ASSESSMENT OF ECONOMIC IMPACT

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Summary of methodological approach and Jbail specific features

The basic choice, as proposed and as retained

The report presented in phase I stressed on three main recommendations:

- That intervention should not be strictly limited to public domain but rather extend to cover both private and public domains,
- That action should not be restricted to the supply side and translate into new hotels and commercial facilities while the existing ones are often lacking profitability. It should rather address issues that could influence demand, whether from tourists (even though the reactivity of tourists can hardly be assessed) or from nationals and local inhabitants,
- That attention should be given to institutional and organizational setups that can favor cost recovery and correct misallocation of resources rather than merely aiming at specific physical achievements.

In this respect, the basic choice appeared to be between

- endorsing the trinket-type of the old city and developing its real assets independently from the future or the situation of Jbail in its general environment,
- or reintegrating the old city in the modern town and further addressing the national and regional level in order to transform Jbail from a place of passage into a place of stay and tackling the international level by elaborating on the theme " Jbeil, city of the alphabet".

For real and undisputable operational reasons, the decision was nevertheless taken to begin with the classical public domain intervention. As mentioned in the report presented in phase I, it is well known that "the « cultural heritage » project has been designed strictly on the basis of local interventions, ignoring all national level reforms", and therefore that "this deliberate approach does not at all stem from some ignorance or under-valuation of the importance of national reforms. On the contrary, its justification derives from the implicit assessment of the difficulties of implementing those reforms and nevertheless from the willingness to implement effective actions and results without waiting for the improbable results on the national level".

For those reasons, we one could add that "this pragmatic trade-off between needed national reforms that are improbable and local actions expected to be possible implies (not only) an increased role for local stakeholders" but also special care been given to the economic parameters that accompany the project in order to mitigate its negative consequences and maximize its positive and expected returns.

Intervening at the expense and for the benefit of whom? Reasons and utility of the economic assessment

If restricting intervention to public domain is obviously easier to achieve with respect to the intricacy of stakeholders' interests and without nation level reforms, it is more difficult to capture its positive results and to compensate its cost for the public entities that have to bear the cost of financing and of subsequent maintenance without addressing the intricacy of stakeholders' interests through nation level reforms.

The risks are great that the loss be restricted to the cost of the intervention and the loser be the intervening public party while the businesses and the landlords who see (or at least hope seeing) their turnover and their land values improved be the winners.

Even though the amounts at stake remain modest at the scale of the nation economy, it seemed interesting to attempt figuring out the conditions under which counterproductive effects and negative transfers could be avoided as results of the proposed project and suggesting the conditions under which and the means through which its positive impact can overcome its cost. The mere fact that the intervention is focusing on public domain implies that the bulk of the effective costs are borne by the nation's economy while the potential gains benefit to the local stakeholders.

Since "reparcellation" or "mixed development" or "incorporation" or other specific setups that could serve the purpose of capturing locally the cost of the intervention are excluded, the decisive factors in achieving the expected results end depending on the general macro-economic environment.

The CDR stressed that "the Cultural Heritage and Urban Development project has to be proved sound both economically and socially. An analysis should be conducted to assess whether the proposed investments are worth undertaking."

Outline and methodology of the assessment of economic impact of the project

In theoretical terms, the assessment of the economic impact of the "cultural heritage" project in Jbeil should successively address the evaluation of the

- Effects of direct expenditure
- Effects of project financing
- Effects of tourism enhancement
- Redistributive impact on the valuation of assets, on resource allocation and on local and public finance.

Effects of project expenditure

The effects of direct expenditure, that is the cost of the project, should be evaluated like the propagation of waves in concentric rings that go on fading along following years:

1. first the **immediate** impact of expenditure on value added in the course of studies, supervision, contracting and maintenance, over time; this can be done through the breakdown of the project along types of activities and the breakdown of each type of activity into categories of inputs,
2. second the **mediate** impact of expenditure, this can be done through the breakdown of each category of inputs into value added, imports and inputs, successively, along the Input-Output matrix of the economy, until reaching the final composition of the basic resources (value added and imports) that have been combined through the whole economic process to produce the end product of the expenditure.

The sum of the **immediate** and **mediate** impact of expenditure is called the **direct** impact of expenditure, it encompasses the effects of the sequence of industrial purchases necessitated by

the project expenditure itself and it is supposed realized over one year (since variation of stocks are generally disregarded) and is composed of value added and imports;

3. the flows of revenues (for households and public finance) generated by the direct impact of expenditure are, for a given part, used for consumption and for investment in the next year, that expenditure again generates (according to the Input-Output matrix of the economy for the corresponding expenditures) values added and imports, the former do the same for the following year and so forth, those effects that go on fading over time, will be called **induced** or **indirect** impact.

Effects of project financing

In parallel to the effects of project expenditure, one can assess the effects of project financing on the balance of payments (for the external financing) and on the treasury and budget expenditure (both for internal and external financing), and therefore on the evolution of public debt.

Effects of tourism enhancement

Since the considered project aims at enhancing tourist activity, one can try to assess the impact of the anticipated increase in tourist expenditure domestically on the economic activity.
The methodology is quite similar to that used for assessing the impact of the project expenditure.
The effects are partly direct (within the same year) and stem for direct tourist expenditure on domestic value added and on imports (as estimated through the inversion of the Input-Output matrix of the economy) and partly indirect through the subsequent effects (on value added and on imports) generated, year after year by the use of the revenues generated in the previous years.
This chain of effects can be assessed at various levels (value added, imports, balance of payments, public revenues etc.).
It is obviously useful to classify the multiple consequences of the induced activity at three main levels:

- consequences on the supply side,
- consequences on the demand side
- consequences on balance of payments

Redistributive effects

In order for the economic assessment to be complete, it should not remain restricted at the level of the effects on production and should incorporate, at each of the described stages, the redistributive effects that accompany them, whether those redistributive effects concern the **valuation of factors and assets** and influence the **allocation of resources** or the situation of **local and public finance,** at the levels of revenues and expenditure. Both series of effects induce changes in the structure of the Input-Output matrix of the economy and in the relative structure of prices.

Project expenditure, direct and indirect effects

Scenarios, types of intervention and costing

The following tables present, for each of the scenarios and each of their respective phases, the breakdown of interventions into categories of activity. All the amounts are expressed in USD.:

SCENARIO 1	A1 (Ph. A)	A1 (Ph. B)	A2	A3	A4	A5	A6	A7	A8	A9	A10	TOTAL (Sc. 1)
Structural work	137,384	40,880	3,786	0	0	8,200	0	0	0	0	60,000	**250,250**
Architectural work												
Architectural ground Level	184,077	147,115	102,508	129,568	84,080	110,075	16,814	60,010	21,360	67,949	29,095	**952,651**
Architectural façades /elevations	27,939	11,016	156,524		5,000	3,000	29,900	2,125		14,000	2,000	**251,504**
Equipment, furniture		7,520	6,900	3,000	7,720	40,100	800	1,720	1,080	3,040	2,600	**74,480**
Information centre	17,220	575,000		17,000	28,800	0	0	0	0	18,200	0	**656,220**
Electromechanical	43,000	44,000	8,100	3,000	5,100	11,600	7,500	1,100	300	18,100	6,550	**148,350**
Landscaping work	43,900	48,440	45,030	36,000	12,100	5,000	17,400	1,200	10,500	0	4,500	**224,070**
Expropriation	0	0	0	0	136,000		89,600	0	0	0	0	**225,600**
TOTAL COST	**453,520**	**873,971**	**322,848**	**188,568**	**278,800**	**177,975**	**162,014**	**66,155**	**33,240**	**121,289**	**104,745**	**2,783,125**

- Recommendations	0	0	0	0	0	57,600	0	0	0	0	0	**57,600**

TOTAL COST	**0**	**0**	**0**	**0**	**0**	**57,600**	**0**	**0**	**0**	**0**	**0**	**2,840,725**

SCENARIO 2	B1	B2	B3	B4	B5	B6	B7	B8	B9	TOTAL (Sc. 2)
Structural work	1,000	1,000	0	0	0	9,750	31,560	0	0	**43,310**
Architectural work **Architectural ground Level**	108,007	13,600	24,660	0	54,190	78,195	86,055	204,000	200,000	**768,707**
Architectural façades /elevations	1,315	1,810	1,825	0	76,606	19,110	5,462	0	0	**106,128**
Equipment, furniture	12,950	2,720	1,960	0	6,020	3,000	3,300	6,200	0	**36,150**
Information centre	0	0	0	97,200	0	0	0	0	0	**97,200**
Electromechanical	30,600	8,000	9,050	0	27,250	3,600	5,900	71,000	0	**155,400**
Landscaping work	9,600	6,900	4,320	0	9,700	0	0	4,000	0	**34,520**
Expropriation	0	0	0	0	0		0	0	0	**0**
TOTAL COST	**163,472**	**34,030**	**41,815**	**97,200**	**173,766**	**113,655**	**132,277**	**285,200**	**200,000**	**1,241,415**
Recommendations	22,000	15,000	0	0	2,500	406,660	0	0	0	**446,160**
TOTAL COST	**22,000**	**15,000**	**0**	**0**	**2,500**	**406,660**	**0**	**0**	**0**	**1,687,575**

SCENARIO 3	C1	C2	C3	TOTAL (Sc. 3)
Structural work	0	0	0	**0**
Architectural work				
Architectural ground Level	279,200	42,150	101,796	**423,146**
Architectural façades /elevations	20,000	37,950	3,780	**61,730**
Equipment, furniture	2,400	3,900	0	**6,300**
Information centre	0	0	0	**0**
Electromechanical	19,000	3,000	10,500	**32,500**
Landscaping work	14,000	0	9,310	**23,310**
Expropriation	0	0	0	**0**
TOTAL COST	**334,600**	**87,000**	**125,386**	**546,986**
- Recommendations	14,400	0	0	**14,400**
TOTAL COST	**14,400**	**0**	**0**	**561,386**

Micro-economic function of production

We propose, for each of the types of activities, the following breakdown of costs into categories of inputs. It is highly recommended that the various official entities involved in designing and contracting public works proceed to gather the necessary information to reach a detailed "function of production" with the corresponding technical factors, for each type of public works in order to allow for proper measurement of their economic impact. In the absence of such data, the table below is a rough estimate that will be used for the present exercise.

	Studies	**Supervision**	**Contracts**	Supplies	*o/w imported*	*o/w local*	Services & transfers	Labor	*o/w unskilled*	*o/w skilled*	Overheads
Structural work	**5%**	**5%**	**90%**	36%	*22%*	*14%*	9%	27%	*16%*	*11%*	18%
Architectural ground Level	**7%**	**7%**	**86%**	26%	*3%*	*23%*	13%	30%	*12%*	*18%*	17%
Architectural Façades /elevations	**7%**	**7%**	**86%**	26%	*10%*	*15%*	13%	30%	*8%*	*23%*	17%
Equipment furniture.	**5%**	**3%**	**92%**	55%	*28%*	*28%*	9%	9%	*2%*	*7%*	18%
Information center	**5%**	**5%**	**90%**	36%	*18%*	*18%*	9%	27%	*5%*	*22%*	18%
Electromechanical	**5%**	**5%**	**90%**	36%	*22%*	*14%*	9%	27%	*14%*	*14%*	18%
Landscaping work	**5%**	**5%**	**90%**	36%	*13%*	*23%*	9%	27%	*16%*	*11%*	18%
Expropriation	**2%**	**0%**	**98%**	0%	*0%*	*0%*	98%	0%	*0%*	*0%*	0%

Value added structure, jobs creation

Apart from the additional works that the consultant strongly recommends to incorporate in the project, the following table presents, in a summarized way and for each of the scenarios, the breakdown of expenditure into categories of inputs that results from the application of the above described "function of production"

Categories of inputs	**Scenario 1**	**Scenario 2**	**Scenario 3**	**Total**
Studies	156,471	79,567	37,047	273,086
Supervision	150,470	78,844	36,921	266,235
Imported supplies	303,540	105,529	28,984	438,053
Local supplies	508,645	259,088	119,684	887,417
Services & transfers	498,376	145,918	68,152	712,446
Unskilled labour	267,298	140,040	63,872	471,210
Skilled labour	447,305	215,827	97,724	760,857
Overheads	451,019	216,601	94,604	762,223
Total	2,783,125	1,241,415	546,986	4,571,526

Assuming that each category of inputs incorporates the percentages of value added and of imports[1] and the ratio of value added per yearly job shown in the following table:

	Share of value added	Share of imports	Yearly VA/job
Studies	70%	30%	12000
Supervision	60%	40%	12000
Imported suplies	10%	90%	7200
Local suplies	35%	65%	6000
Services & transfers	70%	30%	0
Unskilled labour	100%	0%	4800
Skilled labour	100%	0%	7200
Overheads	50%	50%	14400

On the basis of the above data and assumptions, the calculations lead to the following results in terms of value added and of jobs created (one unit meaning one yearly job):

Scenario	**1**	**2**	**3**	**Total VA**	**1**	**2**	**3**	**Total jobs**
Studies	140,824	71,611	33,342	245,777	6.5	2.9	1.3	11
Supervision	135,423	70,960	33,229	239,612	5.1	2.5	1.1	9
Imported suplies	60,708	21,106	5,797	87,611	5.8	2.1	0.6	9
Local supplies	381,484	194,316	89,763	665,562	44.1	24.7	11.8	81
Services & transfers	423,620	124,030	57,929	605,579				
Unskilled labour	267,298	140,040	63,872	471,210	75.8	37.0	17.2	130
Skilled labour	447,305	215,827	97,724	760,857	80.3	37.8	17.3	135
Overheads	360,815	173,280	75,683	609,779	4.1	2.0	0.9	7
Total Value added	2,217,477	1,011,171	457,338	3,685,986	221.7	109.0	50.1	381
Total imports	1,102,368	495,115	206,354	1,803,837				
Share of value added	60%	60%	62%	61%				
Share of imports	40%	40%	38%	39%				
Average VA per job					7,580	6,848	6,798	7,268

The results seem satisfactory and consistent with the amounts of value added per worker in the branch of construction as it can be estimated on the basis of official available statistics (ranging between 6800 and 7900 USD for the years 1994 and 1995)

[1] This structure of final inputs (value added and imports) should be understood as deriving from a partial input output model, restricted to the sole branch of construction.

Assessment of the supply side

Existing activities in Jbail and allocation of labor

The existing economic activity in the old souks can be summarized in the following tables

Accommodation				
Hotels		rooms	beds	jobs
	Hotel Byblos sur Mer	39	78	13
	Hotel Ahiram	25	60	10
	Motel Abichmou	5	10	2
	Sub-total	69	148	25
Others				
	Foyer St Louis (studios)	52	104	17
	Byblos Marina (chalets/ apartments)	20	40	7
	Sub-total	72	144	24
	New project	32	64	
Total		141	292	**49**

Night clubs		seats	jobs
	Zanzibar	100	4
	Hotel Ahiram	80	3
	Total		**7**

Restaurants			
	Opposite the northern city wall	seats	jobs
	Pizza Hut	150	6
	Byblos Seven Seas	60	2
	Snack Cookery	65	3
	Restaurant the King	90	4
	Fruity	40	2
	Au vieux port, upper storey:	350	14
	Au vieux port, terraces	300	12
	Au vieux port, interior	100	4
	in preparation	150	6
		1305	52
	Harbour area		
	L'Oursin (Byblos sur Mer)	225	9
	Byblos sur Mer:	130	5
	El Molino (Mexican Rest.)	85	3
	Rest. Cave d'Ahiram	150	6
	Café du Port	400	16
	Bab el Mina indoors	80	3
	Bab el Mina outdoors	120	5
	Pepe's Fishing Club	250	10
		1440	58
	Others		
	Byblos inn	40	2
	Café Fisheries	50	2
	Café Ashtar	50	2
	Restaurant and motel Abichmou	200	8
	Hotel Ahiram	140	6
	Snack Nakrouch	60	2
		540	22
	Total	3285	**131**

Shops	number	jobs
tourist related	14	14
non tourist related	33	33
closed	6	
Total	53	47

Port	boats	jobs
professional fishermen	35	35
amateur fishermen	40	0
sightseeing boats	24	48
small sightseeing boats	15	15
Total		**98**

DGA	jobs
archeologist	1
guards	3
cleaning worker	1
	5

Municipality	jobs
On the port	1
On archeological site	2
In the fossils' museum	2
	5

The number of active persons in the old town whose activity is related to tourism can therefore be summarized as follows:

	jobs	%
Hotels	49	14%
Night clubs	7	2%
Restaurants	131	38%
Shops	47	14%
Port	98	29%
DGA	5	1%
Municipality	5	1%
Total	342	100%

On the basis of a resident population of 15,000 in Jbail and with a rate of activity of 30%, activities directly related to tourism would therefore represent 7.6% of the workforce in the city.

Effects of the economic structure and leakages

Based on the 1994 and 1995 National Accounts that are available[2], calculations were done to assess the impact of an increase in final demand either at the level of each branch or at the level of the main types of final uses in the economy and mainly domestic consumption[3].

Variations	For a variation of 100 of final demand				
	global	domestic	exports	tradable goods	non-tradable goods
Of the value added in directproduction	41,4	41,5	26,6	25,4	70,8

[2] Administration Centrale de la Statistique (ACS): "L'état des comptes économiques", octobre 1997

[3] Charbel Nahas "Quel modèle de croissance économique pour la prochaine décennie" in « UNDP conference on Linking economic growth and social development in Lebanon », 11-13 January 2000, Beirut Lebanon

Of commercial margins	22,7	20,3	23,6	27,6	7,2
Of production	64,0	61,9	50,2	53,0	78,0
Of imports	36,0	38,1	49,8	47,0	22,2

The results highlight the very high level of leakages that characterizes the Lebanese economy (40% of the increase in domestic demand and 50% of the increase in exports end in imports) and that reflect in the huge deficit of its current account and the need to attract and keep very large and costly amounts of capital to cope with it.

Assessment of the demand side

Trends in tourism

Tourism is the world's fastest growing industry. After agriculture, it is expected to be the world's largest industry by 2010. It provides direct or indirect employment for 231 million people or one out of every ten workers.

Tourism accounts for 11% of all international consumer expenditures, 11.3% of all capital investment and 6.7% of all government spending. It is the world's largest tax contributor with an estimated US$800 billion in personal and corporate taxes for 1999.

The industry is experiencing steady growth. World Tourism Organisation statistics indicate that between 1950 and 1999, international tourism arrivals grew by 7% p.a. from 25 million to 663 million. Growth is forecast at about 4% per annum for the next decade[4].

In recent years tourism witnessed a rapid growth in the Middle East. Since 1995 international arrivals in this region have increased more swiftly than in any other part of the world, at a rate of roughly 60%.

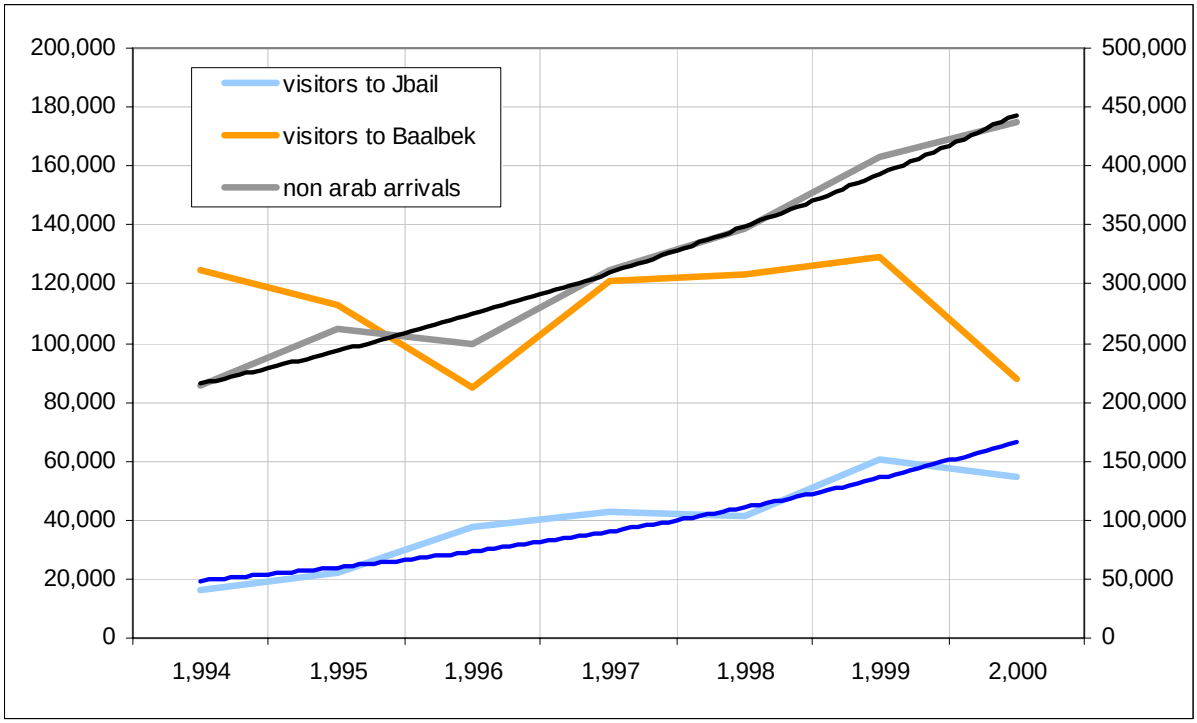
Several basic trends stand behind the evolution of tourism, among them the reduction in air transport costs, the “green sensitivity”, the change in the rhythm of work, the decrease in the age of retirement and the ageing structure of population in the rich countries.

As far as Lebanon is concerned, the available statistics on the numbers of non-Arab nationals entering the country show an increase at annual rate of 12% over the past six years. In the meanwhile, the number of visitors to the Citadel of Jbail increased at a higher pace, almost 22%.

	1,994	1,995	1,996	1,997	1,998	1,999	2,000
non-Arab arrivals	214,457	261,690	248,729	311,665	347,383	408,180	438,058
Visitors to Jbail	16,194	22,205	37,602	42,573	41,486	60,188	54,702
Visitors to Baalbeck	124,456	113,204	85,209	120,812	123,308	129,031	88,031

[4] IFC report “Lebanon - Cultural Heritage and Tourism Development Project “ on the World Bank Internet site, under “Project Development Facilities” page.

Unfortunately, we do not have any breakdown of the visitors, even by nationality. One can



presume that a significant majority are Lebanese. If one assumes that tourists account for 40% of the visitors and that all tourists who come to Jbail visit the archeological site, the yearly number of tourists who visit Jbail would be around 24,000, or 2,000 a month.
If one assumes an average expenditure by tourist of 20 USD during his visit to Jbail, the total yearly expenditure of tourists would be about 0.5 million USD. This figure is obviously low if compared to the existing supply of services in the old city and it is clear that the largest part of the income of the businesses stems from the expenditure of Lebanese.
In order to assess the share of income derived from the Lebanese and that from tourists, one could begin with the number of active persons in the old city (342) and apply to them the average of value added in the economy, that is about 13,300 dollars. The total value added would be about 4.5 million USD. Assuming that the rate of value added to expenditure for the type of activities concerned is about 65%, the annual expenditure would be about 7.0 millions USD and the share due to the tourists would not exceed 7%.

Patterns of spending of the resident population

It is worth looking at the patterns of spending of the Lebanese population as it appears from the study carried by the General Directorate of Statistics (even though the panel has been selected within greater Beirut). The table on next page presents the main results. Several facts are worth noting:

- The share of expenditure allocated to culture is quite low in Lebanon (1.4%) as compared to the corresponding levels witnessed in Europe or Northern America (between 3 and 5%).
- The share of expenditure allocated to culture is almost constant among the various classes of revenues.
- The total amount allocated to visits of museums is insignificant (0.5 million USD as a whole).
- Expenses on restaurants amount to 2.5 times the cultural expenses (590 millions USD for the former and 235 millions USD for the latter) and show a high elasticity (2.2).

All those features explain the overwhelming importance of internal tourism in Jbeil which is much more appreciated as a picturesque than a cultural place.

	Class of yearly income by household												
From (millions LBP)	0	6,000	9,600	14,400	19,200	28,800	38,400	total					
To	6,000	9,600	14,400	19,200	28,800	38,400							
Repartition of													
households	10%	16%	20%	15%	18%	9%	13%	100%					
persons	6%	14%	20%	16%	21%	10%	14%	100%					
units of consumption (UC)	6%	14%	19%	16%	21%	10%	14%	100%					
Yearly expenses per household									**total (billions)**	Per household	Per head	Per UC	Value-elasticity
Audiovisual equipment	43.7	82.1	97.1	88.8	125.5	88.6	175.1	102.7	**86**	102.7	23.4	32.4	0.463
Maintenance of equipment	5.6	0.9	4.3	4.8	3.6	5.2	18.7	5.7	**5**	5.7	1.3	1.8	
Books, magazines, papers	27.9	31.2	58.0	97.9	121.9	256.5	278.9	113.5	**96**	113.5	25.9	35.9	1.298
Audiovisual accessories	9.6	15.2	19.6	105.4	44.2	47.9	49.9	41.3	**35**	41.3	9.4	13.0	0.726
Days out, movies, shows	7.5	23.4	66.0	152.4	166.4	210.0	534.9	156.4	**132**	156.4	35.7	49.4	1.619
Total revenue	3,822.0	7,648.0	11,532.0	16,315.0	23,113.0	32,521.0	75,017.0	22,842.5	**19,226**	22,842.5	5,214.1	7,215.7	
Total expenses	8,665.8	14,349.9	20,687.2	24,675.4	31,827.4	41,960.6	71,301.2	29,333.5	**24,689**	29,333.5	6,695.8	9,266.2	
Cultural expenses	94.3	152.8	245.0	449.3	461.6	608.2	1,057.5	419.6	**353**				
Restaurants and hotels	26.5	94.5	181.9	339.2	631.0	783.6	5,983.6	1,031.1	**868**	1,031.1	235.4	325.7	2.204
% Cultural expenses	1.1%	1.1%	1.2%	1.8%	1.5%	1.4%	1.5%	1.4%	1.4%				
% Restaurants and hotels	0.3%	0.7%	0.9%	1.4%	2.0%	1.9%	8.4%	3.5%	3.5%				

Modeling of impact

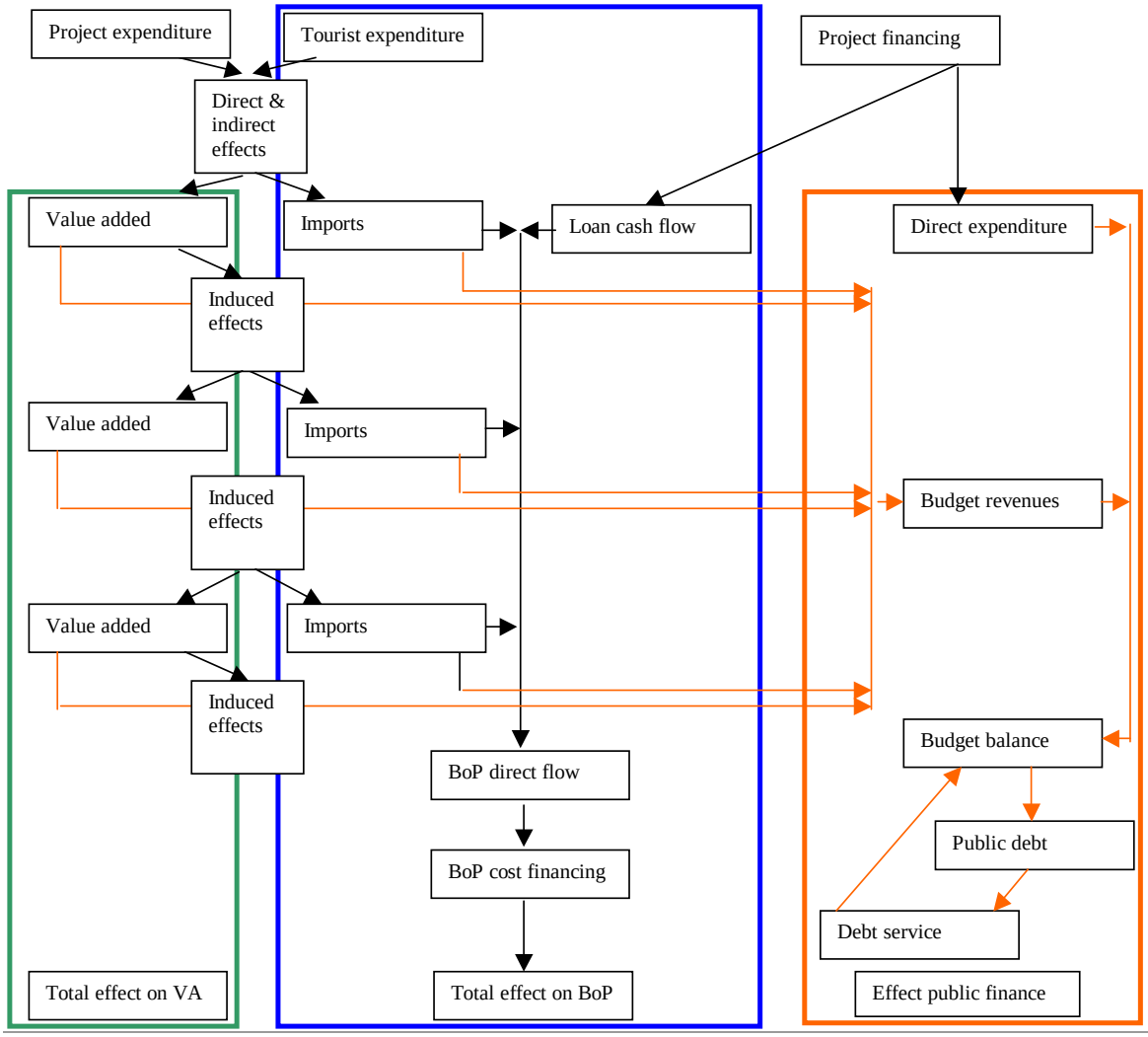
Need for modeling Tourism Impacts

The simple method of analysing the effects of direct expenditure, already presented above, covers only the direct and, to the extent possible, the indirect effects of project expenditure. It necessarily omits the induced economic effects that are associated with the series of local spending flows that originate with the incomes generated at each industrial stage. It omits also the effects of the tourists' expenditure.

A clear methodology is therefore needed to measure the economic impacts not only of construction activity but also of tourism and of public borrowing and expenditure. The traditional financial approach to project evaluation cannot cover that scope and both the CDR and the World Bank ask for more. Lebanon also clearly needs more because the consistent measures of the economic impacts of projects would be a major contribution to the decision making process in the country.

Macro-economic function of production, simplified Input-Output model

In order to serve the above-mentioned objectives, the idea was to assess the economic impacts of the project according to a simplified Input-Output model, summarized in flow-chart below. The model has been carried over 25 years, no inflation was applied and Net Present Values were calculated at a constant discount rate of 8% in order to allow for synthetic comparisons of the main variables under the various scenarios.



It consists of three main modules:

- Production and generation of value added through immediate, mediate and induced effects of both project and tourist expenditure,
- Effects on the balance of payments deriving from the flow of the loan, from tourists' expenditure and from the induced effects of both project and tourist expenditure; and since the result of those basic external flows can generate a surplus or a deficit in the external current account of the country, provision has to be made for the revenue or cost resulting from that surplus or deficit,
- Effects on public finance through the part of the cost of the project that is locally financed, the cost of servicing the loan, the revenues generated by the economic activity generated by the project and by the tourists' expenditure; and since the result of those basic flows can generate a surplus or a deficit in the public accounts, provision has to be made for the revenue or cost resulting from that surplus or deficit.

Unavailable needed data and hypotheses for modeling

In spite of any merit it could present, it is obvious that the approach described below clearly lacks accuracy.

In this respect, there is no need to stress the importance for the Lebanese authorities to gather reliable information not only on tourism and construction projects but also on the various branches of the economy through direct knowledge of sectoral practices. This would allow for a more precise specification of the modules of the model, whether at the level of expenses or industrial intermediate consumption or allocation the value added etc.

In particular it has become urgent to rationalize public expenditure, the experience of the past years having clearly shown that the magnitude of leakages could invert the expected positive effects of public spending and could lead to amplified negative effects both at the level of external and public accounts.

Basic assumptions and scenarios

The impact of the project has been tested against two sets of variables:

a) The level of increase in tourist expenditure (not only in Jbeil but in the country as a whole[5]) that can be considered due to the implementation of the project. Three scenarios were considered:

- A **pessimistic** scenario, according to which yearly tourist expenditure would increase by 200,000 USD and further increase at a rate of 2%, reaching 250,000USD after 10 years.
- A **median** scenario, according to which yearly tourist expenditure would increase by 400,000 USD and further increase at a rate of 5%, reaching 650,000USD after 10 years.
- And an **optimistic** scenario, according to which yearly tourist expenditure would increase by 600,000 USD and further increase at a rate of 10%, reaching 1,500,000USD after 10 years.

If we assume that the average daily tourist expenditure amounts to 80 USD, the scenarios assume respectively 2500, 5000 and 7500 more days spent by tourists.

b) The type of macro-economic structure that would be prevailing in the country over the study period. Two cases have been considered:

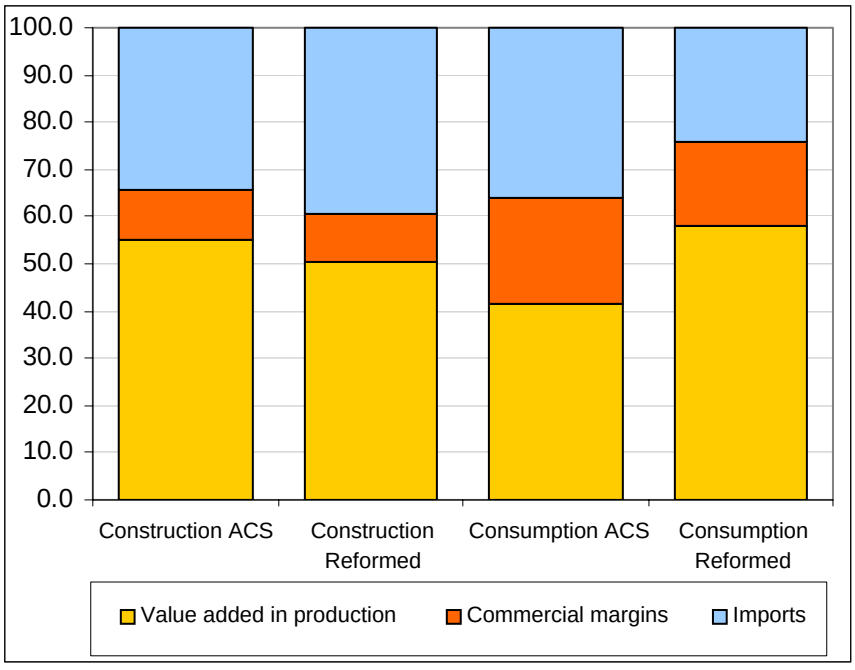
[5] The effects that are considered are not restricted to Jbeil since they stem from the global input output structure of the economy. It remains that the direct effects would probably be concentrated in the city. Any attempt to realize a significant part of the benefits locally needs to transform Jbeil from a place to stop into a place to stay since most of tourist expenditure is related to accommodation.

- The existing situation as assessed by the **ACS**, as far as the input output matrix is concerned and the prevailing structure of fiscal revenues
- A **reformed** situation in which the share of imports deriving from expenditure in the branch of construction and from domestic consumption would decrease by almost 10%.

These two sets of variables have been cross tabulated as if they were independent. That is obviously an over simplification. It is well known that tourist inflow and expenditure is correlated with the level of the real effective rate between the countries of origin of tourists and the host country on one hand and the competing destinations on the other hand, even though the level of correlation is disputed among studies. The extreme over valuation of the real effective rate in Lebanon (an increase from 100 to almost 200 between 1992 and 2001) is clearly a major impediment to the increase of tourist inflow and, in the same time, a major illustration of the imbalances of the macro-economic environment in the country.

The following table and graph expose the economic variables.

Expenditure Economic structure	Construction ACS	Construction Reformed	Consumption ACS	Consumption Reformed
Value added in production	55.1	65.0	41.4	58.0
Commercial margins	10.7	10.0	22.7	18.0
Imports	34.2	25.0	36.0	24.0
Total	100.0	100.0	100.0	100.0



Six cases have therefore been studied:

tourism macro economic structure	optimistic As per ACS	median As per ACS	pessimistic As per ACS	optimistic Reformed	median Reformed	pessimistic Reformed
% of construction wages transferred abroad	80%	80%	80%	80%	80%	80%
% of revenue spent	90%	90%	90%	90%	90%	90%
Cost of the project	4,571,526	4,571,526	4,571,526	4,571,526	4,571,526	4,571,526
Cost of maintenance as % of cost	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
share of local financing	18%	18%	18%	18%	18%	18%

interest rate on loan	7%	7%	7%	7%	7%	7%
1st year of repayment	12	12	12	12	12	12
last year of repayment	15	15	15	15	15	15
basic increment in tourist expenditure	600,000	400,000	200,000	600,000	400,000	200,000
rate of increase of tourists expenditure	10%	5%	2%	10%	5%	2%
cost of financing deficit in BoP	10%	11%	12%	9%	10%	11%
interest rate on public debt	16%	16%	16%	14%	14%	14%
average tariff rate	20%	20%	20%	24%	24%	24%
Ratio of remaining taxes/GDP	7%	7%	7%	24%	24%	24%

Results on production

The model leads to the following results (calculated as the net present values in USD over 25 years in 2002 USD dollars, with 0 inflation and a uniform discount rate of 8%) as far as production is concerned:

tourism	optimistic	median	pessimistic	optimistic	median	pessimistic
macro economic structure	As per ACS	As per ACS	As per ACS	Reformed	Reformed	Reformed
Value Added directly due to construction	2,825,000	2,825,000	2,825,000	3,274,000	3,274,000	3,274,000
Value Added induced by construction	2,597,000	2,597,000	2,597,000	4,489,000	4,489,000	4,489,000
Total Value Added for construction	5,422,000	5,422,000	5,422,000	7,763,000	7,763,000	7,763,000
Value Added directly due to tourists	12,532,000	4,019,000	1,372,000	15,132,000	4,853,000	1,657,000
Value Added induced by tourists	10,611,000	3,547,000	1,232,000	18,744,000	6,321,000	2,204,000
Total Value Added for tourists	23,143,000	7,566,000	2,604,000	33,876,000	11,174,000	3,861,000
Total Value Added	28,565,000	12,987,000	8,026,000	41,639,000	18,937,000	11,624,000

The multiplier of value added over project expenditure varies as follows:

	Tourist inflow		
Economic structure	optimistic	median	pessimistic
as per ACS	6.2	2.8	1.8
reformed	9.1	4.1	2.5

The slight change in the economic structure increases the multiplier of value added by a factor of 1.5, while multiplying tourist expenditure in the tenth year by 6 increases the multiplier of value added by a factor of 3.5.

Results on trade balance

tourism	optimistic	median	pessimistic	optimistic	median	pessimistic
macro economic structure	As per ACS	As per ACS	As per ACS	Reformed	Reformed	Reformed
Imports directly due to construction	-2,062,000	-2,062,000	-2,062,000	-1,613,000	-1,613,000	-1,613,000
Imports induced by construction	-1,909,000	-1,909,000	-1,909,000	-1,961,000	-1,961,000	-1,961,000
Total imports for construction	-3,970,000	-3,970,000	-3,970,000	-3,573,000	-3,573,000	-3,573,000
Imports directly due to tourists	-9,210,000	-2,954,000	-1,008,000	-6,609,000	-2,120,000	-724,000
Imports induced by tourists	-7,799,000	-2,607,000	-905,000	-8,187,000	-2,761,000	-963,000
Total imports for tourists	-17,009,000	-5,560,000	-1,914,000	-14,797,000	-4,881,000	-1,686,000
Total imports	-20,979,000	-9,530,000	-5,884,000	-18,370,000	-8,454,000	-5,260,000

Imports are always very high as compared to the project expenditure. The multiplier of imports over project expenditure varies as follows:

	Tourist inflow		
Economic structure	optimistic	median	pessimistic
as per ACS	-0.87	-0.87	-0.87
reformed	-0.78	-0.78	-0.78

The change in the economic structure reduces the multiplier of imports while it remains unaffected by the level of tourism expenditure.

Results on balance of payments

tourism	optimistic	median	pessimistic	optimistic	median	pessimistic
macro economic structure	As per ACS	As per ACS	As per ACS	Reformed	Reformed	Reformed
Amount of loan	3,748,651	3,748,651	3,748,651	3,748,651	3,748,651	3,748,651
Net flow of loan	-2,965,183	-2,965,183	-2,965,183	-2,965,183	-2,965,183	-2,965,183
Resulting flow on BoP	917,000	-2,404,000	-3,350,000	3,526,000	-1,327,000	-2,725,000
Cost of financing BoP	-636,000	-6,026,000	-9,662,000	3,219,000	-2,496,000	-5,972,000
Total impact on BoP	281,000	-8,431,000	-13,012,000	6,745,000	-3,824,000	-8,698,000

The results at the level of the balance of payments are extremely sensitive both to the economic structure and to the inflow of tourists.
It is worth noting first that the prevailing economic structure in Lebanon generates very negative effects on the balance of payments, whether at the level of the direct effects of construction or tourism expenditure or at the level of their indirect and induced effects.
The level of tourist inflow needed to generate positive effects on the balance of payments are very high.
The multiplier of the external balance over project expenditure is as follows:

	Tourist inflow		
Economic structure	optimistic	median	pessimistic
as per ACS	0.06	-1.84	-2.85
reformed	1.48	-0.84	-1.90

Under the prevailing economic structure, it is only if the most optimistic scenario in terms of tourist inflow is realized that the effect on external balance is equilibrated. Under the "reformed structure" also, the median scenario is not enough to reach equilibrium.
Nevertheless, the "reform" of the economy improves the effect on the balance of payments, under any of the scenarios of tourist inflow, by an amount equivalent to the project expenditure.

Impact on public finance

tourism	optimistic	median	pessimistic	optimistic	median	pessimistic
macro economic structure	As per ACS	As per ACS	As per ACS	Reformed	Reformed	Reformed
Public revenues	6,195,000	2,815,000	1,739,000	14,402,000	6,574,000	4,052,000
Direct budgetary expenses	-4,886,000	-4,886,000	-4,886,000	-4,886,000	-4,886,000	-4,886,000
Debt service	-6,069,000	-15,938,000	-20,482,000	21,433,000	4,550,000	-3,067,000
Total budget expenditure	-10,955,000	-20,825,000	-25,368,000	16,547,000	-336,000	-7,953,000
Impact on Treasury balance	-3,049,000	-16,298,000	-21,918,000	32,660,000	7,949,000	-2,190,000
Impact on budget balance	-4,760,000	-18,009,000	-23,629,000	30,949,000	6,238,000	-3,901,000
Induced effect on public debt in year 2026	10,089,000	42,046,000	56,124,000	-79,934,000	-18,742,000	7,433,000

The results at the level of public finance are also extremely sensitive both to the economic structure and to the inflow of tourists.
It is worth noting first that the prevailing economic structure in Lebanon generates very negative effects on public finance. The level of tourist inflow needed to generate positive effects on public finance are very high.

The multiplier of the impact on balance over project expenditure is as follows:

Economic structure	Tourist inflow optimistic	median	pessimistic
as per ACS	-1.04	-3.94	-5.17
reformed	6.77	1.36	-0.85

Under the prevailing economic and tax structure, even the most optimistic scenario in terms of tourist inflow still generates deficit in public finance and a significant increase in public debt.. Under the "reformed structure" also, halfway between the pessimistic and the median scenarios, the effect on public finance becomes even.

Sensitivity

Sensitivity of results has been tested according to the two main sets of variables:

- First, against change in the economic structure, in each of the three cases envisaged for the level of tourist inflow and in an average case. Value added increases by 46%, imports decrease by 11% and public revenues increase by 133%, irrespective of the level of the inflow of tourists. Impact on the balance of payments, on treasury balance and on public debt is considerable in all cases but depends also on the inflow of tourists.
- Second, against change in the level of tourist inflow, by comparing the optimistic and the pessimistic scenarios, for both cases of economic structure envisaged and for an average case. Value added, imports and public revenues increase by 256%, irrespective of the economic structure. The positive impact of a better inflow of tourists on the balance of payments, on treasury balance and on public debt is largely amplified if the economic structure is reformed.

Senitivity	To economic structure				To tourist inflow		
tourism	optimistic	median	pessimistic	*average*	*opt/pess*	opt/pess	opt/pess
macro economic structure	Ref/ACS	Ref/ACS	Ref/ACS	*Ref/ACS*	*average*	ACS	Modifiée
Total Value Added	46%	46%	45%	*45%*	*258%*	256%	258%
Total imports	-12%	-11%	-11%	*-11%*	*251%*	257%	249%
Total impact on BoP	2298%	-55%	-33%	*737%*	*-155%*	-102%	-178%
Public revenues	132%	134%	133%	*133%*	*256%*	256%	255%
Total budget expenditure	-251%	-98%	-69%	*-139%*	*-212%*	-57%	-308%
Impact on Treasury balance	-1171%	-149%	-90%	*-470%*	*-907%*	-86%	-1171%
Impact on budget balance	-750%	-135%	-83%	*-323%*	*-544%*	-80%	-750%
Induced public debt in 2026	-892%	-145%	-87%	*-375%*	*-693%*	-82%	-892%

Internal redistributive effects: property values, taxes and subsidies

From a theoretical point of view, the model described anove should also integrate various redistributive effects. Their importance could be crucial both at the social level and at the level of resource allocation. One could even say that this level might be the most sensitive in urban interventions.

The redistributive effects can take several channels; for matters of convenience, they can be grouped under two categories: taxes and subsidies on one hand and assets valuation (real estate and related rights) on the other. Both of them are highly dependent on the regulatory framework that prevails at the level of the country and the specific intervention area.

In practical terms however, considering the specific case of the old town in Jbail and the specific type of intervention that has been retained, one can assume that those effects would

INTRAMUROS OWNERSHIP DISTRIBUTION		
Property Ownership	**Area**	**%**
	m^2	
DGA Properties *	30000	29.67%
Public Ownership	7500	7.42%
Listed Buildings	12500	12.36%
Municipal Ownership	100	0.10%
Religious Ownership (Christian Waqf)	19000	18.79%
Religious Ownership (Muslem Waqf)	9000	8.90%
Private Ownership	23000	22.75%
TOTAL	101100	100.00%

* Area of archaeological site is not included

remain minimal. Intervention is taking place on existing public domain and most of the parcels are either public or waqf property or subject to very strict building and use regulations that allow for very little changes.