

2.4 ECONOMIC AND FINANCIAL EVALUATION

1. DATA OF ECONOMIC/FINANCIAL ANALYSIS

1.1 ECONOMIC INDICATORS

The following table shows the key indicators for the estimation of regional income of the tri-provinces.

TABLE 2-46 ECONOMIC INDICATORS

YEAR	1985				1986				1987				1988			
	ii				ii				iii				ii			
Nominal Growth Rate of GDP	5.2				5.5				11				14.3			
Real Growth Rate of GDP	3.2				3.5				7.1				8.5			
GDP Deflator (Annual Rate)	2				2				3.9				5.8			
GDP Deflator (1972=1.00)	278.5				284				295.1				312.2 iii			
Growth Rate of Population	2.4				2.3 iii				2.3 iii				2.3 iii			
Growth Rate of Per Capita GDP	0.4 iii				0.3 iii				1.6 iii				3.5 iii			

Source : i: Bank of Thailand Monthly Report, Apr. 1988
 ii: The Nation, Aug. 18, 1988
 iii: Study Team

1.2 NUMBER OF EMPLOYEE

Number of employment created by the tourism development is estimated by the following method.

1) PRODUCTIVITY OF EMPLOYEE BY INDUSTRIAL SECTOR

The productivity of employee by industrial sector is estimated as following table.

The annual growth rate of the productivity is expected as 2.4 percent which is the same rate of the average growth rate of per capita GNP (real-base) from 1982 to 1986.

TABLE 2-47 PRODUCTIVITY OF EMPLOYMENT

YEAR	1983	1984	1985	1986	1987	1988
Agriculture	11.7	10.6	11.8	11.9	12.9	307.9
Min. & Quarr.	325.0	181.8	302.4	24,409.0	275.7	110.7
Manufacturing	95.6	98.8	90.4	93.5	99.1	100.0
Construction	92.1	99.0	73.8	78.1	89.6	258.8
Elec. & Water	153.4	144.2	282.5	256.0	231.7	198.2
Trans. & Comm.	137.8	161.8	158.5	164.6	177.4	91.8
Commerce	75.6	82.2	69.3	74.3	82.2	102.6
Service	71.9	84.4	83.7	85.5	91.8	

Note: Thousands of Bt

Source: Estimated by the study team based on "Statistical Year Book Labour Statistics 1987"

2) REGIONAL INCOME GENERATED BY THE TOURISM DEVELOPMENT

Additional value added generated by the tourism development is calculated by the following formula.

$$(\text{Additional Values Added}) = \sum_{i=1}^n (\text{Tourist Expenditure}) \times \alpha_i \times r_i$$

where

α_i : coefficient rate of production value generated by the tourist expenditure in i industrial sector

r_i : rate of value added out of total production value in i industrial sector

TABLE 2-48 α_i AND r_i BY INDUSTRIAL SECTOR

Sector	α_i	r_i
Agriculture	0.0694	0.8018
Mining & Quarrying	0.0015	0.9000
Manufacturing	0.2904	0.3616
Construction	0.0043	0.4115
Electric & Water	0.0322	0.4384
Transportation & Communication	0.0728	0.5491
Commerce	0.0179	0.8321
Service	0.9318	0.6860

Source: Input/Output Table of Thailand, 1980

Additional value added by sector is estimated as following table.

TABLE 2-49 EFFECT ON REGIONAL INCOME

YEAR	1987	1991	1996	2001
Agriculture	396.5	866.0	1,284.0	1,804.4
Mini. & Quarr.	9.4	20.5	30.4	42.8
Manufacturing	747.6	1,632.9	2,421.1	3,402.5
Construction	12.5	27.2	40.3	56.7
Elec. & Water	100.4	219.3	325.1	456.9
Trans. & Comm.	284.4	621.3	921.2	1,294.6
Commerce	1,062.0	2,319.7	3,439.4	4,833.5
Service	4,551.6	9,941.8	14,740.7	20,715.7
Total	7,164.3	1,564.7	23,202.3	32,607.1
Increase (agst 1987)		8,484.3	16,038.0	25,442.8

Not: Constant 1988 Price
Million Bt

As a result of the analysis, number of employee created is calculated as the regional income divided by the productivity of employment. The results are shown in table 5.1.7 of Volume 2.

1.3 DEDUCTION RATIO

The deduction ratio for the estimation of foreign exchange earning is calculated by the following formula.

$$(\text{Deduction Ratio}) = \sum_{i=1}^{180} \alpha_i \times IM_i$$

where

α_i : coefficient ratio of production value generated by the tourist expenditure in i industrial sector.

IM_i : rate of import value out of the production value in i industrial sector

The deduction ratio is calculated at 17.28 percent using the formula.

As for Songkhla/Hat Yai and Surat Thani, the deduction ratios are calculated at 13.30 percent and 25.40 percent respectively.

1.4 TOURIST EXPENDITURE

The following table shows the tourist expenditure in Phuket in 1985

TABLE 2-50 TOURIST EXPENDITURE IN 1985

Contents	Country of Residence		International	
	Thai Tourist		Tourist	
	Number	(%)	Number	(%)
Expenditure/Baht/Person/day(A)	435.36	100.00	958.59	100.00
- accommodation	78.19	18.00	200.37	21.00
- food	99.78	22.90	214.00	22.30
- transportation	49.31	11.30	93.35	9.70
- shopping	116.74	26.80	212.33	22.20
- entertainment	42.11	9.70	113.56	11.80
- others	49.23	11.30	124.98	13.00

Source : TAT

Considering the construction boom of luxurious hotels in Phuket, the expenditures for accommodation and food seem to be quite low. In this study, these two expenditures are revised.

TABLE 2-51 NO. OF ROOMS AND AVERAGE ROOM RATE

Class	No. of Rooms	Average Room Rate
High	4,723	Bt 1,689.4
Low	3,216	Bt 266.0
Total	7,939	Bt 1,112.8

Source : List of Hotels and Bangalows in Phuket, TAT

Number of Tourists in 1987

Foreign	399,000
Thai	256,000

The revised accommodation expenditure is calculated as follows.

$$X : Y = 200.37 : 78.19$$

$$\frac{\text{No. of (Foreign Tourists) X + (No. of Thai Tourists) Y}}{\text{(Total Number of Tourists)}} = 1112.8 X \alpha$$

where

X : Accommodation Expenditure of Foreigner in 1987

Y : Accommodation Expenditure of Thai in 1987

α : Ratio for the calculation of average room rate

In this study the ratio is set at 0.75.

High season (6 month) - full rate

Low season (6 month) - half rate

X = 1097

Y = 428

As to food, using the same ratio to accommodation (87/85), the figures of the food expenditure in 1987 are given.

As a result of the revision, the tourist expenditures by category and by tourist origin are shown in Table 2-53.

TABLE 2-52 TOURIST EXPENDITURE (1987)

Category	Thai		Foreigner	
		(%)		(%)
Accommodation	428	34.6	1,097	38.9
Food	546	44.3	1,172	41.4
Transportation	50	4.0	95	3.4
Shopping	119	9.6	216	7.7
Entertainment	43	3.5	115	4.1
Others	50	4.0	127	4.5
Total	1,236	100.0	2,822	100.0

1.5 MULTIPLIER

The multiplier for the calculation of the indirect benefit is calculated by the following formula.

$$(\text{Multiplier}) = \sum_{i=1}^{180} \sum_{j=1}^6 \alpha_{ij}$$

where,

α_{ij} : coefficient ratio of production value generated by the tourist expenditure in i industrial sector and in j expenditure category.

1.6 OPERATING COST

The cost structures of existing facilities are shown in the following table.

TABLE 2-53 PERCENTAGE SHARE OF THE COSTS OUT OF THE REVENUE

	Hotel *				Golf Course**		% Convention Center***
	A	B	C	D	E	F	
Material Cost	13.5	28.4	18.0		11.9	24.4	6.1
Personnel Cost	12.9	16.5	17.0	50.3	31.7	39.3	17.4
Heat & Light Expenses	4.3	7.1	10.0		4.3	12.3	5.2
Depreciation	1.7	5.8	13.0		4.2	5.3	
Maintenance Cost	2.3	6.6	8.0		3.6	3.1	43.6
Tax (except. income tax)	1.0	0.0	10.0		2.6	-	-
Miscellaneous Cost	20.8	5.0	10.0	25.8	31.9	13.8	8.3
Total	56.5	78.6	86.0	76.0	90.2	98.2	94.0
Ave. Occupancy Ratio	58	41	60	60	-	-	-

Source : * A - D Interview survey to the hotelier in Phuket

E "World Hotels 1000", Hotel Almanac

** Bang Pra Golf Course and Kao Yai Golf Course

*** "San Francisco Convention Center"

