THE ECONOMIC FEASIBILITY STUDY OF "GALERIA COMPLEX CENTER"

by

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The Economic Feasibility Study of Galeria Complex Center

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Chapter I

Purpose, Identification, Location, Components and Emergence of the Project

A. Purpose of the Project

The purpose of this study is to assess the economic feasibility of a real estate project, the"Galeria",to be set in Beirut City. This study aims at economically evaluating the project and testing its viability due to the assessing the factors bearing on the success of the project. These factors are the technical, managerial, commercial, political, financial and economical which will determine the project's success or failure to the investors. It also includes an estimation of the costs and revenues due to the existing and forcasted demand on the major components of the project, mainly commercial spaces, offices, apartments and"chalets". Profitability indicators including net present value, the internal rate of return, return on equity, and cash flow statement, will be computed to test the feasibility of the project.

B. Identification of the Project

The project is a real estate business. It is an investment in the services sector which constitute the major part of the Lebanese economy. Based on the assumed market need and on the previous surveys conducted on

similar projects in the area such as "Summerland," "Merryland and "Rouchi Commercial Center", the investors concluded that there is a big need for apartments, offices, touristic facilities such as cinemas, restaurants,"chalets", as well as commercial shops and supermarkets. In fact the need was large but the capabilities were limited.

C. Location of the Project

"Galeria Complex Center" will be located in West Beirut, in the Jinah area to the east side of "Summerland" beach. It is located within the boundaries of the Capital, Beirut, and it covers an area of 8450 square meters. It enjoys with favorable location and beautiful view over the sea. It is expected to include a variety of different components which will require four years of construction.

D. Components of the Project

What is "Galeria" and what does it mean?

"Galeria" is a Spanish or Latin word. It means a commercial exhibition. Specifically, it is a mixture of American mall and a French galerie; i.e., it displays all commercial items that the customer may need.

Galeria is a huge center of 116 meters length and 56 meters width. It consists of nine floors; four of which are below the ground. The reason for not going beyond four floors is the close distance between

"Galeria" and the Beirut Airport. The architectural constraints imposed by the Beirut Municipality building regulation, law prohibits construction over four floors.

Galeria's fourth floor below ground is a parking area. It is estimated that this parking can hold-up to 300 cars. The third floor below the ground has also a parking lot which can hold up to 150 cars. The other part of the third floor consists of 47 stores or shops. In the second floor below the ground, there are four cinemas each of which holds around 160 seats. The purpose behind this small number of seats in each cinema is the type of continuous non-stop film they show. It also includes shops and an amusement center. The first floor below the ground holds 80 shops of different types of commodities. This floor has some special features, for it can be viewed from above the ground and hosts a coffee shop. The ground floor is a duplex floor in which the lower one holds a huge supermarket, a health center and some specialized shops; while the upper one holds around 50 shops and stores of different sizes and a restaurant. These two floors are connected with each other by an escalator.

All the floors above the ground level on the eastern side of the building are supposed to be business offices each of which holds 20 offices of different sizes. The ones on the western side of the building overlooking the Summerland beach are functionalized apartments of

the following sizes; studio, one bedroom, two bedrooms and three bedrooms. These apartments could be used for living purposes as well as"chalets"near the beach. On the first floor below the ground, i.e., the basement, there is a bridge which connects the shops on each side of the shopping center. This was essential because the width of the area separating these two sides is 14 meters, which is thought to be ideal for such kind of shops.

E. Emergence of the Project

In fact, the idea of the project emerged in 1983 as a result of the political stability and the comparative peace prevailed in the capital after the Israeli invasion and withdrawal of its army. This improvement has created a stable environment in which economic projects would succeed and prosper.

The optimistic view of the five partners was accompained with the revised reconstruction plan that was prepared by the Council for Development and Reconstruction (CDR) for 1983-1991. This plan was completed in April 1983 and provided for an outlay of around $13 billion on reconstruction and development projects during the period from 1983 to 1991. As in the overall reconstruction plan the largest share of funds under the 1983 programme was 27 percent of the total, was earmarked for housing projects. The project for the reconstruction of commercial district was around 24 percent, thus placing it second

in order of importance[1]. One of the social problems facing Lebanon is the severe housing shortage. It was estimated that 400 thousand new housing units would be needed before the turn of the century, (roughly 23530/year as an average) to alleviate the present shortage, and to cater for the expected population growth. This is so in spite of the fact that construction activity was less affected by the situation which prevailed in Lebanon after 1975 than other sectors of the economy".[2]

Another phenomenon was reflected by the severe demand for the luxurious office spaces. In fall 1982, which was known as a transitory stage for political normalization and economic recovery, the market witnessed a noticeable movement of foreign visitors to Beirut. They included foreign businessmen, governmental officials and small and large corporations of Lebanese and non-Lebanese origins who were interested in buying or leasing office spaces in West Beirut; especially in Hamra area. They gathered all the information including offices specification, their renting costs and their selling prices. Up to the end of that year, there were too many transactions that have taken place. Some of these were in the

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[1] Iskander, Marwan, The Lebanese Economy 1982-83, (Beirut, 1984), p. 332.

[2] Ibid., p. 55.

following commercial centers:

Name of Centers	Area
1. Jostinian Center	Sanayeh
2. Piccadilly Center	Hamra
3. Younis Center	Hamra
4. Ivoire Center	Hamra
5. Sabbagh Center	Hamra
6. Arisko Center	Sanayeh
7. Broadway Center	Hamra
8. Estral Center	Hamra
9. Hamra Center	Hamra
10. Resmani Center	Hamra
11. Jefinor Center	Clemenceau
12. Center of Banks	Verdun
13. Ramisan Center	Hamra
14. Dolphin Center	Rouchi
15. Verdun Center	Verdun
16. Naroudni Center	Hamra
17. Amin Center	Hamra

Based on opinion surveys, governmental estimation and the availability of data; the optimistic economic and political view of the future will act as a reinforcer to put the supply of such facilities in higher demand.

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[3]Said Alameddin, "Beirut Commercial Centers", Al-Ektissad Wal-Amal, Vol. 4, Feb. 1983, p. 29.

In that year, 1983, there were three housing projects and one commercial space, other than "Galeria", launched by the private sector. The first housing project was in Rumieh, in the Metn district, covering a land area of 620 thousand square meters. Another project covering an area of 60 thousand square meters in Doha, South of Beirut. The third one was in Montevardi, on the eastern hills, covering an area of 10 thousand square meters.[4] But the only commercial center was the New Rouchi Commercial Center. It covered an area of 9200 square meters. As a consequence of that shortage, a high demand for real estate projects was expected.

The economic need of decentralization based on the fact that very few projects can be established in Beirut area because of demographic expansion such as the increase in the per square mile density of the population, the limited area of West Beirut which is surrounded by demarkation lines in the east and north, prompted investors to move to the suburbs=the"Summerland"area in the southern suburb was chosen for this project.

The man behind the project is Mr. Saker Fakhri an - established engineer, project consultant, contractor, architect and one of the investors- can be considered as a master in such business. His wide knowledge in real

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[4]Iskandar, op. cit., p. 83.

estate projects can be portraited in projects such as the "Pavillon", "Estral Ivoire", "Monte Carlo" and the "New Rouchi Commercial Center", etc. He found out that the need for small furnished or not-furnished apartments in the area, was highly demanded because of the unavailability of such apartments except in very expensive places such as rooms in "Summerland" and "Coral Beach".

The need for touristic facilities such as the ones mentioned above would add new features to the already existing ones in the area.

Concerning the need for offices, the stability would create more business; so new delegates of foreign corporations will be in need for representative offices in Lebanon and particularly in Beirut.

The presence of touristic facilities, apartments and offices should create a demand for supermarkets and shops or stores. In addition, the outside customers will benefit from it.

So, Mr. Fakhri decided to satisfy all the needs with a single huge project. Thus, the "Galeria" emerged in the early 1983.

In September 1983, after several months of the construction, the prevailing situation turned upside down with the rapid succession of crises; from the outbreak of full-scale fighting in the Chouf mountains and in Beirut's southern suburbs, to the suicide attacks against the American and French contingents in the Multinational

Force in October, to the breakdown of government authority in West Beirut in February 1984 and the resumption of fighting and shelling between the two parts of the divided city. All these consecutive events led Mr. Fakhri and his partners to reconsider undertaking this huge investment; however, that step was not a way to eleminate the project entirely, but to postpone it to a more favorable and stable environment. However, up till 1987, a total amount of $35 thousand was incurred in which it was considered as a part of the total construction cost.

As of 1988, the growing tension between the different parties on the ground began to calm down. At that time talks about the election of a new cabinet promised a better stable situation. This was accompained with a better exchange rate of the dollar. The Lebanese pound appreciated strongly from L.L. 620 to the dollar in the last few months of 1987 to around L.L. 475 at the end of December 1987 to L.L. 365 in the early of March 1988, and may be to a higher exchange rate in the near future. As a result of the political and economical stability, Mr. Fakhri and his partners reached a point where it became very necessary to revise their previous decision, i.e., they decided to continue the work that was slowed down during that period.

Chapter II

The Role of Macroeconomic Conditions in the Servicing Sector

The purpose of this step is to briefly review the general economic development of the servicing sector before 1975 and to highlight some of the major issues confronting this sector as a result of the civil war. This preliminary step in the study is considered as an essential step in assessing the potential demand for any future servicing sector project and testing its feasibility.

A. The Role of the Laissez-faire in the Servicing Sector

Lebanon's economic system, has been largely conditioned by its strategic location, ethnic heterogeneity, and external contacts. Its generally laissez-faire economy stands in contrast to the growing socialization of the economies of other countries in the Arab world. Its free market, the diversity of its product and services, and its various invisible incomes (private capital inflows, transportation and tourism) have been a source of strength and stability to the economy, providing Lebanon with a higher standard of living than most countries in the Middle Eastern region, and continued economic progress in spite of recurrent political crises. This phenomena

was reflected in the Lebanon's gross national product (GNP) for 1968, the most recent year for which final figures are available, was about L.L. 4274 million as compared to L.L. 3309 million for 1964. Estimates of GNP for 1965 and 1966 are put by the Ministry of Finance at L.L. 3640 and 3995 million respectively. Using the 1968 GNP as a standard guide for comparative purposes and allowing for a population estimated by the Ministry of General Planning at close to three million, the GNP per capita is not far from L.L. 1400 (roughly $500) per year.[5] The contribution of the various sectors to the domestic product shows that Lebanon is essentially a service economy. Table 1 illustrates the spectacular figure based on averages calculated between the year 1964 and 1972. Almost 70 percent of its gross domestic product (GDP) comes from services and only about 25 percent from agriculture and industry. Income from tourism is incorporated with services: commerce, trade, hotels, restaurants, travel agencies, etc. Income from every service category, with the exception of trade, is below 10 percent.

"Existing of a free-market economy has led to a large influx of capital from the oil-producing countries

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[5]Salem A. Elie, Modernization Without Revolution Lebanon's Experience, (Canada, 1972), p. 40.

Table 1

Domestic Product in Lebanon
(Based on averages calculated between the year 1964 and 1972)

Sector	Percentage of Domestic Product
Agriculture	12
Industry	13
Hydro-electric output	3
Construction	6
Transport and Communication	8
Rent and Lodging	7
Banking and Insurance	4
Commerce and Trade	33
Government Services	8
Other Services	6
Total	100

Source: Ministry of Finance, Research and Documentation Department, Statistical Sheets.

in the Middle East and to an economic boom, particularly in Beirut and its suburbs, since the early 1950s. Not all of the influx has been sanctioned officially; Syrian capital has been smuggled into Lebanon by merchants seeking an escape from strengent legislation. Also some of the "new capitalists" in the region, especially Saudi and Kuwaiti investors, prefer to deal with Lebanese Arabs, whose language and culture they understand, rather than with European countries - although shrewdness often dictates that they deal with both."[6]

The Lebanese government objectives, prior to the post war, aimed at maintaining relative financial stability and providing the private sector with the opportunity of playing the major role in the economic expansion. These objectives were based on two principles:

1. A Liberal trade and payments regime. i.e., the existing of free market economy that was mentioned above.
2. A flexible exchange rate. The underlying principle here is that domestic pressures, should they arise, would work themselves out through the balance of payments whose adjustment, in turn, would be dependent upon the flexibility of the rate.

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[6] Ibid., p. 42.

Indeed the above factors combined to produce almost consistent balance of payment surpluses to give pressures on the Lebanese pound to appreciate up to 1975.[7]

B. Lebanon's Role as a Middle Man in the International Trade

Lebanon's favorable location has served its country as a middleman in the international trade. The political and economical stability that prevailed in the country prior to 1975, coupled with the free-enterprise system, have helped Beirut into a commercial and business center in the Middle East. When oil money from the Arab country began to flow into Lebanon, Lebanese businessmen were ready with their banking facilities and world-wide contacts to advise the Arab Kings and Princes about the management of their wealth. Lebanon began to provide the Saudis, Kuwaitis, ... etc. by the servicing facilities they want. "They bought land in hills close to Beirut and built residences for summer and weekend visits. To many of them Lebanon has become a second home, a place to establish a new business in the event that radical regimes at home were to topple the traditional ruling class."[8] "Lebanon has become also a center to finance

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[7]Makdisi,A. Samir, "An Appraisal of Lebanon's Postwar Economic Development and a Look to the Future", The Middle East Journal, V. 31, No. 3, Summer 1977, p. 268.

[8]Salem, op. cit., p. 43.

a tremendous volume of triangular trade (import for re-export) and financial operations encompassing all parts of the world."[9]

C. Lebanon as a Touristic Center

Since the inauguration of the Lebanese Khalde airport on July 1, 1950, Beirut became one of the nadal points of world transports and a stop-point between the East and the West. It became a central point in the international communication. The Mediterranean has also served as the high way for the considerable number of tourists and travellers in transit, lovers of winter sports, summer vacations, and people who make frequent stays for holidays or periodic rest.

The strategic location that Lebanon injoys, has given him a comparative advantage in the Middle East as a producer of the touristic and summer resort activities. Arab summer resorters used to come regularly from the Gulf, Jordan, Iraq, Egypt. Furthermore, Beirut was a fun city. So night clubs, "cabarets", casinos,"discotheques", bars, etc., were introduced.

Beginning from the early 1950s, the foreign visitors to Lebanon were increasing tremendously up to a year 1974, the prior war. Table 2, illustrates the total number of visitors, Arab and non-Arab, starting year 1960 in which sufficient data is available.

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[9]Salem, Khalil, The Economy of Lebanon, (Beirut, 1965), p. 19.

Table 2

Number of Foreign Visitors to Lebanon
From Year 1960 to 1974

Year	Non-Arabs	Arab Excluding Syrians	Total
1960	127088	105995	233083
1961	153295	141011	294306
1962	186992	144631	331623
1963	195442	194103	398545
1964	260349	211827	472176
1965	320571	279937	600508
1966	369833	334351	701184
1967	268208	247020	515228
1968	283456	426554	710010
1969	317379	459756	777135
1970	288097	534250	822347
1971	396601	619171	1015772
1972	470973	577186	1048159
1973	409294	552000	961294
1974	553737	896203	1449940

Source: National Council of Tourism, Research and Documentation Department, Statistical Sheets.

"The business skills of the Lebanese in center Lebanon (Beirut and its mountain environs) and their outside contacts had encouraged tourism even before the government began to invest in the tourist industry. Fifty percent of Lebanon's tourists came from the Arab world, 35 percent from Europe, and 15 percent from the United States."[10] Prior to 1965, Lebanon had never used to invest in this industry. But as the government developed its project which was known as the Five-Year-Plan, and after they realized that this industry occupied around 9.7 percent of the total GDP or L.L. 312million in 1964, they assigned a L.L. 25,000,000 to be spent over 4 years in which the first year was excluded. That budget was distributed as follows:

Tourism:

	1965	1966	1967	1968	1969	Total
Encouragement of tourism and model projects	—	1000	2000	3500	3500	10000
Appropriation and equipment to institute tourist centers	—	3000	4000	4000	4000	15000
Total	—	4000	6000	7500	7500	25000

*Figures are in thousands of Lebanese pounds.

Source: Ministry of General planning, 1965, Khuttat al-Tanmiyat al-Khamsiyyat 1965-1969.

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[10]Salem, op. cit., p. 45.

So receipts from this category have averaged a little over L.L. 100 million ($33 million) per year for 1965-70. Such flow would offset Lebanon's international trade deficit.

D. Economic Impact After 1975

In attempting to assess the economic impact of this war; one major constraint which still remains is the non-availability, as yet, of reliable estimates of the damage which was sustained by the Lebanese economy, although some sources mentioned that the damage resulted between year 1975-1983 was around L.L. 62 billion. However, these losses have manifested themselves in many interconnected areas and in various tangible and intangible forms which may be categorized as follows:[11]

1. Damage to physical assets and, therefore, existing capacity for production.
2. Drop in national income which resulted from the following:
   a) Damage of physical capacity.
   b) Disruption of the transportation network of the domestic and foreign trade channels.
   c) Departure of business firms and capital.
   d) Reduced governmental and private expenditure.

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[11] Makdisi, op. cit., p. 275.

3. Drop in the level of employment.
4. Adverse intangibles.
   a) Loss of confidence on the part of private sector (Lebanese and non-Lebanese investors).
   b) Loss of human resources and changed distribution of asset holdings as a result of physical destruction.
5. Adverse financial development manifested in
   a) Increase inflationary pressures.
   b) Closure of a number of banks and the narrowing of the banking sector.
   c) The emergence of debt problems and the creditor-debtor relationships including the disruption of credit facilities.
   d) The reduction of central banking activity to the minimal level.
6. Drop in the level of tourism.

In spite of all these crisis, the Lebanese case is unique in the world. The balance of payment achieved a net surplus of L.L. 1.32 billion in 1982, although, the proportion of exports to imports is 1 to 6, but since 1983 it changed into deficit and it began to fall sharply up to the beginning of 1987.[12] "From that time the over-

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[12]Council for Development and Reconstruction, The Reconstruction Project, (Beirut, 1983), pp. 2-3.

all balance of payment recorded a surplus of about $50 million in the nine months to Sept. 30, 1987. It benefited from the sharp fall in imports and a rise in exports."[13]

E. Challenges of the Future: Two Possible Scemarios

1. A Complete Stability:

Future outlook of the prevailing situation began to change after the first two years of the war (1975-76). In 1977, the period of relative calm, has witnessed a construction program, carried by the CDR, to reconstruct all the damages resulted from the two-years war. But as soon as they began their reconstruction work under the highly uncertain condition and because the various constraints on the implementation which included the shortage of fund, the plan was revised in 1980 and then in 1983. The final plan was based on a clear strategy and it covered the period from 1983 to 1991. The project provided an outlay of L.L. 62.2 billion (around $13 billion) at 1982 prices. It gave a priority to urgent projects that were necessary to overcome Lebanon's myriad post-war social and economic problems, especially projects, to rehabilitate, and develop the infrastructure, housing facilities, educational, transportation, water supply, communications, agriculture and health institutions. The annual government expenditure on the reconstruction

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[13] Middle East Economic Digest, Vol. 32, No. 4, Jan. 29, 1988, p. 18.

was expected to average around L.L. 1.72 billion. Table 3 shows how these expenditures are allocated on the various sectors and projects.

As 1983 unfolded, however, there was a change in political expectations. By April, a maelstrom of problems came to the surface which kept the political situation tense. But inspite of all its misfortunes since 1975, Lebanon still has the potentials to compete effectively with its neighbouring countries provided security conditions return back to normal. As I mentioned in the earlier chapter, the comparative situation prevailing since the beginning of 1988 has led to a strong appreciation in the Lebanese pound. The competative advantage is based on the facts that were mentioned earlier.

a) Laissez-faire

b) Location, as a middle man in the international trade.

c) Lebanon as a touristic center.

2. Stagnation in the Current Conditions

Under this assumption which will hinder the reactivation of the economic conditions, where the significant fractions are Arabs and foreigners, one will expect the following:

a) The depreciation of the Lebanese pound vis-a-vis foreign currencies, would cause a possible demand from the Lebanese emegrants and even non-Lebanese to invest in real estate projects.

Table 3

Lebanese Construction Plan for 1983-1991
(L.L. Million)

Sectors and Projects	Total Cost
Housing	21,870
Education	2,030.6
Transportation	12,249.4
Water Supply and Irregation	5,955
The National Waste Management Plan	3,169.2
Communications	7,160
Electricity	3,976
Health	1,113
Agriculture	192
Beirut Downtown Commercial District	1,828.5
Credit to the Private Sector	2,700
GRAND TOTAL	62,243.7

Source: Council for Development and Reconstruction, 1983.

b) Due to the given fact, a strong shift in demand on the Lebanese products and services becomes possible.

These facts have created an incentive on the side of the investors, Mr. Fakhri and his partners, to continue their project. According to Mr. Fakhri, he is not the only one investing in this project. Fortunately he has four partners that are contributing in this project and who are based outside Lebanon. According to him a huge investment like this one cannot be financed solely from interior funds in Lebanon due to the huge depreciation of the Lebanese pound.

Concerning this assumption also; i.e., the stagnation in the current conditions, the strong belief of the investors that the project will be a success and will attract a large number of clients is supported by the following observations:

a) The defacto partition of Beirut has diminished if not eliminated the potential competition of similar high class complexes in the Eastern side of the capital.

b) The lack of any first class complex center in West Beirut.

c) Comparing its components with similar ones in the area such as Summerland with respect to the restaurants amusement center, health club, chalets and

the shoping center, we can find that they are working at full capacity. So the rising local demand for a multi-purpose functions, including offices and apartments, becomes essential.

d) The new reconstruction program in all fields.

e) The location of Galeria within the boundaries of the capital on one side and the most luxurious area on the other side.

Chapter III

Research Methodology and the Existing Potential Demanders

A. Research Methodology

The sources of information and data were based on two facts-the primary and the secondary sources.

1. Primary data: which contains, publications, documents, previous researches and projects, volumes and articles. The significance of the primary materials lie in the fact that they contain more complete and accurate data. The reason for this is that the primary source contains all the original data in unaltered form. The data that was referred to was based on an economic.feasibility studies prepared for similar projects in Lebanon and abroad. These projects were used as a guideline in preparing this economic evaluation. Also the publications helped in creating a clear picture for the situation prevailed before and after 1975.

As a first step in evaluating the project, it was necessary to review the economic conditions prevailed prior and after the war. This procedure was necessary because any investment project cannot be separated from its environment. For this purpose, the study started with a general review of the historical background of the macroeconomic conditions that helped the servicing

sector to develop and survive up till now.

The second step was to forcast the future demand with the help of questionnaires which revealed the market preference of the potential customers. In accomplishing this step, it was necessary to review the important role of Lebanon in the Middle East and its geographical location.

2. Secondary data: At this stage, information from field work includes sector surveys, prefeasibility studies, sample surveys, and other assessments of people's needs allows to formulate proposals in enough detail to establish sectoral priorities for an investment components. During this stage, it was necessary to assess the information which can be supplied by the city people in possible or proposed project area. The assumption is that the city people are in the best position to identify their needs and are capable of suggesting solutions to their problems. This step was accomplished by the following;

a) Formulating questionnaires addressed to potential demanders in west region of Beirut and conducting a market survey to estimate the demand for the various components of the project.

b) Conducting interviews with the investors, persons, brokers, and engineers who are involved in the project. This involved the capital cost, the area of land and its cost, the percentage of construction area of the land

on which the center is going to take place, the exploitation factor that is allowed in that area, method of financing, i.e., debt-equity ratio, method of payment when sales take place and the actual price with its keymoney that is paid in the area. (all these items will be discussed in details in the next chapter).

Based on the questionnaire findings, cost and revenue stream were estimated and financial statement was prepared. In the evaluation of the project, the profitability indicator such as net present value, cash flow statement,return on equity, and internal rate of return, were calculated on the discounted cash flow and priced at the market prices.

B. The Existence of an Actual and Potential Demand

1. Commercial Spaces

Even in time of crisis, business firms represent an agent of exchange that deserve special attention. In Lebanon despite of all the economic and political crisis, there is an increase in the number of registered firms in the country. In 1972, the Beirut Chamber of Commerce and Industry listed 359 newly registered firms in Beirut alone, including major banks, insurance companies, airlines, oil companies ... etc. This number was increasing year after year by an average of 16%

(it ranges from 13% to 19%) up to year 1987, as it is shown in table 4. By using trend analysis we can notice that there will be a continuous increase in the future. It follows that the demand on commercial spaces will increase steadily at the same rate.

Since the purpose of the project is to offer a higher quality commercial spaces, it became inevitable to conduct a market survey at a high class areas in order to estimate the potential demand. As the information gathered shows the lack of such facilities in West Beirut, except at "Summer Land Commercial Center" which helds 14 shops only, and as they are working at full capacity, it was expected that the demand will be high on such spaces. The assumption is based on the fact that the marked increases in sales and keymoney have improved lately more than they were in 1984 and 1985. The prospective demanders were selected from a deluxe residential areas such as Verdun, Wardieh, Clemenceau, Mar Elias, Hamra and Madam Kuri. The interviewees were the owners of high fashion shops and encompassing a wide variety of shops in which the "Galeria Commercial Center" is expected to hold. These included flowers, toys, gifts, food, sports wear, shoes, pharmacy, lady's wear, men's wear, children's wear, jewelry, silver, pastry, bookstore, video casette, textiles, furniture and appliances, carpets, candies, roastery, travel agency,

Table 4

Number of Establishments in Beirut

Year	Newly Registered Firms	Previously
1972	359	1314
1973	412	1484
1974	484	1677
1975	547	1862
1976	618	2067
1977	736	2377
1978	876	2734
1979	1205	3885
1980	1368	3614
1981	1105	3642
1982	1060	4044
1983	1484	4329
1984	1595	4606
1985	1704	4894
1986	1814	5182
1987	1923	5470

Source: Chamber of Commerce and Industry.

optician, ... etc. Furthermore, the center is expected to provide different components including a restaurant, a coffee shop, cinemas, an amusement center and a health club. The purpose behind such wide variety is to establish a market area in which people can find whatever they want in one place.

2. Restaurants, Coffee Shops, Cinemas and Health Clubs

Restaurants and coffee shops in the area experience high occupancy rates. The assumption that these facilities will be demanded is the type of the center which holds offices and residential apartments. The area is also deficient of cinema houses. A health club is highly demanded in these days because city people became more health conscious. The "Summerland Health Club" is a best experience for such activity and the information gathered indicates that there is a deficiency in first class health clubs while there is a high demand for such facilities.

3. Functionalized Apartments

It is a new feature in real estate projects. The decrease in demand on offices after the enclosure of foreign companies and stopping their activities in Beirut in 1975/76 and then in the late 1983, has led many of the investors to reshuffle their investment programs into another projects. That was exactly what happened to the "Galeria" investors. Their old strategy which

was based on providing multiple office centers like "Pavillon", "Estral", "Ivoire", "Montecarlo", etc. was reconsidered and some modifications were introduced in the investment components of the project. The reason for such changes was the result of a study conducted in 1983 on a various commercial centers in West Beirut. These results emphasized the moderate occupancy rate governed by office spaces (64% an average). Table 5 illustrates the following results. The reasons lie behind such low level of occupancy rate are illustrated in the following:

a) Most of the investments are poured into such type of centers, thinking that they provide a higher income.

b) Most of these centers are built in one area. As a consequence of that, supply exceeded demand in these places as it is shown in the table.

c) Departure of foreign business firms from the country. So demand is limited to the local ones.

d) Some of the residential buildings are used as commercial places or offices although it is illegal.

e) The lack of an adequate rental law to protect land lords from the effect of inflation has caused many of them to decide on selling these spaces rather than to rent them.

The functionalized apartment idea came as a new innovation to avoid any future stagnation in the economic condition.

TABLE 5

WEST BEIRUT COMMERCIAL CENTERS

NAME	LOCATION	AREA/SQ.METER	NO.OF FLOORS UP	NO.OF FLOORS Down	TYPE OF OCCUPANCY	OCCUPANCY RATE %	ANNUAL RENT L.L/SQ.METER	KEY MONEY L.L/SQ.METER	PRICE L.L/SQ.METER	GARAGE	NOTICE
Verdun Center	Verdun	37800.00	17	4	Offices-Shops-Stores-Cinemas Furnished Apart.-Cafteria	60.00	200-300	-	-	Yes	The whole center is for sale
Makasid Com.Center	Mar Elias	10000.00	12	3	Off.Shp.Clinics-Stores Exhib.-Restaurants	Shps. 45 Off. 55	Shps.-1500 Off. -1000	15000.00	-	Yes	It includes banking, jeweler and 66 comm.shps.
Jostinian Center	Sanayeh	10000.00	11	2	Block B (Offices) Block A (Residential)	50.00	Off.1000-1200	-	-	Yes	-
Piccadilly Center	Hamra	2600.00	8	4	Off.-Shps.-Cinemas-Banks	100.00	Off.1000-1200	-	-	Yes	-
Younis Center	Hamra	3000.00	7	4	Off.-Com.Shps.-Strs.-Exhib.	65.00	Off. -1200	-	-	No	Not for rent-just for sale
Ivoire Center	Hamra	6600.00	9	3	Off.-Com.shps.-Strs.-Banks	65.00	-	-	-	No	-
Naroudni Center	Hamra	20000.00	13	3	Com.& Banking Center	75.00	-	-	-	No	The Whole center is for sale
Sabbagh Center	Hamra	34500.00	14	5	Off.-Shps.-Strs.-Banks Cinemas-Restaurants	10.00	Off. -1200	-	-	Yes	-
Arisko Center	Sanayeh	36500.00	19	4	Off.-Shps.-Strs.Bks.-Cinemas Restaurants-Exhibitions	50.00	-	-	11000-12000	No	1/3 is sold to the Central Bank and the rest is for sale.
Broadway Center	Hamra	8000.00	12	4	Off.-Com.Shps.Cinema-Rest.	65.00	Off. -1300	-	-	No	Not for rent
Estral Center	Hamra	25000.00	10	5	Off.-Shps.-Cinema-Strs.-Exhib. Serv.Centers	Off. 40	Off. -1300	-	-	Yes	It includes 64 rooms built to be as hotel
Hamra Center	Hamra	-	20	5	Off.-Shps.-Furnish.Apart.	100.00	Off. -1000	-	-	Yes	It includes Balling Center
Rasamni Center	Hamra	4000.00	13	-	Off.Shps.-Exhib.-Strs.	75.00	-	-	-	No	The whole center is for sale
Metco Center	Mar Elias	13000.00	13	4	Off.-Shps.-Exhib.-Bks.-Huge center for big corporations	65.00	-	-	Off.-8000 Shps-16000	Yes	It includes 85 comm.shps.

NAME	LOCATION	AREA/SQ.METER	NO.OF FLOORS UP	NO.OF FLOORS Down	TYPE OF OCCUPANCY	OCCUPANCY RATE %	ANNUAL RENT L.L/SQ.METER	KEY MONEY L.L/SQ.METER	PRICE L.L/SQ.METER	GARAGE	NOTICE
Jefinor Center	Clemenceau	35500.00	44 dist.among 7 diff.bldg.		Off.-Shps.-Banks	5.00	Off.1200-1500	-	-	Yes	One of the 7 bldg.is for clinics only
Center of Banks	Verdun	7500.00	11	2	Off.-shps.-Strs.-Exhib.-Bks. Apartments	50.00	-	-	Off.-8000 Shp.-500000-150000	Yes	-
Armisan Center	Hamra	2700.00	7	2	Off.& Com. Center	60.00	-	-	-	No	It includes 21 shops specialized in sales of gold
Dolphin Center	Rouchi	5200.00	11	1	Off.-Shps.-Restaurants	100.00	-	-	Off.-8000 Shp.-25000	Yes	The whole center is for sale
Aldorado Center	Hamra	6000.00	8	2	Off.-Shps.-Strs.-Bks.-Cinema-Exhib.	60.00	Off. -1300	-	-	Yes	-
Amin Center	Hamra	7500.00	10	2	Off.-Shps.-Strs.-Bks. Restaurant	60.00	Off.1300-1600	-	-	Yes	-
Pavillon Center	Hamra	8000.00	7	2	Off.-Shps.-Strs.-Exhib.	80.00	Off.1000-1300	-	-	No	-
Monte Carlo Center	Hamra	3000.00	8	2	Off.-Bks.-Cinema-Com.Shps.	100.00	Off.1300-1500	-	-	No	-
El-Hassan Center	Masra'a	10000.00	10	2	Off.-Strs.-Com.Shps.	90.00	Off. 700-1000	-	-	No	-

* The result of this study shows a law occupancy rate averaged 64%
a price /sq.meter for offices averaged L.L 8000
also a price/ sq.meter for shops averaged L.L 16000.

Source : Al-Ektisad Wala'amal, Statistical Studies, Feb.1983

What are functionalized apartments?
They are deluxe apartments that serve many purposes. They can be used as offices, companies, as well as for dwelling purposes. They can be used also as "chalets" because the center is very close to the sea shore.

The purpose of this innovation is to create substantial demand for the project. The push from the village and the pull by the city have created a shortage in housing which becomes inevitable that such type of project will meet a high demand. Furthermore, these first class apartments can be used as residential"chalets" for summer resort which are widely spread in the Eastern side of the capital. In West Beirut and particularly in the Jinah area, there are only two deluxe establishments namely"Summerland"and"Coral Beach";however, "Galaria"has an advantage over both complexes in the sense that these"chalets"may be used as secondary residences. Suffice to say, that these apartments or"chalets"are private ones and people will feel insensitive towards the permanent increase in prices for such facilities in the future.

4. Office Spaces

Under the above assumption, we shouldn't ignore the importance of the offices in that region. Doctors, engineers, lawyers, upper administrative officers, reporters,bankers, etc. are all professionals and their enrolment in the category of upper-class group has general power and influence among the respondents. Based

on the information gathered, the need for a first class office center in the area is very essential. The reason for establishing it is the location which is very close to Beirut airport. The favorable location provides a high facility for businessmen Arabs and non-Arabs, to communicate with their agents in a short time. The other reason is the development of touristic facilities in that area. If the foreigners, for example, are not interested in buying apartments in "Galeria", they can stay at"Summerland Hotel". This will facilitate their movements from/to their work.

As was mentioned earlier, it is important to take into consideration the local demanders such as doctors, engineers, lawyers among a few professionals. Tables 6, 7 and 8 illustrate the number of these professionals in Beirut that grew year after year since 1972. By using trend analysis we can notice that there will be a continuous increase in the future. It follows that the demand for offices may increase steadily at the same rate. Table 9 provides us with the total number of professionals in Beirut; i.e., the total number of doctors, engineers and lawyers.

In this analysis, we cannot consider that all these professionals are potential demanders for offices due to the inflationery rate; some may find work in hospitals, government and private institutions. Because

of the difficulty to predict the unpredictable, our capacity will be restricted to conduct a market survey and the results that we obtain will determine the percentage of demanders in each construction space and whether the project is feasible or not.

Table 6

Number of Doctors in Beirut

Year	Previously	Newly
1972	525	90
1973	615	106
1974	721	123
1975	844	145
1976	989	178
1977	1167	175
1978	1342	143
1979	1485	153
1980	1638	249
1981	1887	184
1982	2071	153
1983	2224	177
1984	2402	178
1985	2594	192
1986	2723	129

Source: Ministry of Education (Office of Doctors)

Table 7

Number of Engineers in Beirut

Year	Previously	Newly
1972	955	41
1973	996	54
1974	1050	71
1975	1121	94
1976	1215	18
1977	1233	163
1978	1396	101
1979	1497	204
1980	1701	270
1981	1971	274
1982	2245	300
1983	2545	472
1984	3017	500
1985	3517	575
1986	4092	610

Source: Ministry of Education (Office of Engineering)

Table 8

Number of Lawyers in Beirut

Year	Previously	Newly
1972	1292	10
1973	1302	12
1974	1314	15
1975	1329	18
1976	1347	13
1977	1360	30
1978	1390	61
1979	1451	60
1980	1511	79
1981	1590	77
1982	1667	140
1983	1807	140
1984	1947	140
1985	2087	140
1986	2227	140

Source: Syndicate of Lawyers for Beirut.

Table 9

Total Number of Professionals in Beirut

Year	Previously	Newly
1972	2772	141
1973	2913	172
1974	3085	210
1975	3295	257
1976	3552	208
1977	3760	368
1978	4128	305
1979	4433	417
1980	4850	598
1981	5448	535
1982	5983	593
1983	6576	789
1984	7366	790
1985	8198	832
1986	9042	844

Estimating Demand for Offices, Apartments, and Commercial Spaces

A. Estimating Demand for Offices and Apartments

1. Sampling Methodology

The methodology adopted in estimating the potential demand for offices and apartments consisted basically of a market survey conducted with the aid of a questionnaire (Appendix A). To assess the people's needs, the questionnaire was designed in a way to give priorities or percentages of demand on different units of the proposed project rather than to suggest a new demand on any other projects. It is essential, therefore, for the researhcer to assess the information which can be supplied by the city people because they are in best position to identify their needs, and further, are capable of suggesting solutions to their problems.

In fact, the questionnaire was a substitute to the lack of the accessibility to the recent statistical data to the project under study. So that none of the conventional statistical techniques such as mechanical extrapolation and econometric model were developed after the 1976. The sampling process used in this study was as follows:

a) In setting up a sampling study, the selection of the

frame was of prime importance. There was considerable difficulty in forming this category, but in general it was meant to include an upper-class group which has general power and influence in the city, either from high-ranking official position or bacause of position in the business world. The sample included a wide variety with respect to the professional background (Doctors, Engineers, Lawyers, Bankers Merchants...), but from a similar social background in order to have a cohesive community. Moreover, the sampling units were drawn in the first stage from an upper-class areas located in West Beirut and from a selected upper income bracket groups where potential demand lies at the second stage.

b) The sample size was based on convenient sampling procedure. Since there were no access to the names and addresses of the members of the upper-class in Beirut, therefore, I decided to select the sample units based on a convenient sample in which 10 respondents in each classified area (Verdun, Wardieh, Clemenceau, Mar Elias, Hamra and Madam Kuri), would be selected. A strictly proportional sample of 60 were then drawn randomly. That is, each area of the

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[14]Clover, Vernon T. & Balsley, Howard L. Research Methods in Business,(Ohio, 1979). p. 227.

above was divided into 10 blocks in which each block received one sampling unit. The basic assumption of this technique was to reduce the percentage of errors into the minimal level.

2. Sampling Results

In comparison to the study conducted on a various commercial centers in West Beirut (table 5), the respondents were more optimistic about the future economic development. From the results obtained, we are not exaggerating if we say that the survey showed an existence of an actual and potential demand for offices and apartments. Actually, one of the most distinguished points that were concluded is that respondents were more likely to live or work in homogeneous compound where all have the same ideas and tastes. Another factor was that respondents were more interested to be near the sea shore resort in general and "Galeria" in particular because of the distinguished features that were previously mentioned. Finally, since the "Galeria" offers different components (Apartments, Offices, Commercial Center...), the respondents were more interested in owning more than one element. The reason was that some people prefer to work in the same place where they live. The others find it more convenient to live in a place where they can find all the facilities located in one place. As a matter of fact, all the sampled population expressed

deep interest in the project. The following are detailed market findings of the detailed questionnaire addressed to the prospective demanders for offices and apartments.

1. Classification of occupations represented one of the most difficult aspects of the survey. The purpose was meant to include different types of business in the sample so that each one could have an equal chance to give his or her opinion. The prospective demanders were as follows:

Occupation	Frequency
Doctors	5
Engineers	5
Lawyers	4
Bankers	4
Accountants	3
Travel agents	3
Press	3
Pharmacists	4
Merchants*	29

	$\Sigma f = 60$

2. As the results appear in table 10, the largest frequency of locations of the interviewees are in Beirut

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* It formed the largest group, other than miscellaneous, with almost fifty percent of the total sample. Of these, almost half were large merchants as might be expected in a city which depends on commerce for its existence.

with over seventy eight percent of our sample so reporting. The belief that a large part of those who don't have apartments in Beirut of 21 percent have come from rural areas to the city fairly recently or because they move daily between the city - the work area - and the mountains - their residential areas.

On the other hand, not all those who own apartments in Beirut are very close to the work area. Some of them are living in the East side of the capital for example and because of the high cost of transportation and the unsafety of movement between the East and the West sides, they expressed deep interest in the project.

Table 10

Location of Respondents

Location	Frequency	Percent
In Beirut	47	78.33
Outside Beirut	13	21.66
	60	100.00

3. Table 11 appears that 83.3% of the sample interviewed are interested in owning functionalized apartments in "Galeria" while the rest are not. As a matter of fact, and as the results show, we are more concerned with those who show deep interest in the project because the purpose of this research is to satisfy the needs of the respondents

rather than to create a new demand.

Table 11

Potential Demanders

Responses	Frequency	Percent
Yes	50	83.30
No	10	16.70
	60	100.00

4. Since the "Galeria" offers functionalized apartments that serve many purpose such as apartments, "halets," clinics, offices and companies, it became inevitable to conduct interviews with those who are concerned.

The result of those findings shows that 26% of the sample need these apartments for living purpose. 43% need them for offices, clinics, and in huge size for banks and companies. 17% of the sample need them for chalets while the rest of 14% need them to be used temporarly as apartments and then to be turned into offices in the future or to be changed conversely. Table 12 reveals those findings as follows:

5. Table 13 emphasizes on the area needed by each respondent. The average area needed for the offices and apartments are estimated at 66 sq. meter with minimum of 30 and a maximum of 150.

Table 12

Type of Occupancy

Purpose	Frequency	Percent
Apartments	18	26
Offices, clinics, companies or banks	30	43
Chalets	12	17
Apartments and/or offices	10	14
	70*	100

Table 13

Expected Areas

Area/sq. meter	Frequency	Percent
30	15	21.40
40	13	18.60
50	9	12.65
75	15	21.43
100	10	14.30
125	5	7.15
150	3	4.30
	70	100.00

* The reason for the increase number of frequency is that some of the respondents need more than one element in the "Galeria" project.

6. The average price that the people are willing to pay is $564/sq. meter. Although there is a little difference in comparison to the actual price of $550/sq. meter demanded by the owners, this difference will be disguised in order to encourage new demanders. Table 14 shows the maximum and the minimum amount that the people can pay and the frequency for each.

Table 14

Expected Prices

Price/sq. meter	Frequency	Percent	Cumulative Frequency	Cumulstive Relative Frequency
$400 - $500	10	20	10	20
500 - 600	23	46	33	66
600 - 700	12	34	50	100
	50	100		

7. Most of the respondents prefer to buy these elements in the project in the first three years of selling period. The reason for this can be illustrated by the following: 26% of the sample want to buy these elements in the first year for reservation purpose. This group is called enthusiastic because they take the initiative.

34% are waiting to take the opinion of others. They prefer to buy in the second year because they want to see the response of the previous buyers.

30% prefer to buy in the third year. This group is categorized as more conservatives and they hope to select their construction elements after a long study.

10% are laggards; i.e., they prefer to buy in the fourth year. They are risk avertors and for this reason they take enough time before taking any decision. The results of this findings are shown as follows:

Table 15

Percentage of Demanders in Each Year

Demanders	Frequency	Percent
First year - 1992	13	26
Second year -1993	17	34
Third year - 1994	15	30
Fourth year- 1995	5	10
Others	-	-
	50	100

8. In determining the desired facilities, it seems that the shopping center is the facility desired most by the prospective demanders as illustrated in table 16. Cinemas come next, then the restaurant and coffee shop, while the health club and amusement center come last.

Table 16

Desired Facilities

Desired Facilities	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5	Rank 6
1. Shopping Center	20	5	3	2	12	8
2. Restaurant	10	7	10	7	10	6
3. Coffee Shop	15	7	5	7	11	5
4. Amusement Center	8	9	7	5	15	6
5. Cinema	7	10	8	10	10	5
6. Health Club	10	7	12	9	2	10
Total	70	45	45	40	60	40

B. Estimating Demand For Commercial Spaces

1. Sampling Methodology

The methodology adopted in estimating the potential demand for commercial spaces is the same one that was adopted in estimating the demand for offices and apartments. That is, the questionnaire (Appendix B) was the primary and the best available tool in which we could assess the people's needs. Because it was a substitute to the lack of recent statistical data to the project under study, and because it was meant to include an upper-class group with a high income bracket, the sampling process was as follows:

a) The selection of the frame was of prime importance.

b) The sample was based on a conventional sampling procedure.

c) A proportional sampling of 60 were drawn randomly in which 10 sampling units were drawn from each area.

2. Sampling Results

As indicated previously, the sample was chosen among people who live in luxurious areas with whom are meant to be among the higher income bracket. Some of these people are the owners of the following:

1.

Type of Business	Frequency
- Food	4
- Flowers	3
- Gifts	3
- Perfumary & Makeup	3
- Toys	3
- Sports wear	3
- Shoes	3
- Lady's wear	3
- Pharmacy	2
- Men's wear	3
- Children's wear	3
- Jewelry	3
- Silver	3
- Optition	2
- Bookstore	2

Type of Business	Frequency
- Roastry	2
- Video Cassete	3
- Carpets	2
- Candies	3
- Pastry	2
- Furniture & Appliences	3
- Textiles	2
Σf =	60

2. The survey showed the existence of an actual and potential demand for deluxe commercial spaces. Thus, 91.67% of the sampled population are willing to buy shops in "Galeria" because they think that it will be feasible in the near future while the rest of 8.33% just think the opposite because they are still afraid of the unstability in political situation.

Table 17

Potential Demanders

Response	Frequency	Percentage
Yes	55	91.67
No	5	8.33
	60	100.00

3. The average area needed for the commercial spaces are estimated at 42 sq. meter with a minimum of 30 and a maximum of 100.

Table 18

Expected Areas

Area/sq. meter	Frequency	Percentage
30	20	26.37
40	17	30.10
50	11	20.00
75	4	7.28
100	3	5.50
	55	100.00

4. The average price that the people are willing to pay is $555/sq. meter which is almost the same price ($550/sq. meter) that are demanded by the owners. Table 19 shows the maximum and the minimum amount that the people are willing to pay and the frequency for each.

Table 19

Expected Prices

Prices/sq. meter	Frequency	Percent	Cumulative Frequency	Cumulative Relative Frequency
$ 400 - $ 500	14	25	14	25
500 - 600	24	44	38	69
600 - 700	17	31	55	100
	55	100		

5. Table 20 shows also the amount of money that the people are willing to pay as key money. The average amount of key money that the people are willing to pay along with the price/sq. meter is 510 with a minimum of $400 and a maximum of $700.

Table 20

Key Money

Key money/sq. meter	Frequency	Percent	Cumulative Frequency	Cumulative Relative Frequency
$ 400 - $ 500	27	49.0	27	49.0
500 - 600	23	41.8	50	90.8
600 - 700	5	9.2	55	100.0
	55	100.0		

6. More than 75% of the prospective demanders are willing to buy their commercial shops in the first two years 14.55% in the third year while 9.09% are willing to wait for the fourth year. The reason for that can be illustrated by the following:

Since these are for commercial purpose, most of the prospective demanders are willing to buy these shops in the first two years for reservation purpose; i.e., in order to select the most suitable site. The others of less than 25% are willing to wait for the response of others or for more stable environment or to get loan. Table 21 illustrates the percentage of buyers in each year.

Table 21

Percentage of Demand in Each Year

Demanders	Frequency	Percent
First year - 1992	22	40.00
Second year - 1993	20	36.36
Third year - 1994	8	14.55
Fourth year - 1995	5	9.09
Others	-	-
	55	100.00

Earlier analysis showed that it is most likely that there will be a ready market for such facilities proposed in the center under study. What is more important is that the proposed center and facilities will have locational advantage over other facilities and centers which will give a priority in future demand. Moreover the fact that all these facilities which are very much interrelated in function and uses, will be present in one confined area, with proper parking facilities, would most likely give it further priority in future demand over other available facilities in the capital.

C. Optimal Construction Areas

The optimal construction areas for the various components of the proposed project were allocated in the light of the empirical findings, of the market survey

and the technical aspects. Both were subject to the architectural constraints imposed by the Beirut Municipality building regulation and the economic consideration. The optimal distribution of areas and the division of building according to the type of occupancy can be illustrated in tables 22 and 23 as follows:

Table 22

Division of Areas

Floor	Build Up Area/m^2	Occupied Area/m^2	Type of Construction
- IV	4400(1)	-	Garage
-III	4085(2)	2000	47 Stores & Garage
- II	4085	3270	4 Cinemas + Shops+ Amusement Center.
- I	4085	3270	80 Shops + Stores + Coffee Shop.
GROUND	3330(3)	2665	Supermarket + Shops+ Health Club.
I	3025(4)	2420	50 Shops + Stores + Restaurant
II	3330	2665	Offices + Apartments.
III	3330	2665	Offices + Apartments.
IV	3330	2665	Offices + Apartments.
V	3330	2665	Offices + Apartments.
		24285	

1. (40W * 110L)
2. (40W * 110L) - 315
3. (36W * 110L) - (7 * 45) - 315
4. (36W * 110L) - (7 * 45) - 315 - 305.

The calculation was based on the following assumptions:

a) A free area in the middle of each floor excluding last floor below ground. The area is 315 sq. meter. This area was left free as a special feature through which you see the sky.

b) Another free area of 315 sq. meter on each floor as seperation between construction spaces, elevators and stairs.

c) An area of 305 sq. meter on the first floor for the placement of escalators.

d) The occupied area is assumed to be 80% of the build up area. The other 20% will be left as a free spaces for corridors and other architectural design.

Table 23

Division of the Building According to the Type of Occupancy

Types of Occupancy	Areas/sq. meter	Percent
Total Occupied Area :	24285	100.00
Offices :	5330	22.00
Apartments :	5330	22.00
Shops and Stores :	7845	32.30
Cinemas :	2000	8.20
Coffee Shop :	425	1.75
Restaurant :	600	2.47
Supermarket :	1000	4.10
Health Club :	755	3.10
Amusement Center :	1000	4.10

D. Economic Evaluation of the Project

1. Specific Assumptions Used in Computations

Because of the interrelated components of the project, the feasibility of the study shall be taken for the project as a whole. The computations of the cash flow statements, net present value, internal rate of return and return on equity for the project are based on the following assumptions:

a) Selling Period: Usually construction is sold while still on the map; i.e., still in its construction state; however, the owners prefer to wait until they finish the project to begin selling, in anticipation of better future revenues. Therefore, four years are assumed for selling the whole construction area which will begin in 1992 to 1995.

b) Life of the Project: The project life is 13 years divided as follows:

i. Five years already elapsed, from 1983-1987, in which some construction and fixed costs have been incurred.

ii. Four years still to build and finish the project in which 25% of construction will be finished every year.

iii. Four years for selling the whole construction area 1992-1995.

c) A Stable Price Level: The base year for which all future benefits and costs are going to be discounted

or compounded is 1988. A stable price is applied for the whole selling period. Thus, those who come first will benefit from favorable location in the center, while those who wait for taking advantage of the annual interest charges on that amount will lose this advantage.

d) Value of the Land: The land was bought in 1983 for $3.3 million and it was paid 2% as a land registration fee amounted to $68 thousand; (all drawn on equity and paid in the first year, 1983). It was estimated in 1987, that the land was worth $5 million. However, taking into consideration the situation prevailed before 1987, the land barely reached 3/4 of the $5 million. The $5 million estimation of today's price can be explained by an average of 8% annual interest charges on the equity and an amount of $35 thousand paid in year 1987 as a part of construction cost. Therefore, the value of the land other than the interest incurred is around $3.5 million.

e) Interest During Construction: Interest charges accruing during construction on the money invested in the project have been added to the cost stream of the project. A 16% annual interest charges has been assumed for the construction cost and for the money used in purchasing the land. We have arrived to this figure by the following calculations:

- Cost of Equity = 18.0%
- Cost of Debt = 12.0%
- 66% of the necessary funds to the project are contributed by the owners.
- 34% are levied through banks; i.e., we have debt equity ratio of 1/2.

Therefore; r = (.34 * .12) + (.66 * .18)

r = 16.0%

f) Repayment of Principal: Repayment of principal will be in the fifth year after the loan is made and it will be closed in one year.

g) Borrowing: Borrowing will be started in year 1988 and its interest of 12% is to be paid annually.

h) Income Taxes: According to the Internal Revenue Services, the income tax is applied according to a progressive taxation. We shall assume, in our computations, that the law is applied as stipulated; i.e., 2%.

i) The Leverage Factor and the Method of Finance: It has been assumed that a huge investment like this one neither can be financed solely from interior funds in Lebanon, due to the huge depreciation of Lebanese pounds, nor it can be raised in the form of equity alone. Fortunately, the five partners, who are all based outside Lebanon, are contributing in the region of 66% of the necessary funds to the project, the other 34% are levied

through banks; i.e., the debt equity ratio is 1/2.

j) Developers Fees: It is assumed that the developers fees to be 0.7% of total construction cost and it has to be paid in the fourth year of the construction period.

2. Capital Costs of the Project

Because the major part of the construction cost has been incurred in 1987, we shall assume that 5% of the construction was done in that year having a cost of $35 thousand. The construction cost of the skeliton of the whole project is expected to have a cost of $750 thousand based on the prices of 1988, to be divided equilly over the four years construction period of 1988-1991. But the cost of finishing the project is estimated to be around $3.4 million also to be divided over the coming four years. This means that the total cost of the land together with the construction cost will be around $8.4 million on the prices of 1988 in which the distribution of the costs are divided as indicated in table 24.

3. Revenue Stream of the Project

The revenue streams of the project that are expected to be received from the sale of all elements of the construction space will be estimated according to a questionnaire findings. That is, the sales will be divided over the four years in the following percentages; 26%, 34%, 30%, and 10% for offices and apartments; and

Table 24

Capital Cost of the Project (1988 Prices)

Cost Items	$ U.S. (000)	Percent
- Cost of Land	5000(1)	59.56
- Construction Cost	2050	24.42
- Engineering, Design and Supervision	176	20.97
- Interest during Construction	1053	12.52
- Working Capital	29(2)	.35
- Pre-opening Exp.	29(2)	.35
- Developers Fees	59	.70
Total	8396	100.00

1. The cost of land other than the construction costs is estimated at 1987 prices and it includes the 5% construction costs of 1987.

2. Working capital and pre-opening expense are also included in the construction cost. Working capital is defined as the amount needed to bridge the gap between cash receipts and cash expenditures. Since nothing of the construction component will likely be sold before their completion, owners will need minimum capital requirement just to cover pre-opening expenses estimated at 0.35 of total construction cost.

40%, 36%, 15% and 9% for commercial spaces. The sales will start in year 1992 and it will end in 1995. The parking from which no revenues are expected, is considered as a special feature that attracts people to the "Galeria". Actually, for such a huge project, a parking lot is a prime necessity.

a) Revenue Analysis of Each Element of the Galeria

It is worth mentioning here that the same principle of selling the construction space is applied, whether it is an apartment, office, or commercial space.

This principle is based on two components:

i. Key money

ii. Space price

These two prices will be determined by the floor on which the office or apartment is located and the area of each. The space price depends on many factors, among them, the area in which the construction is situated and the quality of the construction, while the key money is the premium paid for getting a favorable location. Usually, space price and key money are function of:

- Accessibility and Location
- Parking
- Type of Accommodation

Fortunately, the "Galeria" has these features.

According to the owners, the space price of all floors is the same regardless of the type of unit. However, the difference is clear in the price of key money which differs between each floor as indicated in the following table:

Table 25

Maximum Prices People are Willing to Pay for Each Element

	Key Money $/m^2		Space Prices/m^2	Total Prices/m^2	
	Ground	Other	for	Price/m^2	
Type of Construct.	Floor	Floors	All Floors	G.F.	O.F.
Offices	-	-	550	-	550
Apartments	-	-	550	-	550
Stores/Shops	850	450	550	1400	1000
Supermarket/H.C.	850	-	550	1400	-
Cinema/Restaurant	-	-	550	-	550
Coffe Shop/A.C.	-	-	550	-	550

This table demonstrates the price of $550/sq. meter as it was demanded by the sampling population and the owners together. However, the key money is the only difference imposed by the owners because, as was mentioned earlier, it represents the favorable location demanded by the customers. For this reason, it was assumed that the ground floor is the most favorable location for the customers, thus the key money demanded is the highest at

this area which amounted $850/sq. meter while the key money at the other floors is $450/sq., almost the least price demanded by the customers.

Therefore, these are the expected prices for the years in which revenues will be incurred. Based on the above mentioned schedule, table 25, I have calculated the expected revenue stream as shown in tables 26 and 27.

4. Profitability Indicators

It is the most important tools in which we could test whether the project under study is feasible or not. It includes the cash flow statement, the net present value table, the internal rate of return and the return on equity tables. According to the aforementioned tables, I have calculated them based on the following:

a) Cash Flow Statement: It gives the sources and uses of funds and the surplus and deficit for each year (table 28, Appendix C). In this project, it is composed of the cost of land, the construction cost, working capital, pre-opening expenses, developer's fees and engineering design and supervision. These are the main constituents of the cash outflows part of the table. On the other hand, the cash inflows consist of revenues arrived at by deducting operating costs and overheads from the total gross revenue from one side and the drawn on equity from the other side.

Table 26

Expected Future Revenue Stream

Type of Occupancy	Price/m^2	Area/m^2	Expected Total Rev. (000)
Offices & Apartments:			
Offices	550	5330	2931.500
Apartments	550	5330	2931.500
Total			$5863.000
Commercial Spaces:			
Stores/Shops (G.F.)	1400	910	1274.000
(O.F.)	1000	6935	6935.000
Cinemas	550	2000	1100.000
Coffee Shop	550	425	233.750
Supermarket	1400	1000	1400.000
Health Club	1400	755	1057.000
Restaurant	550	600	330.000
Amusement Center	550	1000	550.000
Total			$12879.750
Total Revenue			$18742.750

* Total revenue for each element was calculated according to the area given in table 23 and its corresponding price given in table 25.

Therefore; total revenue of each element = Area/m^2 * Price/m^2.

Table 27

Expected Yearly Revenue Stream
For Each Component

Offices & Apartments

Year	% of Demanders	Revenue (000)
1	26.00	1524.380
2	34.00	1993.420
3	30.00	1758.900
4	10.00	586.300
		$5863.000

Commercial Spaces

Year	% of Demanders	Revenue (000)
1	40.00	5151.9000
2	36.36	4683.0771
3	14.55	1874.0036
4	9.09	1170.7692
		$12879.7500

Expected Revenue Stream
For All Components

Year	Total Revenue (000)
1	6676.2810
2	6676.4971
3	3632.9036
4	1757.0692
	$18742.7500

b) Debt Repayment Schedule: It shows the years in which the debt will be repaid (table 29, Appendix D).

c) Net Present Value (NPV): It represents the discounted balance between the revenue stream and the cost stream. The 1988 costs of the project elements (table 30, Appendix E) were compounded to their respective years before being discounted as a balance in the net revenue column of the net present value table. The $1.053 million, interest during construction represented in this table, is the summation of the compounded interest of all the cost items (excluding land) incurred during the construction period. According to the computations, the calculated net present value is equal to $352.48 million.

d) Internal Rate of Return (IRR): It is that discount rate that equates the present value of the expected future cash flows to the initial cost outlay of the project. The IRR (table 31, Appendix F) was computed to be 17.0% which is more than the cost of capital of the project.

e) Return on Equity (ROE): It represents that rate which equates to zero the difference between revenues on one hand, and the costs and debt repayment and equity on the other hand. In ROE (table 32, Appendix G), the equity part is discounted ($4632.8) while the others are discounted on the Present Worth Factor (P.W.F.). In this table the ROE was computed to be 17.5%.

According to the results obtained, the "Galeria" will be considered economically viable because NPV is greater than zero, IRR is greater than the cost of capital and the ROE is greater than the opportunity cost of capital. These results are summarized as follows:

1- NPV = $352.48

2- IRR = 17.0%

3- ROE = 17.5%

5. Sensitivity Analysis

The sensitivity of the investment criteria was based on two assumptions:

a) A decline of 10% of construction cost.

b) A decline of 10% of sales revenue.

The first assumption was very relevant to the cost control. That is, it was assumed that 10% of the construction cost will be declined when there is a direct close control by the owners.

The second assumption was based on the development of the second scenario, discussed previously in chapter II. It is assumed that 10% of the sales revenue will decline as a direct result of the unstability in political and economic situation.

Under these assumptions, the following results were obtained:

	NPV (000)	IRR	ROE
Assumption A:	$490.3	17.3%	18.1%
Assumption B:	-428.1	14.6	14.4

Chapter V

Conclusion

Although the feasibility of the project under study depends primarily on the actual and potential demanders, I think that it also depends on the chances involved in the multitude of economic and political factors. When the owners decided to purchase the land in 1983, their purpose was to begin excavation in the same year. The assumption that was made was to eliminate any additional and unnecessary cost on one hand and to increase the sales revenue on the other hand. The elimination of additional and unnecessary costs would be accomplished by reducing the slack period between the time at which the land was acquired and the time at which the work was started. But unfortunately, in this country, not all what is planned for will be applied immediately. Because of the vital changes in the environmental characteristics and the economic and political trends that was discussed earlier in Chapter I, the project carried forward an accumulation of costs on land amounted to $2.3 million according to 1988 rates.

On the other hand, the sales revenue that was expected during the period, 1983, was much more than the sales revenue expected for the years 1992-1995. The reason for that was illustrated in table 5, Chapter III.

This table shows that the average of sales price/square meter was around L.L. 16000/sq. meter for shops and L.L. 8000/sq. meter for offices at the time the exchange rate of the dollar was around L.L. 3.25. This means that the prices/sq. meter for shops and offices have declined from around $4900 (sales price, without the key money), to $1400 (sales price and the key money) and from around $2460 to $550 respectively.

From the above mentioned analysis, the owners had faced the most critical decision; i.e., either to continue their investment with some or no profits or to sell the land at the spot, 1987.

According to the owners and the brokers involved in this project, they all gathered on saying that the price of the land in 1987, has barely valued at 3/4 of the $5 million, the value of land.

According to the study conducted on it, I recommend the owners for adopting the project for two important reasons:

1. Under the prevailed situation and the expected increases in demand, the project has proved to be economically feasible. The net present value is positive and consequently the internal rate of return and the return on equity are greater than the cost of capital.
2. If the project has proved to be economically unfeasible,

I also recommend the owners to adopt the project because, in the sensitivity test and under the assumption B, the total loss involved is much less than the loss incurred on selling the land alone. So the project is still more favorable to be implemented.

3. The last criteria suggests that, even at the worst condition, if the total loss was equal to the loss of the land, I think that the investment should be continued. Under this criteria there are two advantages:

a) To maintain the market share that the investors enjoy.

b) To help in accelerating the dynamic movement that the economic situation requires. This point is very helpful to get rid of the recession period that has been governing the country for a very long period.

Appendix A

Galeria Complex Center
Offices & Apartments

1. Type of Business _____

_____

2. Do you own an apartment in Beirut?

Yes No

3. If Yes, where ? _____

4. Knowing that these apartments are functionalized, i.e., serving many purpose; are you interested in owning an apartment in Galeria?

Yes No

5. If Not, terminate the questionnaire.

6. If Yes, identify the purpose

_____ for residential purpose?

_____ to use it as an office, company, or bank?

_____ to use it as chalet as it is very closed to the seashore?

_____ to use it temporarily as an apartment and then turn it into office in the future?

7. How much spaces/m^2 do you think you need for this purpose?

_____ (30 m^2) _____ (100 m^2)

_____ (40 m^2) _____ (125 m^2)

_____ (50 m^2) _____ (150 m^2)

_____ (75 m^2)

8. How much money, in dollar, are you willing to pay in which you think is appropriate?

   Price/square meter _____

   Key money/square meter _____

9. Given the prices of chalets, apartments, or offices, when do you prefer to buy? (remind you that Galeria will be ready in four years' period and nothing will be sold before that period).

   _____ First year (1991)

   _____ Second year (1992)

   _____ Third year (1993)

   _____ Fourth year (1994)

   _____ Others, identify

10. What facilities would you like to find? (Rank by order)

    1. _____ shopping center
    2. _____ Restaurants
    3. _____ Amusement Center
    4. _____ Coffee shops
    5. _____ Cinemas
    6. _____ Health Clubs.

Appendix B

Galeria Complex Center
Commercial Spaces

1. Type of Business _____

2. Do you think that Galeria Commercial Center is feasible for such type of business?

   Yes ____ No ____

3. If not, do you think it will be feasible in the near future? (How long in the future)? If no why? _____

   _____

4. How much space/m^2 do you think you need for such type of business?

   _____

5. How much money, in dollar, are you willing to pay in which you think is appropriate?

   price/square meter _____

   Key money/square meter _____

6. Knowing that Galeria will be ready in four years' period, in which year, after finishing, you prefer to buy your commercial space?

   _____ First year (1991)

   _____ Second year (1992)

   _____ Third year (1993)

   _____ Fourth year (1994)

   _____ Others, identify

7. Why did you choose this year? (Choose one of the following):

_____ for reservation purpose; in order to select the best site.

_____ Waiting to see the response of others (community in general and other merchants in particular)

_____ Waiting to see the overall capacity.

_____ Waiting for stable environment (political, economical, ... etc.).

_____ For loan purpose

_____ Others, if any? _____

Table 26
Appendix C

CASH FLOW STATEMENT,1983-1995 IN(000) OF $ U.S.

CASH ITEMS	(YEARS) 1983	1987	1988	1989	1990	1991	1992	1993	1994	1995
Cash Outflows:										
Cost of Land	(3468.0)									
Construction Costs		(35.0)	(512.5)	(512.5)	(512.5)	(512.5)				
Working Capital						(29.0)				
Preopening Expenses						(29.0)				
Developr's Fees						(59.0)				
Eng.Design & supervision			(44.0)	(44.0)	(44.0)	(44.0)				
Debt Servicing:										
Interest			(16.47)	(83.52)	(150.3)	(231.12)	(231.12)			
Debt Repayment							(1926.0)			
Taxes(2%)							(2.36)	(133.53)	(72.67)	(35.14)
Total Cash Outflows	(3468.0)	(35.0)	(573.24)	(640.0)	(706.8)	(904.62)	(2159.48)	(133.53)	(72.67)	(35.14)
Cash Inflows:										
Drwn on Equity	3468.0	35.0	433.74	83.52	150.30	231.12	231.12			
Drawn on Debt			139.50	556.50	556.50	673.50				
Net Flow From Operations							6676.281	6676.797	3632.900	1757.070
Total Cash In Flows	3468.0	35.0	573.24	640.0	706.8	904.62	6907.400	6676.797	3632.900	1757.070
Cash Surplus(Deficit)	-	-	-	-	-	-	4747.920	6543.000	3560.240	1721.93
Cumulative Cash Surplus (deficit)	-	-	-	-	-	-	4747.920	11290.90	14851.14	16573.00

TABLE 29
Appendix D

DEBT REPAYMENT TABLE IN (000) OF $ U.S.

YEAR	DRAWN ON DEBT	BASIC INT.AMOUNT	DEBT BALANCE	INT.PAYMENT	DEBT REPAYMENT
1988	139.5	16.74	139.5	16.74	-
1989	556.5	83.52	696.0	83.52	-
1990	556.5	150.30	1252.5	150.30	-
1991	673.5	231.12	1926.0	231.12	-
1992	1926.0	231.12	-	231.12	1926.0

Table 30
Appendix E

NET PRESENT VALUE TABLE, 1987-1995 IN (000) OF $ U.S.

YEAR	TIME INDEX	COST OF LAND	CONSTR. COST	WORKING CAPITAL	PRE-OPEN. EXPENSE	DEVELOPER'S FEES	ENG.DESIGN &SUPERVIS.	COST STREAM	TAXES	REVENUE STREAM	NET REVENUE	P.W.F.	N.P.V.
1987	-1	5000.0						(5000.0)			(5000.0)	1.160	(5800.0)
1988	0		733.0				63.0	(796.0)			(796.0)	1.000	(796.0)
1989	1		733.0				63.0	(796.0)			(796.0)	0.862	(686.0)
1990	2		733.0				63.0	(796.0)			(796.0)	0.743	(581.0)
1991	3		733.0	52.5	52.5	107.0	63.0	(1008.0)			(1008.0)	0.641	(646.0)
1992	4								(2.36)	6676.281	6673.921	0.552	3686.000
1993	5								(133.53)	6676.497	6543.000	0.476	3115.120
1994	6								(72.67)	3632.904	3560.230	0.410	1461.118
1995	7								(35.14)	1757.069	1722.000	0.354	609.240
													$ 352.48

TABLE 31
Appendix F

INTERNAL RATE OF RETURN TABLE,1987-1995 IN (000) OF $ U.S

YEAR	TIME INDEX	COST OF LAND	CONSTR. COST	WORKING CAPITAL	PRE-OPEN. EXPENSE	DEVELOPER'S FEES	ENG.DESIGN &SUPERVIS.	COST STREAM	TAXES	REVENUE STREAM	NET REVENUE	P.W.F.(17%)	IRR(17%)
1987	-1	5000.0						(5000.0)			(5000.0)	1.170	(5850.0)
1988	0		733.0				63.0	(796.0)			(796.0)	1.000	(796.0)
1989	1		733.0				63.0	(796.0)			(796.0)	0.855	(680.6)
1990	2		733.0				63.0	(796.0)			(796.0)	0.731	(581.9)
1991	3		733.0	52.5	52.5	107.0	63.0	(1008.0)			(1008.0)	0.624	(629.0)
1992	4								(2.36)	6676.281	6673.921	0.534	3563.87
1993	5								(133.53)	6676.497	6543.000	0.456	2983.60
1994	6								(72.67)	3632.904	3560.230	0.390	1409.85
1995	7								(35.14)	1757.069	1722.000	0.333	573.426
													========
													- 6.7

IRR = 17%

YEAR		R-C-D-T	P.W.F. 17%	P.W.F. 18%	P.V. (17%)	P.V. (18%)
1983						
1987		(35.0)	1.17	1.18	(40.950)	(41.300)
1988		(796.0)	1.00	1.00	(796.000)	(796.000)
1989		(796.0)	.855	.847	(680.580)	(674.610)
1990		(796.0)	.731	.718	(581.876)	(571.700)
1991		(1008.0)	.624	.609	(629.000)	(613.450)
1992	21	4747.920	.534	.516	2535.390	2449.000
1993	97	6543.000	.456	.437	2983.600	2860.000
1994	04	3560.230	.396	.370	1409.850	1318.700
1995	69	1722.000	.333	.313	573.426	539.670
					+141.054	-162.490

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