

Philippines

“Mactan (Cebu) International Airport Development Project”

Project Summary

Borrower	Government of Republic of the Philippines
Executing Agency	Department of Transportation and Communications (DOTC)
Exchange of Notes	March 1991
Date of Loan Agreement	July 1991
Final Disbursement Date	October 1998
Loan Amount	¥10,790 million
Loan Disbursed Amount	¥10,578 million
Procurement Conditions	General Untied
Loan Conditions	Interest Rate: 2.7% Repayment Period: 30 years (10 years for grace period)
Project Commencement	November 1991 (start of consulting service)
Project Completion	March 1997 (end of the main construction)

Other Related Project:

Engineering Services for Cebu (Mactan) International Airport Development Project
(L/A signing in January 1988, loan amount of ¥326 million)

<Reference>

(1) Currency: Philippine Peso

(2) Exchange Rate:

Year		1990	1991	1992	1993	1994	1995	1996	1997
Rate	Peso/US\$	24.31	27.48	25.51	27.12	26.42	25.71	26.22	29.47
	Yen/US\$	144.79	134.71	126.65	112.20	102.21	94.06	108.78	120.99
	Yen/Peso	6.0	4.9	5.0	4.1	3.9	3.7	4.1	4.1
CPI		100.0	118.7	129.3	139.1	151.7	164.0	177.8	186.8

(IFS annual average market rate)

(3) Rate at the time of appraisal: 1 peso = ¥6.8 (1990)

(4) Fiscal Year: January ~ December

(5) Abbreviations:

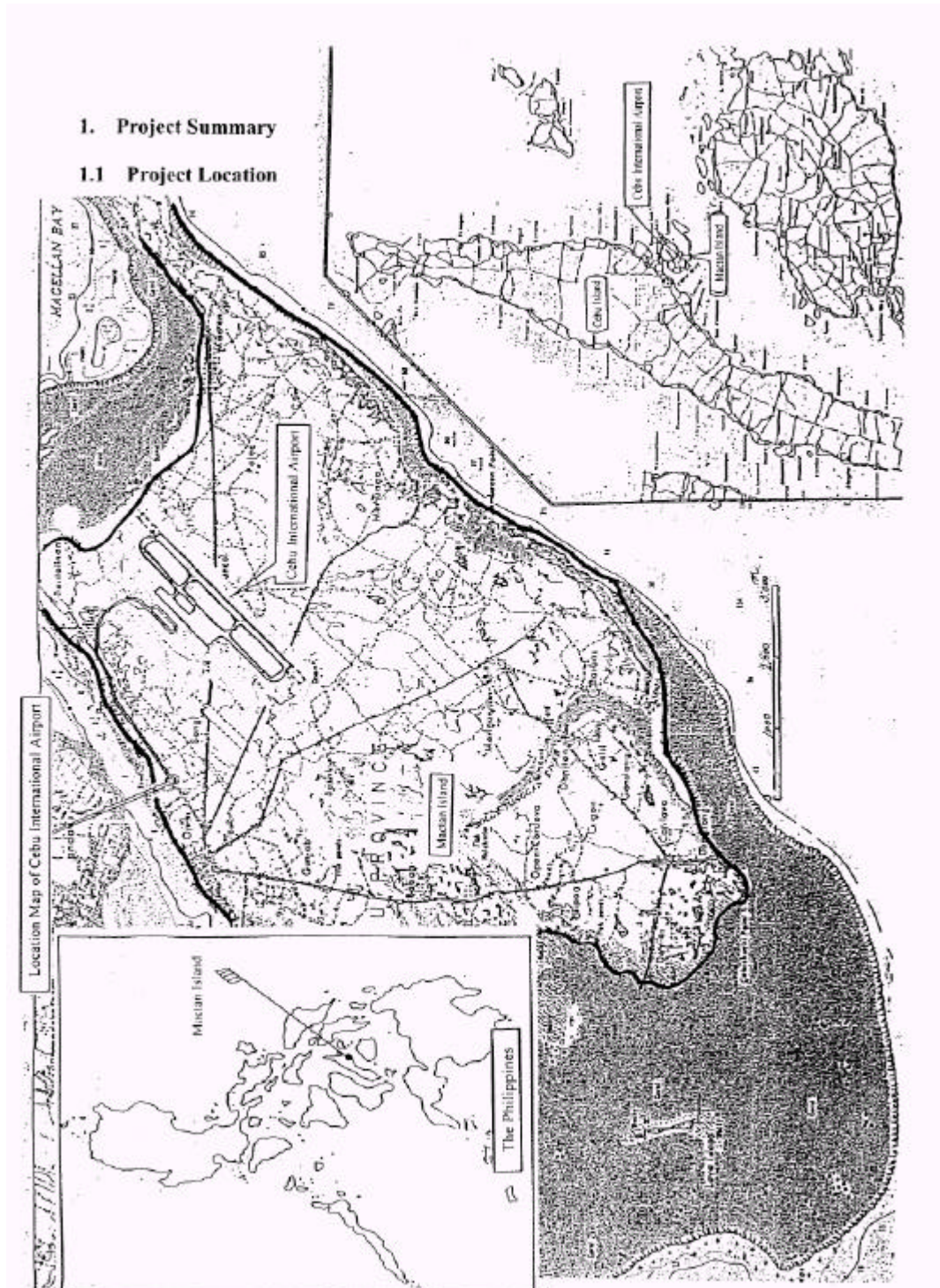
DOTC: Department of Transportation and Communications
PTA: Philippine Tourism Authority
MEPZ: Mactan Export Processing Zone
MCIAA: Mactan International Airport Authority
USAID: U.S. Agency for International Development

(6) Terminology:

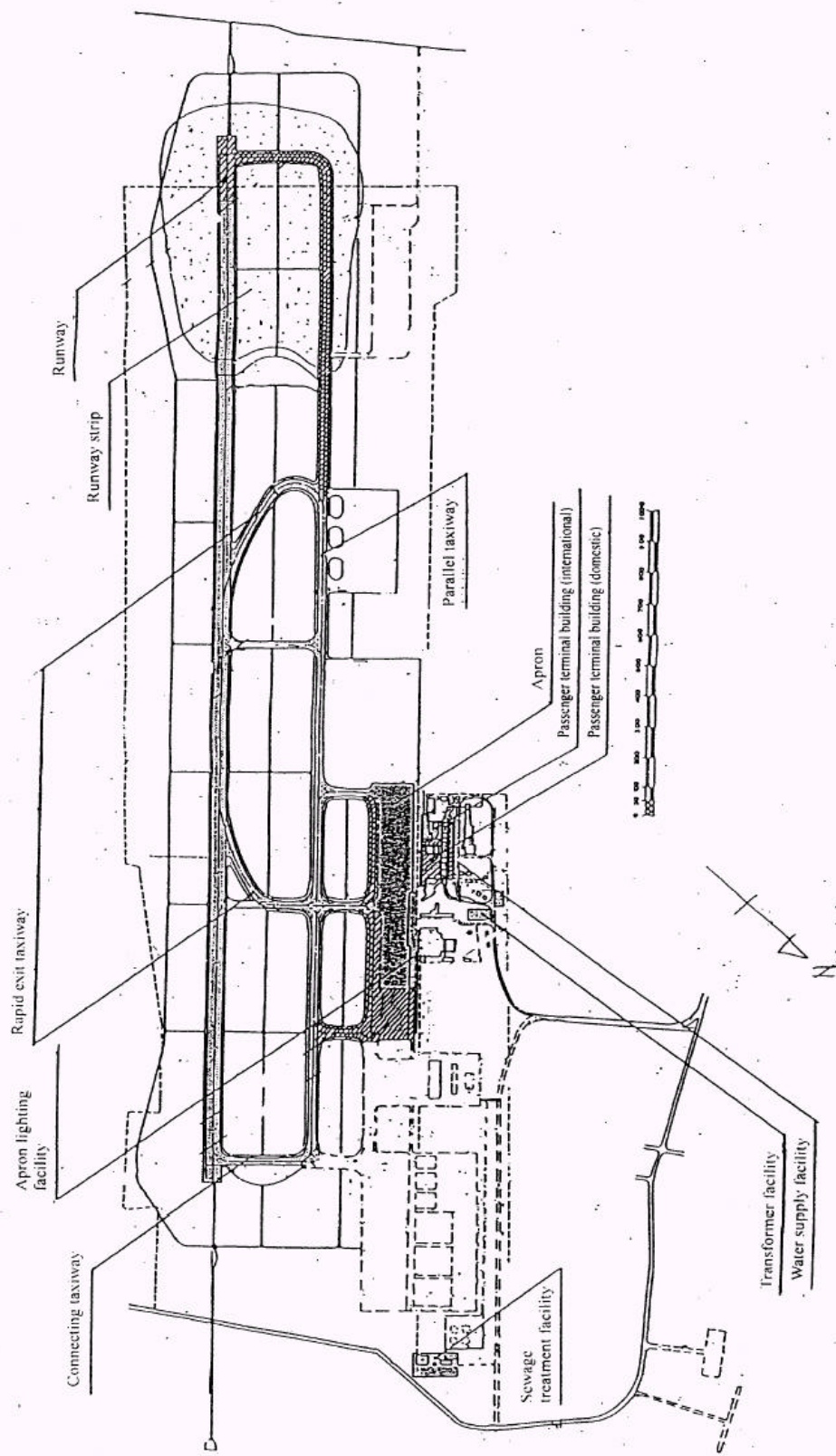
Apron: A place to park airplanes at airports that is provided for getting passengers in and out of airplanes, unloading cargo, supplying fuel, and performing airplane maintenance.

1. Project Summary

1.1 Project Location



Layout of Mactan (Cebu) International Airport



1.2 Project Summary and ODA Loan Portion

This project is designed to expand and improve facilities at the Mactan (Cebu) International Airport¹ (opened in the mid-1960s), which holds an important position as the second largest airport in the Philippines after the Manila International Airport. This project aims to enable the port to accommodate the predicted rise in passenger and cargo transport, as well as to improve the airport's safety. The JBIC loan covers the entire foreign currency portion and a part of the local currency portion (75% of the total project cost) of the project costs.

1.3 Background

1.3.1 Status of Philippine Transportation Sector (at the Time of Appraisal)

Since the Philippines consists of more than 7,000 small and large islands, marine transport has developed since ancient times. However, particularly for passenger transport, transportation by road has held the largest share, with air transport (both passenger and cargo) accounting for a minute portion of total transportation demand. (See Table 1.1.)

Table 1.1 Actual Results of Domestic Transport by Transportation Mode in 1987

	Freight		Passenger	
	ton· km (100 million)	Share (%)	Person· km	Share
Road	22.00	53.59	83.00	89.23
Sea	19.00	46.29	8.00	8.60
Air	0.02	0.05	0.22	0.24
Railway	0.03	0.07	1.80	1.93
Total	41.05	100.00	93.02	100.00

Source: JBIC materials at the time of appraisal

1.3.2 Trend in Philippine Air Transport

Table 1.2 shows the trend in air transport of passengers and cargo in the 1980s. As can be seen in this table, in the 10-year period from 1980 to 1989, the number of passengers transported has been steadily increasing every year, expanding by a factor of 2.4, from 4,916 to 11,611 passengers, while the cargo transport volume has boomed 12.6 times, from 65,239 tons to 822,497 tons.

¹ The airport derives its name from the fact that it is located on Mactan Island just south of Cebu Island. (See map.)

Table 1.2 Trend in Air Transport of Passengers and Cargo

(Units: passenger; 1,000 persons, cargo; ton)

Year	Domestic passenger	International passenger	Total	Rate of increase (year-on-year; %)	Domestic cargo	International cargo	Total	Rate of increase (year-on-year; %)
1980	2,299	2,617	4,916	-	28,035	37,204	65,239	-
1981	2,445	2,650	5,095	3.6	28,440	33,490	61,930	-6.6
1982	2,674	3,028	5,702	1.9	35,648	56,884	92,532	49.4
1983	2,982	3,088	6,070	6.5	45,548	117,488	163,036	76.2
1984	3,077	3,107	6,184	1.9	46,679	136,757	183,436	12.5
1985	3,267	3,173	6,440	4.1	46,584	118,879	165,463	-9.8
1986	4,846	3,214	8,060	25.2	53,831	145,800	199,631	20.6
1987	4,811	3,547	8,358	3.7	82,064	157,670	239,734	20.1
1988	5,659	3,997	9,656	3.2	116,753	177,584	294,337	22.8
1989	7,153	4,458	11,611	20.2	226,980	595,517	822,497	179.4

Source: Compiled from the JBIC appraisal materials

1.3.3 Positioning of Metro Cebu in Philippines

Metro Cebu is a metropolitan area consisting of 3 cities and 7 towns at the center of Cebu City (state capital), which is located in the central eastern side of Cebu Island, which is itself situated at the center of the Philippines. Metro Cebu covers an area of approximately 80,000 ha and has a total population of approximately 1.5 million people. Metro Cebu is the main tourist area in the Philippines, while at the same time being famous as the producing district of Philippine furniture made of rattan and stone. In recent years, Metro Cebu has seen remarkable growth of electronic-related and other industries, particularly in the Mactan Export Processing Zone (MEPZ).

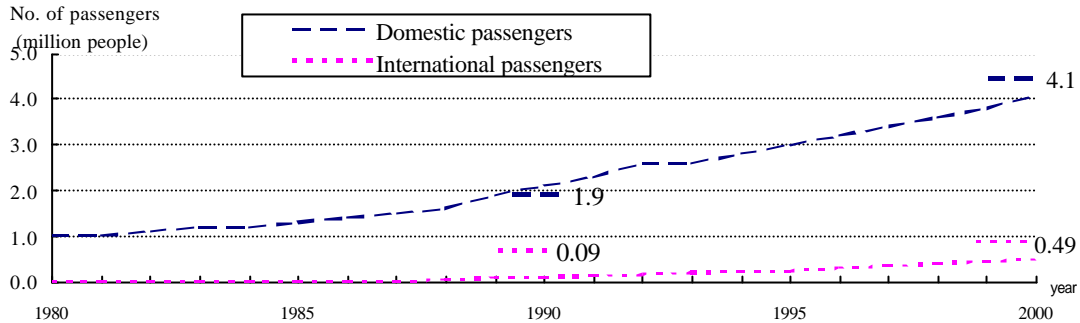
1.3.4 Air Transport at Mactan (Cebu) International Airport (at the Time of Appraisal)

(1) Actual and projection of passenger statistics

The international air routes of the Mactan (Cebu) International Airport commenced as a charter service begun in 1978. The number of international air route passengers has been steadily rising since the establishment of the Aquino administration in 1986, and reached 90,000 persons in 1989. According to a forecast of demand done in 1989, the number of international air route passengers is expected to quintuple to approximately 496,000 passengers by 2000.

Moreover, the number of domestic air route passengers has also been rising, almost consistently, since the airport was opened in the mid-1960s, showing particularly remarkable growth from 1981, and reached 1.932 million passengers in 1989. The number of domestic air route passengers is forecast to double to approximately 4.086 million passengers by 2000.

Table 1.3 Actual and Projection of Air Route Passengers at Mactan (Cebu) International Airport



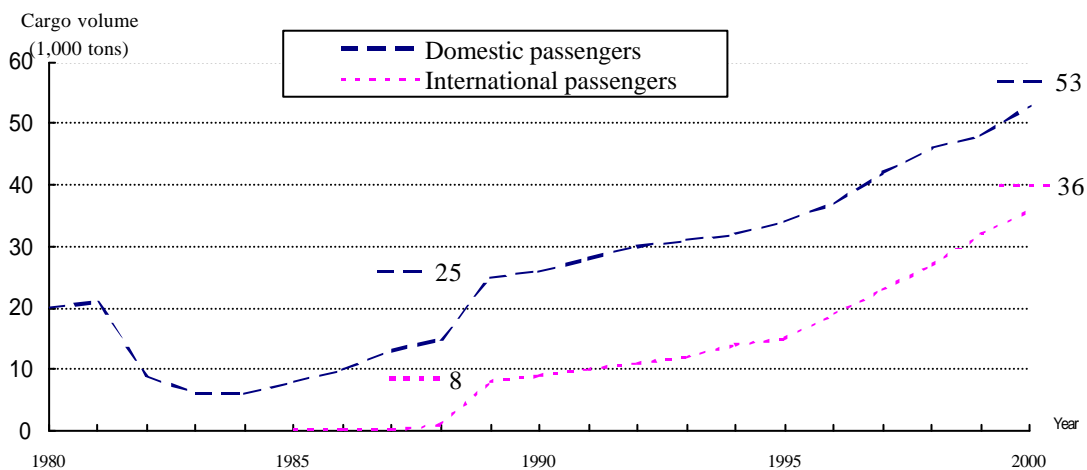
Source: Prepared from DOTC materials

Note: The figures between 1980 and 1989 are actual, and the projected values after 1990.

(2) Actual and projection of cargo statistics

While air cargo demand for the Mactan (Cebu) International Airport was 20,000 tons at the beginning of the 1980s, the global economic recession that set in thereafter caused demand to drop to 6,000 tons in 1983. However, along with the rising production amount in the Mactan Export Processing Zone (MEPZ), which is adjacent to the airport, the total amount of air cargo (domestic and international) handled at the airport recovered to 33,000 tons. Moreover, total cargo volume (domestic and international) is projected to reach 89,000 tons by 2000.

Table 1.4 Actual and Projection of Cargo Transport at Mactan (Cebu) International Airport



Source: Prepared from DOTC materials

Note: The figures between 1980 and 1989 are actual, and the projected values after 1990.

1.3.5 Mactan Export Processing Zone (MEPZ)

Thirty-five companies has a production base in the MEPZ in 1990, accounting for a total export value of 143 million US dollars and a total import value of 114 million US dollars in 1989. The main products for that year were electronic components, medical products, leather products, and precious metals.

The MEPZ is located next to the Mactan (Cebu) International Airport, which was the focus of this project, and 60% of MEPZ exported goods get exported via this airport.

1.3.6 Need for the Project

As described up to this point, a large increase both for passengers and cargo was predicted for the Mactan (Cebu) International Airport around 1990. Moreover, it became necessary to enable the port to handle civilian super carriers. At the time, the airport's annual handling capacity was limited to 2.875 million passengers (2.52 million for domestic air routes and 355,000 for international air routes), and its 2,590-meter runway was insufficient for handling super carriers. Therefore, this project, aimed at expanding and improving airport facilities and improving the airport's safety was highly necessary.

1.4 History

1982		Preparation of Master Plan by USAID funds
1986	October	Request of engineering service on Cebu International Airport Development Project by the Philippine government as the 14th ODA Loan
1987	December	Exchange of Notes for the 14th ODA Loan
1988	January	Loan Agreement signing for the 14th ODA Loan (Cebu International Development Project (E/S) PH-P90)
1989	August	A Japanese consultant was selected as above-mentioned project and was approved by JBIC.
1990	May	As the 17th ODA Loan, the main project of Mactan (Cebu) International Airport Development Project was requested by the Philippine government.
1990	June	Visit to the Philippines by the government mission of the 17th ODA Loan
1990	July	Visit to the Philippines by JBIC Appraisal Mission
1990	October	Completion of Cebu International Airport Development Project (E/S)
1991	March	Exchange of Notes for this Project
1991	July	Loan Agreement signing for this Project
1996	March	Partly opened domestic line
1996	July	Partly opened international line
1997	March	Completion of construction for the main project
1998	January	Additional procurement (boarding bridge)
1998	April	Additional procurement (X-ray inspection equipment, Metal detector)
1998	October	Final disbursement

2. Analysis and Evaluation

2.1 Evaluation on Project Implementation

2.1.1 Project Scope

Regarding the scope of the project, there were no changes related to the major facilities of the airport (runways, domestic passenger terminal building). (See Table 2.1.)

With regard to improvements of the International Passenger Terminal Building (completed in the second half of 1994), which was built by the Philippine Tourism Authority just prior to the commencement of this project, the quality of this terminal was considerably inferior to that initially planned², and consequently the amount of improvements and rework increased. These additional improvements and rework were performed to give the airport full functionality, and can be said to have been appropriate.

Regarding the parking, a hotel was built on the lot that had been planned for the parking, and thus construction of the parking was switched to adjoining land with a smaller surface, but there have been no particular problems with regard to practical use. The adjoining land belonged to Philippine Air Force, and therefore site acquisition was not a problem.

Regarding the increase in M/M for consulting services, this increase is considered to have been unavoidable due to the fact that the construction management period was extended as the result of the extension of the implementation schedule.

Regarding additional procurements, degradation of the equipment at the existing terminal was progressing, and the renovation of this equipment being judged to be essential for the safe operation of the airport, the required procurement was performed as part of the scope of this project.

² Differences in height, steep slopes, and other aspects ignoring passenger convenience, insufficient (low-grade) air conditioning, electric system, lighting fixtures, etc.

Table 2.1 Project Scope

	Plan	Actual	Difference
1. Civil works			
Runway	Extension 200m × 45m, (Total length after extension is 3,300m), Overlay 3,100m × 45m	Same as left	
Runway strip	Extension 200m × 300m, Upgrading 510m × 300m	Same as left	
Taxiway			
Parallel	Extension 710m × 23m, Overlay 2,950m × 23m	Same as left	
Rapid exit			
Connecting	Construction (580m, 670m) × 23m, Construction (320m, 190m) × 23m, Overlay 190m × 23m	Same as left	
Apron	Expansion 130m × 165m, Overlay 115m × 265m, 135m × 395m		
Parking zone	Construction 22,400m ²	18,600m ²	3,800m ²
2. Construction and renovation of passenger terminal building	Total: 33,300m ²	Total: 34,000m ²	+700m ²
Domestic	Construction 16,400m ²	16,300m ²	100m ²
International	Construction 7,300m ² , Renovation 9,600m ²	7,500m ² , 10,200m ²	+200m ² , +600m ²
3. Consulting service	Total: 376M/M	Total: 769M/M	+393M/M
Foreigners	172M/M	301M/M	+129M/M
Filipinos	204M/M	468M/M	+264M/M
Additional procurement	Boarding bridge:1, X-ray inspection equipment:7, Metal detector:3		

2.1.2 Implementation Schedule

The construction work, which represents the main part of this project, was completed 22 months behind schedule. This delay consisted of a delay (of 8 months) in the tender procedure by the Department of Transportation and Communications (DOTC), the executing agency for this project, and the effect (14-month delay) of the construction of the International Passenger Building separately implemented by the PTA. The latter in particular resulted in the delayed construction start of a building connecting the domestic and international passenger terminals, which was covered by the ODA loan³, and as a result the overall work for this project was delayed. Furthermore, due to the low quality finish level of the latter, the amount of repairs

³ At the time of the E/S project loan agreement, the construction of the international passenger terminal building was planned to be included in the loan. However, due to the greater than expected rise in demand, construction of the international passenger terminal building only was performed in advance of this project (without waiting for the results of the E/S project) using Philippine funds. Following construction of the international passenger terminal building, construction of the building connecting the domestic and international passenger terminals was performed, and as a result improvements of the international passenger terminal building were included in the scope of this project.

performed for improvements covered by this project considerably increased (as described previously), which also contributed to the extension of the implementation schedule.

The construction of this international passenger terminal by the PTA prior to other construction was agreed to within the Philippine government due to the requirement to open the international passenger terminal as soon as possible, but the building did not achieve full functionality as a terminal, and as mentioned above, this project presented numerous inefficient aspects.

Along this the above, consulting services were also extended, but as previously explained, this is considered to have been unavoidable⁴.

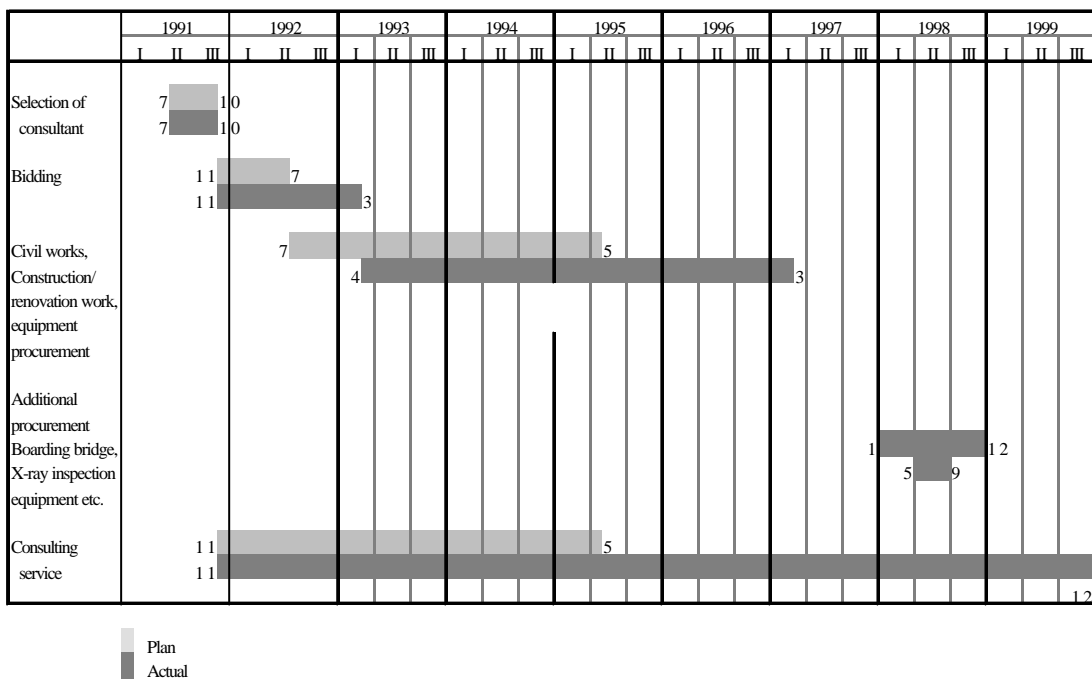
Regarding additional procurements, the reason for their implementation and their contents are as described above. Both the reason for their implementation and their contents are judged to be appropriate.

Table 2.2 Implementation Schedule

	Plan	Actual	Difference (Implementation Scheme)
Selection of consultant	Jul. 1991 ~ Oct. 1991 (4 months)	Jul. 1991 ~ Oct. 1991 (4 months)	()
Bidding	Nov. 1991 ~ Jul. 1992 (9 months)	Nov. 1991 ~ Mar. 1993 (17 months)	+8 months (+8 months)
Civil works, construction and renovation of passenger terminal building, and equipment procurement	Jul 1992 ~ May 1995 (35 months)	Apr. 1993 ~ Mar. 1997 (48 months)	+22 months (+13 months)
Additional procurement (from contract to completion of installation)		Jan. 1998 ~ Dec. 1998	
Consulting service (including one-year guarantee period of additional procurement)	Nov. 1991 ~ May 1995 (43 months)	Nov. 1991 ~ Dec. 1999 (98 months)	+55 months +55 months

(Source: DOTC)

⁴ The blueprints of the international passenger terminal, which were kept by the PTA, have been lost. This made it necessary for the consultants to proceed on a trial and error basis, removing ceiling panels, etc., to ascertain the design of the international passenger terminal in order to secure the interface for connection to the domestic passenger terminal building covered by this project.



2.1.3 Project Cost

The construction work contract, except for the additional procurements, was performed through a single contract with the contractor, and there were no major changes in the total product cost. However, due to rise in the value of yen compared to its level at the time of appraisal, the total project cost on a yen base was slightly lower than planned. Although there were changes in the project cost breakdown, it is considered that there were no major problems in terms of the total project cost.

Regarding the additional procurements, these were additional costs required for the reasons previously described in the section on the project scope, and the necessity of these additional procurements is recognized.

The increase in consultant services was covered by the contingency. This increase was required by the extension of the implementation schedule, and is considered to have been appropriate based on the necessity of performing sufficient construction management.

Table 2.3 Project Cost

(Units: Foreign currency: ¥ million, Local currency: million peso)

	Plan		Actual		Difference	
	Foreign currency	Local currency (covered by ODA loan)	Foreign currency	Local currency (covered by ODA loan)	Foreign currency	Local currency (covered by ODA loan)
Civil works	2,166	391 ()	989	668 (468)	1,177	+277
Construction of passenger terminal building	2,145	261 ()	3,318	620 (434)	+1,173	+359
Equipment	729	37 ()	1,025	107 (74)	+296	+70
Escalation		143				143
Contingency	504	83			504	83
Consulting service	554	15	827	20 (20)	+273	+5
Import duties		289		140		149
Sub-total	6,098	1,219	6,159	1,555	+61	+336
Additional procurement		()	369	3 (2)	+369	+3
Total	6,098	1,219 (690)	6,528	1,558 (998)	+430	+339 (+308)
Grand total (¥ million) (covered by ODA loan)	14,387 (10,790)		12,835 (10,568)		1,552 222	

Source: DOTC

[Exchange rate]

At the time of appraisal: 1 peso = ¥6.8 (as of 1990)

Actual: 1 peso = ¥4.048 (weighted average at the time of loan disbursement)

2.1.4 Implementation Scheme

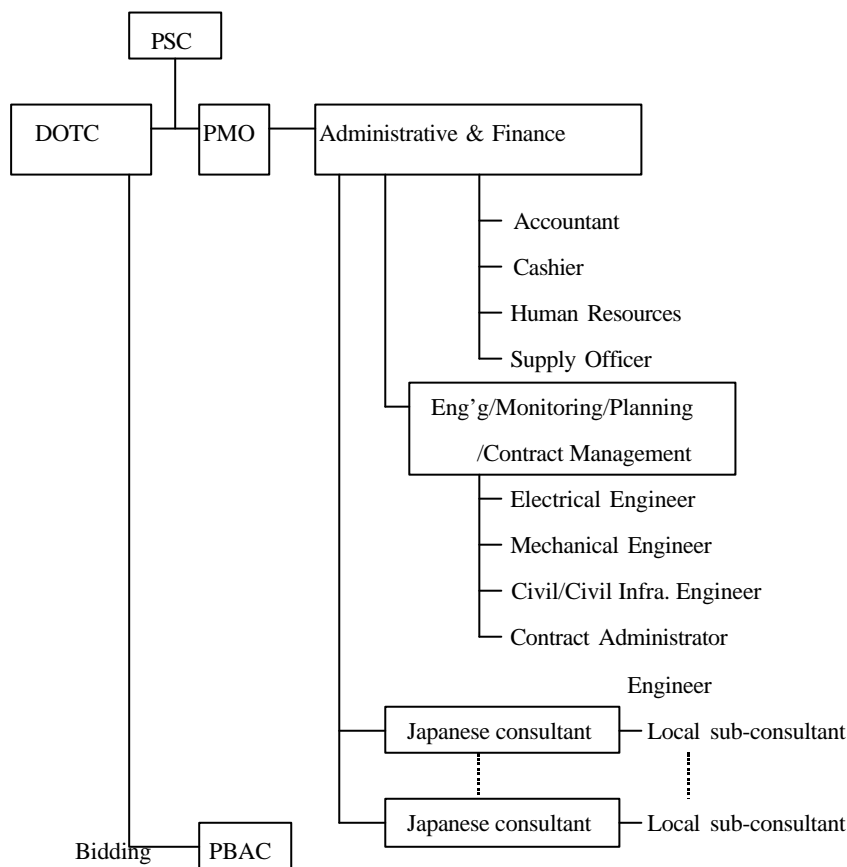
(1) Executing agency

The Department of Transportation and Communications (DOTC) served as the executing agency for this project. Regarding the implementation of this project, the locally established Project Steering Committee (PSC) was in charge of overall coordination and progress management, while the Project Management Office (PMO) within the DOTC was in charge of the actual implementation of the project. For the tender, the Pre-bidding and Awards Committee (PBAC) was established within the DOTC and implemented the tender.

The PSC has 9 committee members, and the representative also serves as the representative of RDC7 in order to establish a system of cooperation with the Regional Development Committee for Region 7 (RDC7), which belongs to Cebu state. This system allows the smooth exchange of ideas between the state government and the central government.

Considering the actual implementation status of this project, during the rehabilitation of the existing international passenger terminal built by the PTA and the construction to connect this terminal with the domestic passenger terminal through this project, an amount of rework exceeded the amount initially planned occurred, which led to an extension in the implementation schedule. Regarding coordination with the PTA and the project implementation status on the PTA side, the DOTC/PMO, as the implementers (supervisors) of the overall project, established a satisfactory supervision system, and work consultants and others were made to perform in order to grasp the existing status is considered to have been necessary (as described above).

Figure 2.1 Implementation Scheme



(Source: DOTC)

(2) Consultant

The Japanese consulting firm that performed engineering services for this project was hired on a direct contract basis, and two local consulting firms were retained as subcontractors. These two consulting firms were respectively in charge of civil works and terminal construction. The Japanese consulting firm that acted as the main consultant for this project selected as its scope of

service tender assistance, construction supervision, and guidance during the guarantee period (1 year). As mentioned about the implementation schedule, the fact that the consultants worked to minimize the impact on work caused by the international passenger terminal constructed by the PTA using its own funds is worth commending.

(3) Contractor

Prequalification (P/Q) was performed regarding the implementation of this project, and 6 companies out of 23 were selected. Four of these companies participated in the tender, and a joint venture between a Japanese contractor and a Philippine contractor which came in first for the price evaluation won the contract. Regarding the scope of the contract, this single contract encompassed civil works, construction of the terminal building, and equipment procurement, to be performed by the joint venture between a Japanese contractor and a Philippine contractor. Two Philippine firms were subcontracted by the main contractor, and the scope of work of these 2 firms consisted in construction of the terminal building and overlay of runways, etc., respectively. No particular problems were noted regarding the construction capability of the contractor.

2.2 Evaluation on Operation and Maintenance

2.2.1 Operation and Maintenance Scheme

The Mactan-Cebu International Airport Authority (MCIAA) performs operation and maintenance for this project. The MCIAA is a public corporation that was approved and established by the Philippine government in July 1990⁵, and it currently manages operation of the airport under the following system (Figure 2.2).

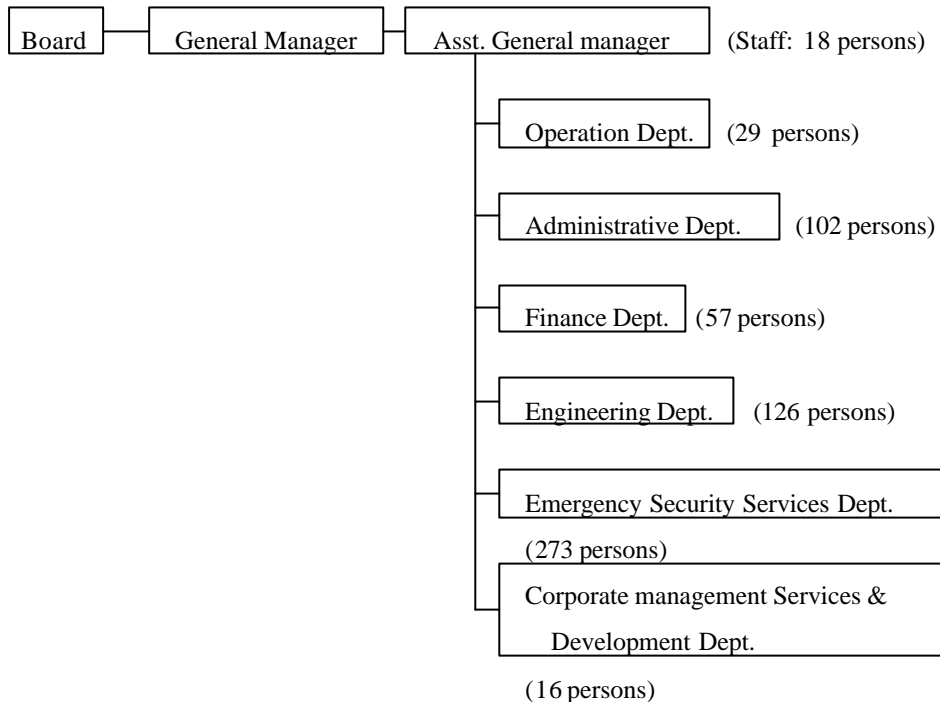
The board that has final decision-making authority at the MCIAA had 10 members as of March 1999. These members are the DOTC, MCIAA, the legal, finance, and tourism ministries, the Aeronautical Bureau, the Mayor of Cebu, and private sector representatives.

The operation of the airport is mainly performed by the Operation Department, which manages the flow of passengers and cargo from the apron to the terminal buildings. Aircraft takeoffs and landings are managed by control towers under the jurisdiction of the Air Transportation Office (ATO), one of the offices in the DOTC, but guidance of aircraft within the airport prior to takeoff and after landing is performed entirely by the Operation Department.

Regarding maintenance, the repair of all facilities and daily maintenance, from equipment to buildings, is performed by the Engineering Department.

⁵ The MCIAA was established based on Republic Act No. 6958.

Figure 2.2 Organization Chart of Mactan-Cebu International Airport Authority



(Source: DOTC, as of March 1999)

2.2.2 Operations and Maintenance

The airport’s operation status is analyzed below based on the number of passengers, the amount of cargo, and the number of takeoffs and landings.

(1) Actual results of passenger and cargo transport

Actual result of passenger transport have risen along with the increase in the number of domestic and international flights following the opening of new terminals through this project in 1996, but the Asian economic crisis that occurred in 1997 and the suspension of business of Philippine Airlines caused a decline in domestic flight in 1998 (Table 2.4).

Cargo transport statistics also fell considerably in 1998 for the same reasons. On the other hand, international flight statistics, after registering a decline in 1996 prior to the economic crisis, have been gradually recovering (Table 2.5).

Table 2.4 Actual Results of Passenger Transport

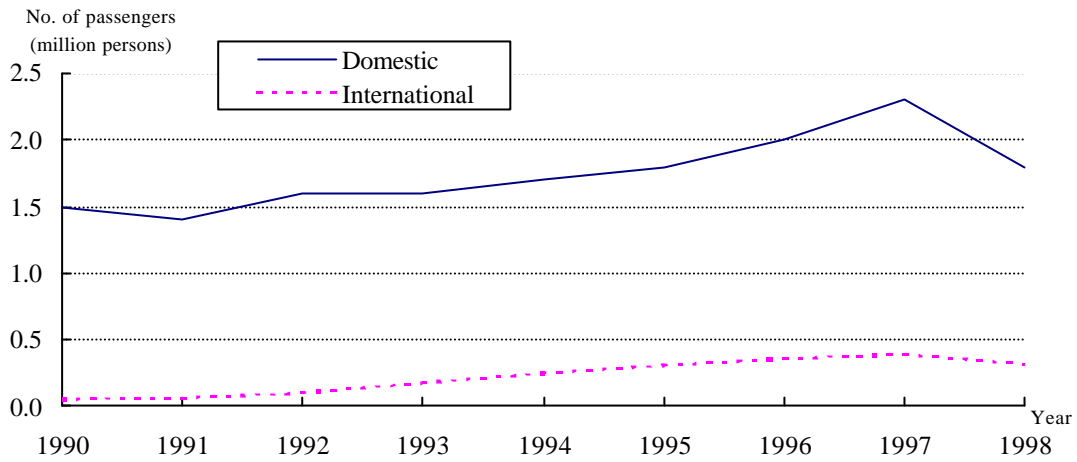
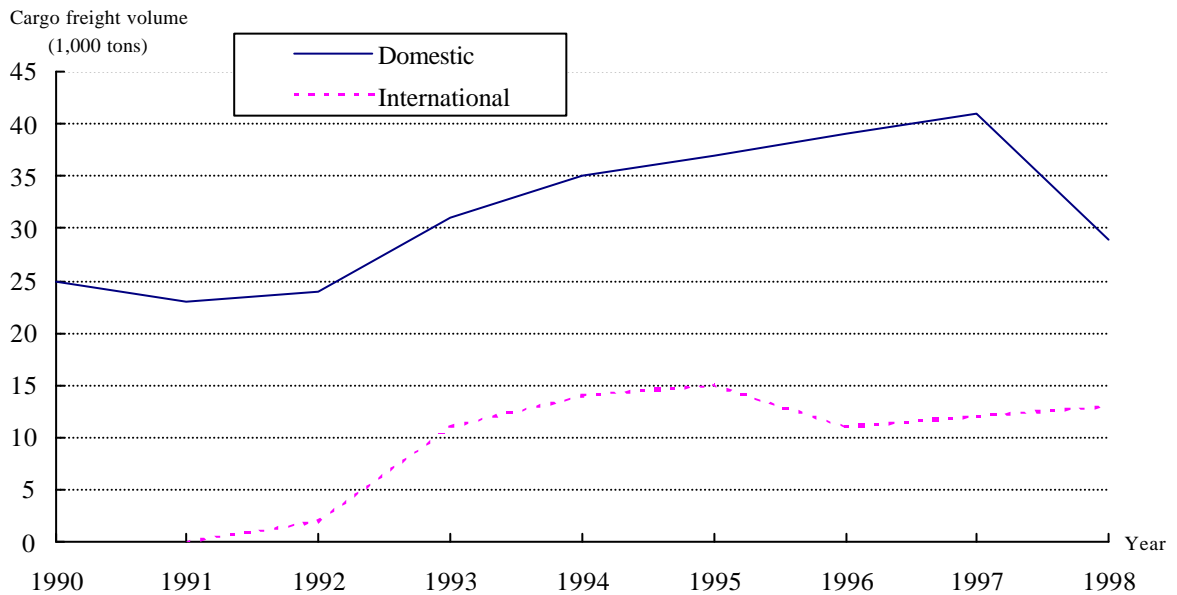


Table 2.5 Actual Results of Cargo Transport



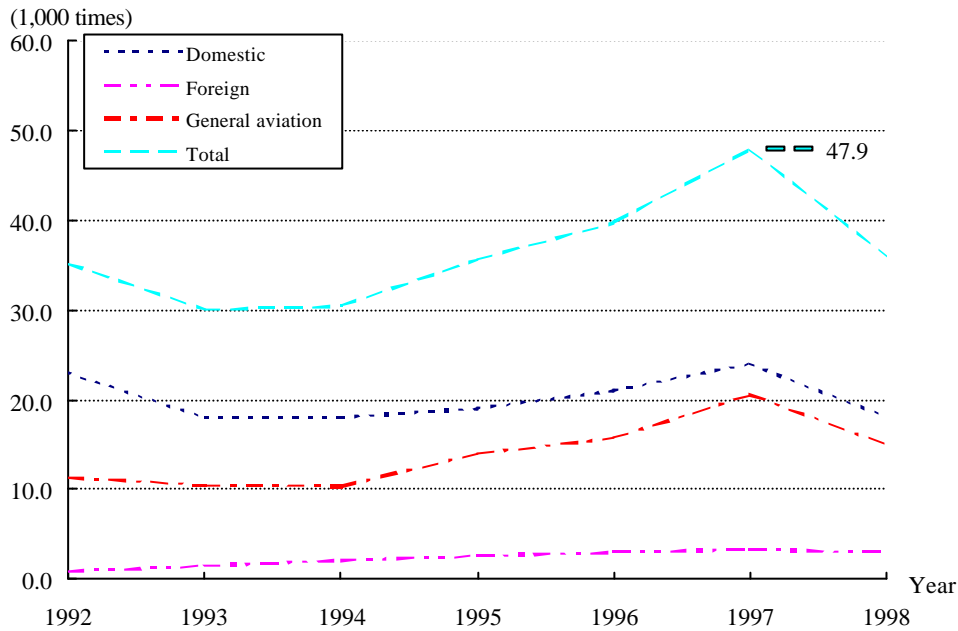
(Source: Compiled from MCIAA materials for Tables 2.4/5)

Regarding the amount of cargo handled, foreign companies (European, American, etc.) that have established operations on land adjoining the airport collect and deliver merchandise via the cargo warehouses of Philippine Airlines, which are also located next to the airport. No problems in particular have arisen so far in relation to the amount of cargo handled and cargo handling efficiency (cargo congestion, etc.).

(2) Actual results of departure and arrival

As shown in the following figure, while the number of aircraft departure and arrivals at the Mactan (Cebu) International Airport declined in 1998 for the reason given above, figure of 24,000 departures and arrivals in 1989 had doubled to approximately 48,000 in 1997, when they peaked.

Table 2.6 Actual Results of Departure and Arrival



(Source: MCIAA)

Based on (1) and (2) above, following completion of this project, the airport has been satisfactorily used. However, due to the effects of the Asian economic crisis and the suspension of business of Philippine Airlines, all the indices became negative in 1998 compared to the previous year, and the recovery of these indices is unavoidably linked to the economic performance of the countries in the region.

(4) Maintenance status of airport facilities

No particular problems have been noted regarding the maintenance of airport facilities. As indicated below, the airport's maintenance cost was within the MCIAA's budget, which is being sufficiently allocated every year. Particularly since 1997, following the completion of this project and the start of operation of the facilities that were created through it, the maintenance budget allocation has been set according to the expansion of the scale of operations.

Table 2.7 Maintenance Cost

FY	1993	1994	1995	1996	1997	1998
Maintenance cost	26,947	45,378	66,682	86,679	151,745	187,759
Spares procurement cost contained within above figure	1,757	3,987	4,579	5,780	13,907	13,335

(Source: MCIAA)

2.2.3 Effect on Residents and Environment

(1) Relocation of residents

Since the land for the project was owned by the MCIAA, no new site had to be acquired for the implementation of this project. As a result, the executing agency reports that there were no problems in relation to resident relocations. Furthermore, as mentioned in section 2.1.1 Project Scope, the parking zone, whose location was changed, was constructed on a site that belonged to the Philippine Air Force, and there was no problem with regard to site acquisition.

(2) Effect on environment

No problems in particular have been reported regarding the effect on the environment during and after the implementation of the project.

(i) Sewage treatment

The sewage produced in the airport is first treated at a sewage treatment facility located on the airport premises and then released into the sea. The airport's sewage treatment facility has a treatment capacity of 900 m³/day, and according to the executing agency, the sewage produced in their airport can currently be processed in its entirety by this facility. The water quality of the treated sewage is measured by an engineer from the Engineering Department once a week and continuously controlled.

The water quality of the water obtained for evaluation purposes right next to the exhaust port of the sewage treatment facility fell within the value range set by the Philippine government, and there seem to be no problems regarding the water quality of the treated sewage as far as the recorded value is concerned.

(ii) Noise

There are almost no residential areas around the airport, and the adjoining areas consist of an industrial complex and the sea. According to the executing agency, there are no problems with regard to noise.

Table 2.8 Water Quality of Sewage

	pH	TSS(mg/L)	COD(mg/L)	BOD(mg/L)
Average value between October and December 1998	7.02	42	111	42
DENR standard value	6.0 - 9.0	150	200	100

Note) DENR : Department of Environment and Natural Resources
TSS: Total Suspended Solids
COD : Chemical Oxygen Demand
BOD : Biochemical Oxygen Demand

Source: MCIAA

2.2.4 MCIAA Financial Status

The operating income of the MCIAA has continued to be positive since its establishment. Despite the drop in fiscal 1998, the MCIAA still had a positive operating income that year. (See Table 2.9.) Incidentally, the passenger service charge was 80 peso for domestic flights and 500 peso for international flights as of April 1999. For domestic flights, it was raised to 100 peso during fiscal 1999⁶.

The MCIAA owns the terminal building that was built through this project, but responsibility for repaying the construction cost to the JBIC lies with the Philippine government. In other words, the MCIAA does not have any repayment obligation, and repayment of the construction cost does not put management pressure on the MCIAA. On the other hand, ownership and repayment obligation for the international passenger terminal building that was constructed by the PTA was transferred from the PTA to the MCIAA, and a total of 279 million peso (principal + interest) was to be repaid over 25 years from 1993.

Investments from the government to the MCIAA are limited to that for the terminal building at the time of its establishment and disbursement in kind and no additional investment have been made by the government since then. The MCIAA pays 20% of its profit to the Philippine government similarly to the other public corporations under the jurisdiction of the Philippine government.

Taking these factors into consideration, there are no problems regarding the management status of the MCIAA.

⁶ This rise was confirmed to have occurred as of December 1999. The procedure for changing the passenger service charge consists in the MCIAA operation side submitting a petition to the board, receiving the board's approval, and then announcing the change to users through newspapers and TV ads prior to effecting the change. (For reference purposes, the passenger service charge at the International Manila Airport was 100 peso for domestic flights and 550 peso for international flights as of April 1999.)

Table 2.9 Operating Income and Expenditure

(Unit: 1,000 peso)

Item	FY	1994	1995	1996	1997	1998
Operating income		100,035	129,727	193,177	307,101	305,262
Landing and Take-off fees (international)		N.A.	15,902	16,927	31,447	37,084
Landing and Take-off fees (domestic)		N.A.	12,218	12,761	24,600	14,834
Passenger service charges (international)		N.A.	49,181	53,925	58,694	55,266
Passenger service charges (domestic)		N.A.	18,523	29,430	50,376	44,540
Others		N.A.	33,903	80,134	141,984	153,538
Operating expenditures		95,318	123,787	171,187	268,969	294,363
Operating profit		4,716	5,940	21,990	38,132	10,898

Rate of return on total assets = Net profit / Total assets (%)	0.8	1.5	2.7	2.7	0.6
Current ratio = Current assets / Current liabilities (%)	82.0	46.7	39.4	73.2	31.8
Ratio of net worth = Owned capital / Total assets (%)	18.9	21.8	68.1	68.9	66.5

2.3 Project Effects and Impacts

2.3.1 Quantitative effects

The economic internal rate of return (EIRR) at the time of appraisal was calculated to be 22.2%, using as benefits (1) the reduction in waiting time for business passengers at the airport, (2) the reduction in travel time of business passengers using other means of transport such as ships during times of airport congestion, and (3) the securing of tourism income from foreign travelers, who overflowed and reached a peak, using as costs the total of the construction cost and maintenance cost, and assuming a project life of 24 years. At the time of this evaluation, the EIRR⁷ was calculated to be 29.3% using the same factors based on the latest demand projections and actual cost values.

2.3.2 Qualitative effects

(1) Response to rising airport demand

In recent years, civilian aircraft have been getting larger as they offer a greater number of passenger seats and a longer flying range, and the required runway length is gradually becoming longer. The following table lists the types of aircraft that currently use the Mactan (Cebu) International Airport as well as the required runway lengths. From an international viewpoint, super carriers increasingly require a runway length in the 4,000-meter range, and the runway length provided through this project can be said to be adequate from the viewpoint of accommodating the rising number of supercarriers.

Table 2.10 Breakdown of Aircraft Using Mactan (Cebu) International Airport

		Necessary length of runways			
		1,500m class	2,000m class	2,500m class	3,000m class
No. of passengers	Less than 100	YS-11			
	100-200		DC-9		
	150-250		A320		
	250-350				A330
	350 or more		A300, B737,B777		B747

Source: Compiled from "Airport Handbook" 1997 published by Doyu-sha

The extension of the runway length (from 2,900 meters to 3,100 meters) through this project has enabled large-scale aircraft with a high passenger carrying capacity to use the Mactan (Cebu) International Airport, as well as an increase in the number of direct international flights. Currently, flights departing from/to Japan (Narita, Kansai International Airport), China (Hong Kong), Singapore, Malaysia (Kuala Lumpur, Kota Kinabalu), Taiwan (Gaoxiong), and other countries.

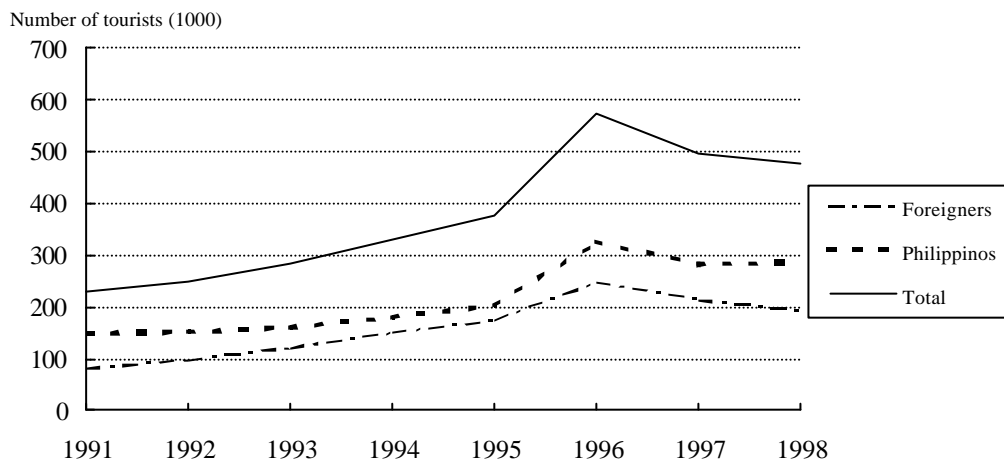
⁷ The statistics and calculation results listed in the Cost Benefit Analytical Investigating Committee, Ministry of Transport were used.

As described above, the fact that this project has enabled the use of the airport by super carriers has expanded the role of the Mactan (Cebu) International Airport as a hub airport for both domestic and international flights second only to the Manila International Airport in the Philippines.

(2) Effect on Cebu tourism sector

The numbers of foreigners and Filipinos coming to Cebu as a tourism destination are as follows. The number of tourists, after greatly increasing in 1996 when the new terminals were opened, has been trending at a high level, demonstrating the effect of this project.

Table 2.11 Trend in Number of Cebu Tourists



Source: Philippine Tourism Authority

Year	1991	1992	1993	1994	1995	1996	1997	1998
Foreigner	80,272	98,110	121,255	150,000	174,295	247,440	213,510	191,637
Filipino	149,919	150,889	160,301	180,000	202,313	325,908	281,488	285,948
(Reference) No. of overseas tourists to the Philippines	849,418	1,043,188	1,246,421	1,414,652	1,610,260	1,906,614	2,087,982	N.A.
Total	230,191	248,999	281,556	330,000	376,608	573,348	494,998	477,585

Source: PTA, Philippine Tourism Authority

(3) Mactan Export Processing Zone

The export value statistics of the Mactan Export Processing Zone (MEPZ) adjoining the Mactan (Cebu) International Airport are as follows. No great drop in the values after the economic crisis of 1997 can be seen. The MEPZ, whose main products are precision instruments and electronic components is considered to have a high export ratio consisting of air cargo (although it was not possible to obtain concrete export ratio figures), and the MEPZ is likely to continue having a large degree of dependence on the Mactan (Cebu) International Airport. Moreover, following the opening of the airport in 1996, the number of companies in the MEPZ has increased, and the enhancement of the zone next to the MEPZ through the expansion of airport facilities through this project is considered to be one factor contributing to the rise in the number of companies that have established operations in the MEPZ.

Table 2.12 Mactan Export Processing Zone

FS	1995	1996 Jan-Mar	1997	1998	1999 Jan-Mar
No. of companies (business base)	84	89	102	103	103
Export amounts (US\$ million)	880	240	1,133	1,307	318
No. of employees (as of end of December)	28,259	29,304	35,932	35,920	37,118
Total personnel costs (million peso)	1,647	453	2,541	2,931	724
Average monthly income per employee (peso)	4,857	5,148	5,892	6,801	6,499

Source: Mactan Economic Zone, Administration Office

Note) Statistics for fiscal 1996 and fiscal 1999 cover only the 3-month period from January to March.