminars, a book store, a small grocery store, a novelty store, a number of brand name fast and regular food restaurants, an arcade for games machines, bowling, ping pong, billiards, and a large space with appropriate seating for students and guests, and large screen TV's and a movies theater. This paper proposes a scheme to build a risk managed students association building dedicated to the satisfaction of campus' students' and visitors' needs. The return on its operations is assumed to be very rewarding to entrepreneurs and small businesses alike. This paper presents a case in which a union building is budgeted, three legal businesses leasing spaces within this building. The building's budgeted capital is financed. The space leased by the three businesses represents a small percentage of the overall structure, however, its revenue and specifically input into the building's investment is relatively much larger, emphasizing that the union's building's investment is a successful venture. An element of humorous sarcasm is introduced in describing one of the union building's leasing businesses; a provision of an entertaining flavor to escort readers' attention.

Keywords: present value p: initial investment, future value F: future revenue, interest i: loan cost percentage, annual payment A: the loan annual payment, time series: the period in years for the financed loan's repayment

1. Literature Review

This paper presents a scheme for the establishment of a students' union building on universities' campuses. There are no academic papers on this subject from a business perspective; although the social aspects of universities campuses, in general, have been investigated and explored. The importance of the subject stems from its importance to the students in terms of entertainment and other aspects of social services.

Businesses have always rushed into opportunities on universities' campuses. However, very limited amount of literature was published in terms of the social and entertainment attributes. Businesses perception of such opportunities centers on the rental aspects of such projects, limiting the prospect of the building's essential value to a small number of customers, contractors, instead of a large number of consumers, students. This has always been the theme of the literature related to projects and businesses investing in building structures on universities' grounds. Large restaurant franchises, mom and pap stores are the main investors when dealing directly with students through renting small spaces in such buildings to accommodate students' needs. Literature related to universities focused on so called knowledge economy and its influence on education, campus sustainability, and the management of campus buildings and facilities. The actual building of an infrastructure related literature that serves the students in terms of their education and entertainment is almost null; academically speaking. This paper focuses on the specifics of the students' sustenance and entertainment needs.

2. Introduction

Students' association (union) buildings are the corner stone of students' life on campus. Its existence is necessary for a lot of the daily students' activities. Some students enjoy doing their homework in one of the building's coffee shops. Some spend many of their daily hours between lectures, either working in one of the businesses in the building and or enjoying their leisure time with friends. Some campus housing students do all their shopping for clothing, grocery and more in the little stores located within this building.

Students' residing within university campus and its peripherals meet in restaurants and cafés to study, get to know each other and so forth. Having a place within the campus area facilitates such activity in distance and time. A union building is a facility that encompasses rooms where students' services such as athletic units, intellectual and political groups meet and or hold their activities, respectively and more. Most often, universities catering services are located within such buildings. Foundations built to provide trust funds and scholarly grants are often located in these buildings.

Establishing such facility as an investment is certain to succeed. The most important element in the success of an investment is the availability of dedicated customers and consumers. Restaurants and cafés meet students' needs for food and study space, respectively. Entertainment centers satisfy students with desire to play games, watch movies and more.

A lot of students spend their weekend nights pleasuring themselves in the game rooms playing billiards, the arcade machines, or just bowling. Many student-groups meet in this building to discuss research, exchange ideas or prepare for an exam. The availability of food places, coffee shops and seating space large screen TV's attract students to the building. The larger the school attendants the larger number of visitors and customers. The students association building in any university is a good business venture. Most universities locate their catering services in the upper deck of the union buildings.

3. Analysis

Forecasting the future value of an investment provides ample data on the investment, subject to quality and availability of related information. The return on an investment is calculated using return on operations of the businesses leasing the building's units. The cost of constructing the building can be the present value investment for a single or group of investors. The future value of this investment, assuming the building units are leased by the main building investors, is the total revenue, of all the leased units, over the estimating time series minus maintenance cost. The return on the investment is the future value minus the cost of the construction, plus the return on the units' leases of the periods beyond the cost estimating time series. Assuming investors utilize the space for their own ventures, cost of leases will be an added cost for the space used; otherwise, the investment's revenue is just the total value of the units' lease over the period of the time series, beyond that is pure profit. I postulate that the project is profitable, for investors, either through leasing the space or utilizing space for their own ventures. I also postulate that the revenue is subject to cost, more spending means more revenue.

Forecasting the future value of an investment requires determining the cost of the project and estimating revenue that covers the project's cost and the entailing interest, over a certain period of time. Let us assume that the cost of the project is SR10.50 million. Let us also assume that the entire SR10.5 ~ $2.8 million, was borrowed with a 5% interest over 10 years. The investment must bring revenue to pay off the loan with profits well over the 5% interest. It is assumed that loan payments start after construction ends, or when it is ready for leasing. Utilizing the future value math, equation 1, we can calculate the cost of the investment to be as follows:

The future value:

$$\mathbf{F}_i(t)=\mathbf{P}_i(t)(1+r_i)^t \quad (1)$$

Where r: is the interest rate,

t: is the period in years,

P: is the present value of the investment, and

i: the components of the investment to be evaluated over time

The cost of construction is measured in capital per square meter, subject to floor, services, amenities and safety features. The lot's area is assumed to be slightly over 4000 m^2. In this case, if the interest is based on annual basis, i= 0…n, for cost of components in the building's investment worksheet; t = 1… 10, r = 5%, and P = SR10.5 million. The university may construct the building and lease it to investors, or lease the lot to bidding investors to build it and run it with a percentage of the profits in the contract's clause for the university. The future value of the investment $F_i(t) = 10500000*(1+0.05)^{10} = 17103393.6$ (Saudi Riyals, SR). The investor's annual payment A, for the next ten years, can be calculated using the following equation:

$$A = (Fi)/((1+i)^{10} -1) \quad (2)$$

We find A = 855169.7/(0.629) = 1359798 (SR). The investor(s) have to earn, on annual basis, more than the annual payment on their investment loan. The investment must generate revenue well over the calculated future value, to be

considered a successful venture. Now let us assume that the building is made up of three floors, including a basement. Let us also assume the building houses space for ten restaurants of various sizes, spread over the basement and ground floor. A couple of partitions for a general small retailer and or a novelty store. A wide space for a set of game rooms, bowling alley, an arcade, a couple of coffee shops, space for students to sit, study, watch some entertainment located on both the basement and ground floor. A movie theater located in the basement, covering the ground floor above, for nightly and weekend operations, and or according to the university regulations. A number of rooms and a lecture theater on the first floor for the students' union meetings and offices that can be utilized by the university and the students' association.

The above spaces can be leased to the university, other businesses, and the students' union's association. It is common that such projects encompass the basics, electric outlets, toilettes and washing rooms in preset locations, safety features and so on, however, leasing businesses are expected to add their own where necessary. Following section will delve into the process of managing the investment and providing examples of some businesses leasing spaces, such as restaurants, and or stores.

4. The Approach

Investing in real-estate, especially construction can be a risky venture due to overpriced viable real estate, competition and costly maintenance. Investing within university's campuses is almost guaranteed success, due to the constant and consistent availability and close proximity of consumers; students, faculty members and visitors. Few universities allow for ownership of on-campus lots, however, leasing and or investing in businesses within the campus property is encouraged. Profits are the driving force behind any investment. All businesses leasing partitions within university campus properties will be seeking large profits. Assuming an investor decides to establish a restaurant within the campus, fast food should be at the top of the list. Fast food takes less time to prepare and easy to take out. Students, in most cases, are on the run for lectures' schedules and other duties.

Most investors worry about the competition, long term viability and benefits, and last but not least profit. Competition, for providing students' services is speculative however only one students' union building is allowed in any university. Campuses are always busy with students and visitors; their desire to meet and eat within the peripheral of the school is favorable. Thousands of students roam the campus grounds on daily basis.

This paper presents three of the businesses leasing in the union's building. Taco Bell franchise was the first fast food restaurant to lease one of the spaces dedicated for restaurants. Its food, although ethnic, is popular. The following is its financial cash outflow sheet. The Taco Bell franchise's restaurant branch is one of the established ventures, and paid/spent SR14700 per month leasing one of the spaces designated for restaurants. The lot rent, SR10000, plus SR5414 for Taco Bell's added structure and maintenance minus SR714 for structural depreciation, on a one year contract extendable to ten years. The restaurant's initial worksheet, cost, cash outflow, provides us with ample data on its future balance sheet and income statement.

Table 1 provides us with the cost estimate of the Taco Bell on monthly, annual and ten years bases. The secured capital was predictably long term loan with 5% annual interest. The restaurant's structure, tools, instruments, cooking material, packaging, ingredients and other services are estimated using wholesale values. Employees' pay is based on the relative cost of living and income in Saudi Arabia where it fluctuates, subject to provincial residence and distance from the metropolitan areas (1). The loan is assessed on the basis of the appraised monthly wholesale prices and one year is just a multiple of that, and so are the ten years estimates. So, the prices of supplies and other related items and articles may fluctuate over time, but within acceptable average. Table 1 is based on initial cash outflow, where the borrowed money is the inflow – initial income, and the net income is nil, since the restaurant is in the presale stage. To make sure the evaluation is correct, the expenditure is taken out of the borrowed money as a percentage, to keep track of the cost and guarantee accuracy. Every item on the monthly list is equally listed proportionally on the annual and ten yeas' lists using excel functions.

The first year's expense estimates reaches over one million and three hundred thousand Saudi Riyals. Now, the sales for that year are expected to exceed that value. The ten years expenditure estimate is over thirteen million Saudi Riyals. The total estimated cost of the entire union building borrowed and paid off over ten years is a little over seventeen million Saudi Riyals. The lease contract for the Taco Bell restaurant only, over ten years, exceeds one million and seven hundred thousand Saudi Riyals. The building investors are likely to earn net profit and pay off their loan earlier than anticipated. The life cycle of a concrete structure, with proper maintenance, may exceed one hundred years. The investors, considering the type of university land lease contract, size of real estate taxes and fees, will be making loan free net profits for decades afterwards.

Table 1. The Taco Bell business worksheet (Note 1)

Period →	Monthly	% of the monthly	Annually	Over 10 Years
Activity ↓	$P_i(t)$	1/ Pi(t)	12 months	Ten years cost
Budgeted cost	109282	100%	1311384	13113840
Basic food	12000	10.98076536	144000	1440000
Waste	500	0.45753189	6000	60000
Raw waste	600	0.549038268	7200	72000
Employee meals	1600	1.464102048	19200	192000
Condiments spices	2500	2.28765945	30000	300000
Ovens, frigerator, related Instroments	2000	1.83012756		240000
Paper material	1000	0.91506378	12000	120000
Plastic material	1000	0.91506378	12000	120000
Computer, screens, software	1500	1.37259567	18000	180000
Royalty fees	5000	4.5753189	60000	600000
Total direct cost	27700	25.3472667	332400	3324000
				0
Total cost - direct cost	$81.582	74.6527333	978984	9789840
				0
Uniforms	417	0.381581596	5004	50040
Transportation	2500	2.28765945	30000	300000
Maintenance/repair	1000	0.91506378	12000	120000
Cleaning supplies	1000	0.91506378	12000	120000
Office expense	150	0.137259567	1800	18000
Labor cost (salary/bonus)	30000	27.4519134	360000	3600000
Managers	8000	7.32051024	96000	960000
Home delivery expense	2000	1.83012756	24000	240000
Utilities	2200	2.013140316	26400	264000
Miscellaneous	1000	0.91506378	12000	120000
Medical insurance	2000	1.83012756	24000	240000
Telephone	500	0.45753189	6000	60000
Stationary	100	0.091506378	1200	12000
Total fixed cost	50867	46.54654929	610404	6104040
				0
Total cost - direct and fixed costs	$30.715	28.106184	368580	3685800
Computer & related	551	0.504200143	6612	66120
All cooking & storage related	536	0.490474186	6432	64320
Structural	714	0.653355539	8568	85680
Total depreciation	1801	1.648029868	21612	216120
				0
TM building structure	5414	4.954155305	64968	649680
Marketing	5000	4.5753189	60000	600000
Admin	3000	2.74519134	36000	360000
Lot rent	10000	9.150637799	120000	1200000
Employee benefits	3500	3.20272323	42000	420000
Staff accommodation	2000	1.83012756	24000	240000

Total indirect cost/overhead	28914	26.45815413	346968	3469680
Total Cost	109282	100	1311384	13113840
Cost overrun	0	0	0	0

Tables 2 and 3 are on the novelty store business, in one of the stores' partitions, leased by a gentleman named Houdini (Note 2) (5). This store sells articles, costumes, and some magic items, plus other material students might utilize in classes and daily life. The name Houdini is well known for tricks one of which may have killed him, and so the name's fame is basically an ad of its own for this rare quality store. Table 2 is an income statement. The statement displays Houdini's weekly income statement. Since the store is one of few available novelty stores in the entire city, it is utilized by parents in preparing their kids' birthday parties with magical trickeries, fantasy displays and entertainment. The store is very popular throughout the city and gets a lot of orders for appearances on valentine day, birthdays, new-year's day, and on many other special occasions. The lot rent for Houdini's novelty store is greater than that of the Taco Bell, although it was less likely to be as successful.

Table 2. The weekly income statement

Activity	**Magnitude**	**Explanation**
Revenue	1500	Novelty sales
	20350	Appearances
Total	1350	Owed for novelty sales (accounts receivable)
	23200	Total sales
Cost of service	1000	Payment for novelties
	100	Late payment (accounts payable)
Total	-50	Inventory (unsold stock)
	1050	Total cost of services rendered (direct cost)
Gross profit	22150	Total profit after direct cost
Expense	1300	Wages including 100 late payment
	1450	Total travel expense 1500 less 50 prepaid travel
	280	Total rabbit and rabbit feed 330 less 50 recovered losses
	110	Cleaning cost
	940	Total costume and magic books depreciation
	4000	Lot rent
Total	8080	Total expenses
Net profit	14070	Total net earnings

Table 3 is Houdini's balance sheet. Three important data is provided in the balance sheet: assets, liabilities, and equities. Lower liability businesses indicate good financial status, and Houdini's has a very low liability. Greater equity on the other hand indicates stronger ownership and greater selling value with higher ranking for franchising, and open market candidacy.

Table 3. The weekly balance sheet

activity	Magnitude	Explanation
Current assets	460	Cash
	120	Bank
	350	Accounts receivable
	50	Inventory
	50	Prepaid expense
	1030	Total current assets
Total	1030	
Long term assets	200	Playing cards
	1000	Magic books and equipment
	1500	Costumes
	2500	Disappearing lady's act
	-940	Depreciation
Total	4260	
Net assets	5290	
Liabilities	100	Novelties (accounts payable)
	100	Wages (accounts payable)
Total	200	
Equity	2500	Costumes – magic books and equipment paid for from
	15	Prepaid travel expense paid for from owner's savings
	14070	Owner's net profit
Total Liabilities & Equity	16785	Total liabilities and equities
Owner's drawing	11495	Less owner's spending
Net liability & equity	5290	

Houdini's balance sheet also has less good news for investors, with its high long term assets and low current assets. Long term assets may depreciate and are liable at some point; current assets, on the other hand, can be turned to equities depending on its type. Material current assets can become a liability if and when asset debt is due.

The Houdini's business, however, will pay SR16000, which can accumulate to SR1920000. This is SR200000 more than the Taco Bell's total rent amount. The two businesses already account for more than 20% of the total loan owed by the students' union's building owners, over the loan period.

Figure IV is a copy of a business found everywhere in the world, used cars rental businesses. The word used car, is a liability of its-own. Used cars salesmen are among the least trusted people in the world, especially in the USA; it is believed that almost all used cars salesmen are on the FBI list. Werdan's Used Cars Rental leased one of the partitions designated for stores (Note 3). Here is the story of Werdan's business, so called "Werdan's Used Cars Rental" (WUCR). lt used to be called (RSTC), the Road Scoundrels Taxi Company, and was established on the 15th of January of 2008 by a businessman named Werdan, who was known as Werdan the crook. In order to start his business he leased three Repossessed cars for 10000 SR each (in which he utilized bribery to get the deal) for a period of three years paid 20000 SR cash and the rest to be paid in equal instalments over the next three years (with 10% annual interest). He also hired three unemployed drivers with ethically questionable reputation (to be paid 1000 SR each per month plus ~ 3-4% of the net profit as commission). He also hired a caretaker and an accountant, (~ two months later) both of whom were just released from the Riyadh county jail, one for armed robbery, the other for fraudulent activities (also to be paid 1000 SR each per month, with commission).He leased (for three years) an office space on the corner of a gas station (known for its unusually high-priced gasoline the quality of which is at best suspect); including the abused furniture and other living amenities the lease would cost 25k SR of which he paid 10000 SR cash and the rest to be paid in equal instalments over the next three years (with 10 % annual interest). During the first two weeks (last two weeks of

January) the taxicabs collectively incurred 7000 SR from its customers and victims, and sustained 1500 SR in losses resulting from traffic tickets and cost of customers' medical emergencies/injuries, inflicted by the drivers. The loss was paid at the end of that month. The business transactions of the Road Scoundrels for the first year ending on the 31st of December are provided in the following Table 4.

Table 4. Werdan's worksheet of (RSTC)

Long term assets still owned by the end of the first year	SR
Three cars at total cost	32063
Office space at total cost	28095
Cars insurance (covering liabilities only) at cost	4500
Medical insurance for employees and drivers at cost	2500
Phone service contract including HF mobile broadcasting system	3000
Amounts received (cash and cheques)	
Cabs fees	197500
Taxicabs contracts	35000
Special deliveries	18000
Amounts paid (cash and cheques)	
Drivers Wages	34500
Other employees wages	18500
Cars maintenance	1500
Commissions (~3.9 %)	6900
Gasoline	1800
Medicine	500
Cleaning and care taking stuff	1200
Gratuities (Werdan shared gratuities by 50 %)	4000
Werdan's drawings from his business (including his 5000 SR monthly salary)	80000
Werdan paid cash to purchase a car for his personal use for	64650
Other information	
Invoices received from gasoline provides	1900
Invoices received from car workshops	1800
Contracts bank balance	18000
Special deliveries bank balance	12000
Cab fees bank balance	500
Soft drinks and soda pops inventory (for guests and customers)	500
Notes	
Werdan paid in advance for the following month of January	5000
Werdan is owed for special deliveries for which he was paid with deferred cheques (to January)	3000
The cars (total value) depreciated on annual bases	4000
The office space furniture and other equipment collectively depreciated at	300
The cars and medical insurance had an inflationary rate appreciating its value by 5% for an annual total of	350
Werdan wrote off an income as a loss after the death of a contracted customer	1000

Table 5, provides us with the cost and profit of Werdan's new business leasing within the students' union's building. Its monthly revenue, unlike his previous business, is astoundingly high, with great profit.

Table 5. Werdan's income statement

Revenue	Magnitude	Explanation
Taxicab fees	197500	Total monthly Regular cab fares
Cab contracts	35000	Income from monthly or weekly contracts
Cab special deliveries	18000	Special trips/ short term contracts
Owed for contracts	3000	Accounts receivable (the customers owe Werdan)
Total	253500	
Direct cost		
Driver's wages	34500	Drivers are a product labor cost
Auto maintenance	1500	
Auto maintenance	300	Accounts payable payment
Gas	1800	
Gas	100	Accounts payable payment
Inventory (deducted)	-500	Unused Inventory
Total	37700	
Gross profit	215800	
Operating expense		
Wages	18500	Non driver's wages
Commissions	6900	Commissions taken from net profit
Medicine	500	Expense for dispensable/ disposable medicine
Cleaning	1300	
Gratuity	4000	In Arabic (Baksheesh)
Prepaid wages	5000	
Depreciation (auto)	4000	
Depreciation (office)	300	
Income write offs	1000	The death of a customer before authorizing payment
Total	37500	
Net profit	178300	Explanation

It provides detail data on the company's main sources of income, revenue, costs of his drivers, maintenance and fuel. Ample data on his expenses allows for accurate explanation of his net profit. There is also explanation to some of the vague items in the statement offering confidence in the data.

Table 6, unlike the data on Table 4 provides us with better data on Werdan's business with a detailed balance sheet. His attempt to become a legitimate businessman is paying off. His business's assets, liabilities, and equities are well defined indicating readiness for a meticulous audit. An observation worth mentioning is his reasonably high current assets, which can be a plus however, his high long term assets are too high which could spell a disaster if at some point they turn into a liability.

Werdan's liabilities are, however, reasonably low, compared to his assets, which is another plus. One thing that may bring a smile to Werdan's face is his high equity value. This can be his greatest selling point for either attracting investors, or to just selling the business to the highest bidder.

The werdan's business revenue and net profit justifies the assumption that investing in any of the businesses within the university's students' union building is a valid proposition. The following section will delve into proving the validity of this construction business scheme by utilizing the cash flow, revenue, relationship to the outflow, the cost and their intertwining predictability. The variance and deviations in the respected relationship will be used to prove that the error in the assumption is low enough suggesting such validity.

Table 6. The balance sheet of the New Werdan's Used Cars Rentals (WUCR)

Current assets	Magnitude	Explanation
Contract bank balance	18000	The accounts balance at period's end
Special delivery bank balance	12000	The accounts balance at period's end
Taxicab fees bank balance	500	The accounts balance at period's end
Prepaid expense	5000	The employees (including drivers) wages
Accounts receivable	3000	Money owed to Werdan
A.C. doubtful accounts	-1000	Un credited accounts receivable check
Inventory	500	Un used inventory
Total current assets	38000	
Long term assets		
Cost of automobiles	32063	Cost of the cars including the accrued debt
Office space	28095	Cost of the office space including the accrued debt
Auto insurance	4500	Insurance Over three years
Medical insurance	2500	Insurance Over three years
HF communication system	3000	Broad band mobile communication system
Auto depreciation	-4000	Annual Auto depreciation
Furniture depreciation	-300	Annual furniture depreciation
Auto and medical insurance	350	The prepaid three years insurance appreciated as insurance in Saudi Arabia decreased
Total long term assets	66208	
Total assets	104208	
Liabilities		
Current		
Accounts payable (gas)	100	Gas debt
Accounts payable (maintenance)	300	Maintenance debt
Current maturity (auto)	4021	The auto's long term debt annual maturity is due
Current maturity (office)	6031.7	The office's long term debt annual maturity is due
Total current liabilities	10452.7	
Long term liabilities (debt)		
Auto	8042	Auto long term debt including accrual
Office	12063.3	Office long term debt including accrual
Total long term debt	20105.3	
Total liabilities	30558	

Equity			
Owner's capital (fund)		40000	I call it Long term equity (can be used as an equity line to
Net profit	+178300	33650	The earnings retained after all expenses/taxes and dividend are paid (in this case it includes an unused amount of inventory)
Werdan Drawings	-144650		
Retained earnings	33650		
Total equity		73650	
Total equity and liabilities		104208	

5. The Methodology

In this paper, it is assumed that the average cash flow, revenue, of Taco Bell in Arabia has a direct proportional relationship to the outflow, cost. In order to do an analysis of the cash flow of Taco Bell restaurant and its relationship to the cost we have to first calculate the average cash flow of a Taco Bell in Saudi Arabia. Due to lack of financial data on Taco Bell in Saudi Arabia, data from the US franchise on average revenue is employed in combination with approximated sales values in Saudi Arabia. The number of open Taco Bell restaurants in Saudi Arabia, three, is much smaller than its counterpart in the US, by population ratio. Although it is considered as popular if not more than in the US, consequently, we assume the data used is acceptable for our purpose. Table 7 houses actual prices of the most popular Taco Bell's menu items, and hypothetical data on Taco Bell's sales, based on data provided by employees of the restaurant in Riyadh Saudi Arabia. Of course, the data was averaged along with data from YUM's (the owner of Taco Bell) website (Note 4); as in Table 8 (Note 5), to produce the data in the Table 10 (3).

Table 7. The price estimates per Taco Bell store in Saudi Arabia

Item	Crunchy taco	Soft taco	Burrito	Scrambler	Nacho	Combos	Total
Price Saudi Riyals (SR)	4	5	10	8	5	20	52
Number sold (daily) approximated	400	400	300	100	300	500	2000
Total price (SR) (Note 6) (daily)	1600	2000	3000	800	1500	10000	18900

There are six popular items on the Taco Bell's menu: Burritos, Scramblers, Nachos, soft and Crunchy tacos, Chalupas and their combos, which include combinations of the above plus a drink and fries. To simplify the calculation we choose one average price for the combo meals, and the single prices for the rest of the main six menu items.

Table 8. Taco Bell data, from the US, Saudi Arabia, and the average for this paper

Annual Revenue \\Dates	11	12	13	14	15	16	
The averages Revenue (The Paper in millions of $)	1.32	1.39	1.46	1.53	1.60	1.68	0.05
Sales (millions of $)	1.12	1.18	1.24	1.30	1.36	1.43	0.05
Total cost of the product (millions of $)	1.11	1.17	1.23	1.29	1.35	1.42	0.05
Operating profit (millions of $)	0.21	0.22	0.23	0.24	0.25	0.26	0.04

Table 7 provides the average price per meal for the combos and single items, plus the total daily sales. These prices are subject to size and ingredients. Before moving ahead, it is proper to mention that the Table 9 provides us with a correction to the Taco Bell's worksheet of 2011, which employs the Saudi Riyal (4). The owed difference for the

first month is borrowed from the following months, where the values are based on a new budgeting plan that takes into account that the difference is spread evenly over the last eleven months of the year (6).

Table 8 (Note 7) provides the US and Saudi total Taco Bell's revenue, sales, total cost and profit in US dollars. The last column is the extrapolation factor/coefficient. The average of the US extrapolated and Saudi approximated data are employed.

Table 9. The Taco Bell business worksheet

Period →	Monthly	% of the monthly	Annually	Over 10 Years
Activity ↓	$P_i(t)$	1/ Pi(t)	12 months	Ten years cost
Budgeted cost	168294.28	100%	2019531.36	20195313.6
Basic food	20000	11.88	240000	2400000
Waste	700	0.42	8400	84000
Raw waste	800	0.48	9600	96000
Employee meals	1600	0.95	19200	192000
Condiments spices	3850	2.29	46200	462000
Ovens, frigerator, related Instroments	2000	1.19		240000
Paper material	1540	0.92	18480	184800
Plastic material	1540	0.92	18480	184800
Computer, screens, software	1500	0.89	18000	180000
Royalty fees	8000	4.75	96000	960000
Total direct cost	41530	24.68	498360	4983600
Total cost - direct cost	$126,764	75.32	1521171.36	15211713.6
Uniforms	550	0.33	6600	66000
Transportation	4500	2.67	54000	540000
Maintenance/repair	1000	0.59	12000	120000
Cleaning supplies	1540	0.92	18480	184800
Office expense	150	0.09	1800	18000
Labor cost (salary/bonus)	46200	27.45	554400	5544000
Managers	12320	7.32	147840	1478400
Home delivery expense	2000	1.19	24000	240000
Utilities	4500	2.67	54000	540000
Miscellaneous	1000	0.59	12000	120000
Medical insurance	3080	1.83	36960	369600
Telephone	500	0.30	6000	60000
Stationary	200	0.12	2400	24000
Total fixed cost	77540	46.07	930480	9304800
Total cost - direct and fixed costs	$49,224	29.25	590691.36	5906913.6
Computer & related	770	0.46	9240	92400

All cooking & storage related	536	0.32	6432	64320
Structural	900	0.53	10800	108000
Total depreciation	2206	1.31	26472	264720
TB building structure	6500	3.86	78000	780000
Marketing	8200	4.87	98400	984000
Admin	5000	2.97	60000	600000
Lot rent	10000	5.94	120000	1200000
lot fees	5400	0.03	64800	648000
Employee benefits	8418.28	5.00	101019.36	1010193.6
Staff accommodation	3500	2.08	42000	420000
Total indirect cost/overhead	47018.28	27.94	564219.36	5642193.6
Total Cost	168294.28	100.00	2019531.36	20195313.6
Cost overrun	0	0.00	0	0

Now, the average daily sales of the estimated sale prices in Saudi Arabia, and the US are utilized, in Table 8 to produce the nominal present value for the indicated year's revenue (2015), P_i = (14003 + 18900)/2= (SR16451.5 = $4387, daily); producing ~$1.6 million, annually (2). It is worth mentioning that the lease of the Taco Bell's lot, Table 9, has increased significantly due to changes in the cost and to modifications to the actual restaurant structure. Data gleaned from some of the employees in the Riyadh's Taco Bells was helpful. The new lot rent, Table 9, is $21000, with 10000 for rent plus 6500 for structural modification, 5400 for fees, minus 900 for depreciation, totaling SR252000 on annual basis, and SR2520000, over the ten years lease, and or loan life span. The lease of a partition, one of ten designated for restaurants, is practically paying close to 10% of the estimated cost of the annual loan's payment.

The data used in Table 8 (Note 8) includes, for the Taco Bell's US franchise data, the years 2013-2015 and partial data from 2016, from YUM's website, the rest was extrapolated in accordance to growth percentages in previous and following years.

The following equation, multi-variant regression, was used to calculate the predicted revenue $\hat{R}$. Its various variables provide components of the prediction analysis, the intercept b_R and the slope, and forecast the slope line m, of the predicted values (7). The error, residual, in the equation provides us with the fluctuation about the predicted slope line.

$$\check{R}_{i,t} = \theta_i + \pi_i R_{i,t-1} + \varepsilon_{i,t} \quad i = 1..n \tag{3}$$

Where:

$\check{R}_{i,t}$: the mean of the predicted value

θ_i: the nitial value at intercept

π_i: the factoring coefficient of the predictor based on the relationship between the variance and covariance of the two variables

$R_{i,t-1.}$ the predictor of the revenue over time, in this case the cost C

$\varepsilon_{i,t}$: the variation around the predicting graph line of the uknown considered to be an error over time

Looking at the Table 10, we can see that the predicted values are linearly proportional to the known values of R.

Table 10. The Taco Bell basic statistical data

Dates	2011	2012	2013	2014	2015	2016	sum
Revenue - R	1.323356	1.39	1.46	1.53	1.6	1.676712	8.980068
Sales - S	1.122903	1.18	1.24	1.3	1.36	1.425806	7.62871

Total cost of the product- C	1.112927	1.17	1.23	1.29	1.35	1.415854	7.56878
Operating profit -- OP	0.210435	0.22	0.23	0.24	0.25	0.26087	1.411304
R2	1.751272	1.9321	2.1316	2.3409	2.56	2.811364	13.52724
C2	1.238606	1.3689	1.5129	1.6641	1.8225	2.004642	9.611648
RC	1.472799	1.6263	1.7958	1.9737	2.16	2.373979	11.40258
The predicted value = $\hat{R}$	1.35229	1.40178	1.46010	1.51843	1.57675	1.64077	8.95012

This indicates dependency of the revenue on the cost, which also indicates that the sales are linearly proportional to the business management's assumption of the popularity of the product. The cost management assumed sales would be comparable to those in the US; it turned out to be a valid assumption.

Table 11. The Taco Bell statistical analysis of the slope of the prediction and its initial value - the intercept

	2011	2012	2013	2014	2015	2016	sum
the covariance R and C	0.01243						
the C variance	0.01278						
the R variance	0.01739						
slope=m	0.97210	0.97210	0.97210	0.97210	0.97210	0.97210	
the initial value - intercept = b	0.27041	0.26442	0.26442	0.26442	0.26442	0.26442	
the error, so called Residual -- $\varepsilon i,t$	-0.02893	-0.01178	-0.00010	0.01157	0.02325	0.03594	0.02995
The residual = Sres	0.00084	0.00014	0.00000	0.00013	0.00054	0.00129	0.00294
Std deviation of the residual Sres	0.01670						
Std error of the slope (m)	0.00740						
Std error of the intercept (b)	0.10433						
t statistics slope-large- indicating proportionality	131.31730						
the error in predicted $\hat{R}$	0.00084	0.00014	0.00000	0.00013	0.00054	0.00129	0.00294
total variation in the error	0.00294						
estimated variations in the errors	0.00074						

6. Results

Table 11, displays the regression analysis with the statistics, the t-slope test, is quite large indicating that the model used for the analysis is very good and is providing very linearly accurate predicted values for the revenue R. this also tells us that the least squares method for predicted, the revenue, is valid for its very closely predicted values. The total variation of the error, the residual, is almost zero an indication of the very low variability of the predicted revenue in comparison to the cost, again, a proof of accuracy. The error in the slope, the line predicting the revenue, and the error in the intercept, the initial function access value are both very small, actually in comparison to both, the cost, predictor, and the revenue, the predicted.

This study of the Taco Bell indicates that the union's building construction, based on the outcome of Taco Bell is almost guaranteed success (8). The 2015 cumulative profit of the three businesses is about 20% of the revenue, which is reasonable five years into the ten years life-span of the loan for three of more than fifteen potential businesses. More Significant is the cumulative of the three leases; less than 20% of the available space, practically covers close to 60% of the loan's annual payment. The chart in Figure I is a line chart of the relationship between the cost and the revenue, the predictor and the predicted. The linearity of the two lines is an indication of the accuracy of the direct proportionality of the two data sets. Table 12, provides the revenue and lot-lease amounts for the three businesses. The total three businesses' lease-amounts indicate that the cumulative leases, assuming proportionally

direct relationship, for the entire building will be very profitable. It is important to note that the directly revenue to cost proportional relationship is valid only for the study period of the time series. The period beyond the time series may show a different proportionality due to the fact that the loan's payments are paid off and excluded from the cost.

Table 12. Businesses profits and leases for the year 2015 ($)

Activity / Business→	Taco Bell	Werdan	Houdini	Total
Revenue	1600000	3042000	1113600	5755600
Profit	250000	178300	675360	1103660
Lease costs amount	252000	337140	192000	781140

7. Conclusion

Investing in a business within the union's building in any large school, with emphasis on large, can be very rewarding. Consequently, investing in constructing the union building's itself is more than likely to be very profitable. Businesses within university's grounds flourish as a result of the consuming attitude of the inhabitants of the school's residential areas. I recommend investing in a venture within the perimeters of any large school, and especially a building dedicated to serving students.

Of course, investments in schools' services and facilities encompass the involvement of small mom and pap's stores/restaurants alongside large franchises. Restaurants are amongst the most popular ventures on schools' campuses. Many franchises started within or near schools' properties. Entertainment facilities within a students' union building included a bowling alley, an arcade room, a game room, and or billiard cafés/bars. It is almost always profitable to start a small business within a popular school building. I certainly recommend such ventures with long term financial sustainability's.

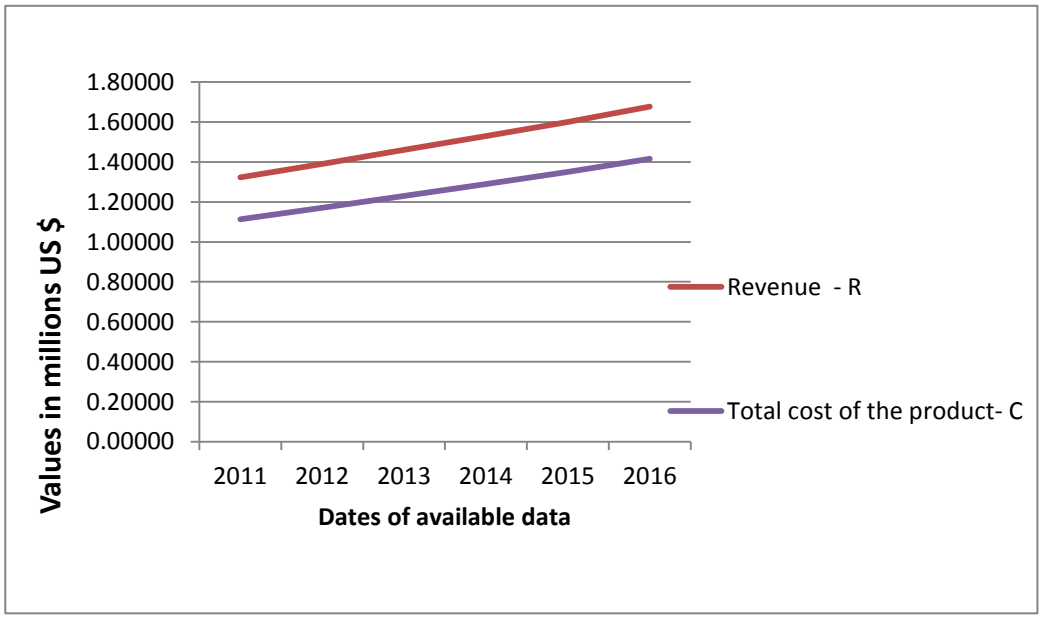

Figure 1. Taco Bell Revenue and Cost

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Notes

Note 1. The businesses discussed in this paper are real, with imaginary names, although based on real businesses and similar facts and Tables. The author was not authorized to reveal data on these businesses, not to mention the actual names.

Note 2. This item was one of my lectures while teaching, as an adjunct professor at the Arab Open University, for which I wrote accounting statements and sheets, a few years ago; it was appropriate for a business on the university property.

Note 3. These business accounting sheets were done a few years ago. As an adjunct professor at the Arab Open University I used my memory of a rental car business in the US, the state of Minnesota 1983, where I rented a car for one week for $35, $5 per day. The owner, Jeffrey, whose name is all that I remember was so crooked he told me once done leave it where you last need it. It was a stolen car. Werdan is a gun runner, from al Natheem district in Riyadh, where I believe he owns a junkyard in the area. I met him on my way to Al Hafouf quite a few years ago, was not a good experience.

Note 4. YUM is the current owner of Taco Bell, along with many other franchises.

Note 5. The US Taco Bell data is given in Table 8.

Note 6. The prices were approximated from data given by Pilipino employees in the Taco Bell restaurants in Riyadh, requesting anonymity.

Note 7. Values from YUM's website and independent sources as mentioned above.

Note 8. The Taco Bell is owned by YUM corporation, available online www.yumfranchises.com ,Taco Bell data is found on YUM's website. For stocks data check: www.amstock.com