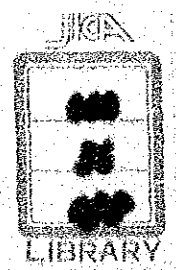


無償資金協力案件の事業費積算に
関する基礎調査(フェーズII)報告書
(別冊 インドネシア編)

昭和63年3月

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目 次

インドネシア資料

1. ジェネラル・コストデータベース項目の内容	1
2. 現地国一般建設コストデータ (A)	3
2-1 概要 (A・A)	3
2-2 指数 (A・B)	7
2-3 労務 (A・C)	8
2-4 資材及び建設機械 (A・D)	11
2-5 工法 (A・E)	13
2-6 法律 (A・F)	14
2-7 統計及び経済指数 (A・G)	15
2-8 地域差 (A・L)	16
3. 現地建設事情についての刊行物の概要 (B)	18
4. 実績コスト調査 (F)	21
5. 詳細コスト分析 (G)	22
6. 現行ローカル市場価格及び複合単価 (H)	24
7. 参照用索引 (Z)	29

インドネシア資料

無償施設案件におけるより適正な事業費積算を図る上で、当該国におけるコストデータ、つまり現地における正確なコスト情報の蓄積・整備が今後の重要な鍵となる。

下記に、インドネシア国における現地調査で得た資料を基に、当該国ジェネラル・コストデータベースの形に要約した。

今後、他の国においても同様なコストデータベースを整備し、常時最新情報が蓄積されるようメンテナンス処理を施すことの意義は極めて大きいと考えられる。

1. ジェネラル・コストデータベース項目の内容

現地調査にて入手した資料を、次ページ(表-1)に挙げる主要項目に従って分類し、インドネシアにおけるジェネラル・コストデータベースの概要として次ページ以降にまとめた。

表-1 ジェネラル・コストデータベース項目

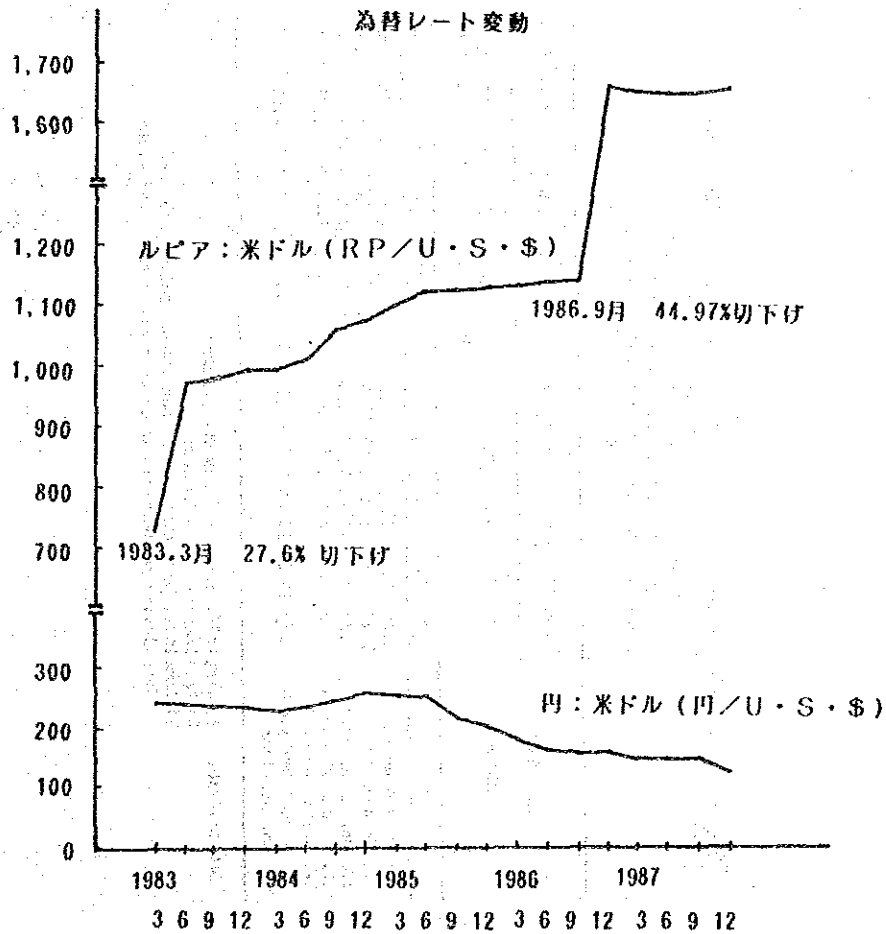
A.	現地国一般建設コストデータ	
A. A	概要	当該国の建設コストにおける特徴、傾向、特性等現行データを常にメンテナンスした最新データ (インフレ率、為替レート等)
A. B	指数	当該国の建築コストインデックス、建築コスト指数、値動きの状況
A. C	労務	建設産業における、建設工事労務費、労務時間、労務契約状況、労務に関する保険、税金、歩掛データ
A. D	資材及び建設機械	主要資材価格及び建設産業に使用されるプラント機械の値段の動き、材料の歩掛りデータ
A. E	工法	当該国の建設工法の特徴及び作業方法
A. F	法律	建設産業に影響を及ぼす、法律、法令の概要
A. G	統計及び経済指数	当該国の建設産業に係わる、投資額、就業率、経済状況等の統計、経済指標データ
A. H - A. K (空欄)		
A. L	地域差	当該国内での地域差によるコスト指数の違いと傾向性
A. M	予定価格	予定価格及び予算算出指標計画一覧表
A. N	コンサルタントへの報酬額と業務内容	コンサルタント業務報酬額に関する資料及び業務範囲
B.	現地建設事情についての刊行物の概要	建築のコスト面に関連する出版刊行物の概要
C - E (空欄)		
F.	実績コスト調査	実績プロジェクト概要コストを分析し、企画時における予算算出、概略予算に利用できるようにまとめたもの。
G.	詳細コスト分析	実績詳細コストデータであり、予算価格の作成、もしくは、審査における有効なデータ情報システム
H.	現行ローカル市場価格及び複合単価	現行の流通している材料費、労務費そして建設工事複合単価積み上げの根拠データ
K - Y (空欄)		
Z.	参照用索引	このデータベース内での検索用として整理した参照用、索引累積一覧表

2. 現地国一般建設コストデータ (A)

2-1 概要 (A・A)

(1) 為替交換率 (ルピア対米ドル) の変動

	RP/U・S・\$	円/U・S・\$
1983. 3	724.86	239.3
6	972.96	239.8
9	983.84	236.1
12	993.28	232.0
1984. 3	996.0	224.75
6	1,011.0	237.45
9	1,058.0	245.4
12	1,070.0	251.58
1985. 3	1,099.0	250.7
6	1,117.0	248.95
9	1,122.0	216.0
12	1,125.0	200.6
1986. 3	1,128.0	177.6
6	1,132.0	162.95
9	1,136.0	154.25
12	1,657.0	158.05
1987. 3	1,647.1	145.65
6	1,645.2	146.75
9	1,645.5	146.35
12	1,650.6	122.0



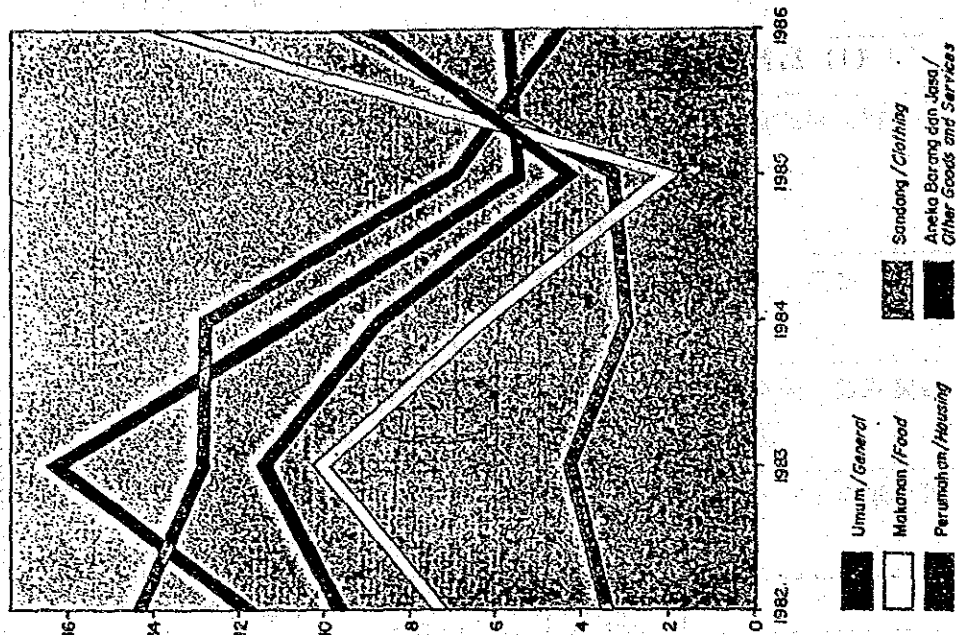
(2) インフレーション

TABEL : 9.5.5. LAJU INFLASI GABUNGAN 17 KOTA DI INDONESIA MENURUT TAHUN
 KALENDER DAN TAHUN ANGGARAN
 INFLATION RATES GROUPED OF 17 CITIES IN
 INDONESIA BY CALENDAR AND FISCAL YEAR
 (APRIL/APRIL 1977 - MARET/MARCH 1978 = 100)
 1982-1986

KELOMPOK GROUP	Tahun Kalender/Calendar Year ¹⁾ Tahun Anggaran/Fiscal Year ²⁾											
	1982	1983	1984	1985	1986	1981/1982	1983/1984	1984/1985	1985/1986	1986/1987	1987/1988	1988/1989
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Umum/General	9.69	11.46	8.76	4.31	8.83	9.80	8.40	12.63	3.64	5.66	7.30	
I. Makanan/Food	7.29	10.04	6.32	2.05	13.59	6.13	3.48	15.26	1.77	6.12	10.39	
II. Perumahan/Housing	14.33	12.91	12.80	7.03	4.58	15.52	13.64	14.50	3.58	6.36	3.97	
III. Sandang/Clothing	3.39	4.31	3.00	3.32	9.47	3.81	2.14	5.02	2.72	3.38	9.18	
IV. Aneka barang jasa/other goods and services	11.79	16.29	10.84	5.52	5.77	13.05	14.07	8.81	7.78	4.95	5.42	

Catatan/Note : 1) Januari/January - Desember/December
 2) April/April - Maret/March
 3) Kumulatif persentase perubahan indeks selama 9 bulan/
 Cumulative percentage change of index during nine months.

Gambar 9.4 Laju Inflasi Gabungan 17 Kota Di Indonesia
 Figure Inflation Rate Grouped of 17 Cities in Indonesia
 (April/April 1977 - Maret/March 1978 = 100)
 1982 - 1986



(3) 建設業界の動き

インドネシア建設業界のここ8年間（1979～86）の動きを追ってみると次のようになる。

(ジャカルタ)

年	総売上高 (×10億ルピア)	年間伸び率 (%)	GDPに占める 割合 (%)
1979	1,789.7	41.0	5.59
80	2,523.8	23.5	5.55
81	3,117.8	12.5	5.77
82	3,507.2	26.4	5.88
83	4,433.7	26.4	6.23
84	4,393.8	-0.9	5.62
85	4,508.0	2.6	5.64
86	4,497.6	-0.2	5.45

表をみてわかるように建設業界は順調な伸びを示していたが、ここ最近、建設ブームは頭打ちで、特にジャカルタでその傾向が著しい。

(4) 施設用途別、建物総床面積

TABEL : 18 LUAS LANTAI DARI PEMBUATAN GEDUNG YANG DISELESAIKAN
FABLE : 18 DAN SIAP DIPAKAI DALAM TAHUN 1985, MENURUT TUJUAN
PENGUNAANNYA.
TOTAL FLOOR AREA OF BUILDING CONSTRUCTION AND READY
FOR USE DURING 1985, BY TYPE OF BUILDING.

Tujuan Penggunaan Gedung Direction of Building Use	Luas Lantai Floor Area (m ²)
(1)	(2)
1. Bangunan Tempat Tinggal / Residential Building	367.197
2. Gedung Perkantoran / Office Building	1.022.559
3. Fabrik/Industri / Factory	305.398
4. Pusat Perdagangan & Toko / Business Centre & Shops	82.866
5. Gudang / Warehouses	101.620
6. Rumah Sakit, Poliklinik, Puskesmas dan sejenisnya / Hospital, Clinic, Public Health Centre, etc..	9.450
7. Bangunan untuk Pendidikan / Educational Premises	246.135
8. Mesjid, Gereja dan Rumah ibadah lainnya / Religious Premises	23.782
9. Hotel, Losmen dan Tempat Penginapan lainnya / Hotel and Inn Building	13.300
10. Gedung Bioskop / Cinema Building	15.140
11. Gedung tempat hiburan dan gedung olah raga lainnya / Entertainment and other sport building	46.490
12. Lainnya / Others	60.900
Jumlah / Total	2.294.837

2-2 指数 (A・B)

(1) コストインデックス

INDEKS HARGA
PRICE INDEXES

Table
Tabel : 1.18.

Angka Indeks Harga Perdagangan Besar¹⁾ Bahan Bangunan/Konstruksi menurut jenis
Konstruksi/Bangunan Indonesia
Wholesale Price Index of Construction materials by type of construction, Indonesia
(1983 = 100)

Jenis Bangunan/Type of Construction	Rata-rata/Average										
	1983		1984		1985		1986		1987		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
1. Bangunan Tempat Tinggal dan Bukan Tempat Tinggal / Residential and Non Residential Building (21)	100	107	112	119	122	127	128	130	131	132	
2. Pekerjaan Umum untuk Pertanian / Public Works in Agriculture (17)	100	109	115	121	123	127	128	129	130	132	
3. Pekerjaan Umum untuk jalan, jembatan, dan Pelabuhan / Public Works on Road, Bridge and Port (16)	100	108	114	120	124	128	129	131	132	132	
4. Bangunan dan Instalasi Listrik, Gas, Air Minum dan Komunikasi / Construction of Electricity, Gas, Water and Communication (19)	100	107	111	117	121	128	132	134	134	135	
5. Bangunan Lainnya / Other Building (21)	100	108	113	119	124	128	130	132	132	134	
Umum / General (21)	100	108	113	119	123	127	129	131	132	132	

Catatan : Angka dalam tanda kurung () pada kolom jenis bangunan menunjukkan banyaknya kelompok barang yang mewakili didalamnya.
1) Berdasarkan formula Laspeyres.

Note : Figures within brackets () under column type of construction indicate the number of groups represented in that type of construction.
2) Based on Laspeyres formula.

2-3 労務 (A・C)

(1) 労務賃金

The List of Labor Cost

(Dec. 1987&Jan. 1988)

description	unit	price	
		floor	ceiling
worker	1 person/day	3,000	3,500
foreman	"	5,000	6,000
carpenter	"	5,000	6,500
iron smith	"	4,000	5,000
bricklayer	"	4,500	6,000
electrician	"	5,000	6,000
painter	"	4,500	5,000
furnance watch	"	4,000	5,000
smith foreman	"	6,000	7,000
digger	per- \square	2,000	2,500

(2) 現地の一般状況

実際に支払われる賃金は複雑で、地域間、都市部と農村、人種、大小企業などにより非常に大きな格差がある。賃金について一般的に次のような特徴があげられる。

- 賃金は現金給与と現物給与の2本立てが通例であるが、最近では現物給与が少なくなってきた。
- 諸手当の比重が大きく（医療補助、交通手当、食事手当、勤勉手当など）賃金はこれらの合計と考える必要がある。
- 単純な未熟練労働と技術、事務労働の格差が非常に大きい。又、熟練労働者が不足している場合は賃金がきわめて高くなる。
- 最高給与と最低給与との格差が大きい。
- 業種別、地域別の格差が大きい。

このように労務費を算定するには個々のケース毎に特殊事情を考慮して判断する必要がある。

(2) 労務率掛

: 現地聴き取り調査による。調査対象は P.29 参照。

Labour Constants

It is assumed that one working day includes 8 hours.

No.	TRADE	APPLICATION	AVERAGE-OUTPUT PER MAN-DAY	A(M)	B(L)	J(L)
1.	Excavation	hand excavation 2m deep foundation base		1.20 /m ³ /md	2.00 /m ³ /md	0.60 /m ³ /md
2.	Concreting	using a mixer reinforced concrete floors incl. mixing, transport & placing		0.40 /m ³ /md	0.60 /m ³ /md	0.12 /m ³ /md
3.	Form Work	floor slab		2.00 /m ² /md	3.00 /m ² /md	1.40 /m ² /md
4.	Reinforcement Steel Work	columns steel fixing		0.08 /t/md	0.10 /t/md	0.05 /t/md
5.	Brick Work	one brick wall common bricks		3.00 /m ² /md	2.00 /m ² /md	1.20 /m ² /md
6.	Plastering to Wall	20mm thick		3.00 /m ² /md	2.50 /m ² /md	0.60 /m ² /md

(3) 工事保険

: 現地態さ取り調査による。調査対象は D.29 参照。

Construction Insurance

It is assumed that this constructio site is located in the central area of the dity and the total floor area is 3,000 m².

No.	Item	Unit	A (M)	B (L)	J (L)
1.	Building construction insurance: (What percent of the total contract price do you allow?)	%	0.03 C.A.R. insurance (Construction All Risk Ins.)	0.3	0.2 of the total construction price
2.	Liability insurance: (What percent of the total contract price do you allow?)	%	included in item no. 1	0.25	—
3.	Worker's liability compensation insurance: (What percent of the total wage do you allow?)	%	0.5	0.2	0.2 of the total contract price
4.	Automobile insurance: (What percent of the insured amount do you allow?)	%	1.5-2 from total price of equip/machine, etc.	3 per year	3.5 of the procurement price
			Property damage insurance: 0.5 %	Construction equipment insurance: 0.75 %/year	
				Contractor's All Risk (CAR) (incl. Third Party Liability and Workmen Compensation) 0.45 %	

2-4 資材及び建設機械 (A・D)

(1) 資材費

TABEL : 9.5.12. ANGKA INDEKS HARGA PERDAGANGAN BESAR
BAHAN BANGUNAN/KONSTRUKSI¹⁾
TABLE : WHOLESALE PRICE INDEXES OF CONSTRUCTION
MATERIALS¹⁾
1983-1986
(1975 = 100)

KELompok BARANG GROUPS		1983	1984	1985 r)	1986 ²⁾
(1)	(2)	(3)	(4)	(5)	(5)
1. Kayu gelondongan/Logs	(2)	267	280	292	115
2. Kayu gergajian/Sawn timber	(2)	303	324	343	116
3. Bambu/Bamboo	(1)	283	292	307	111
4. Hasil-2 penggalian/Quarrying	(4)	286	313	338	123
5. Aspal/Asphalt	(1)	287	310	344	127
6. a. Permadani/Carpets, Rugs	(1)	225	252	254	114
b. Serat tali keras/ Ropes, Gunny bag, other	(1)	225	237	253	116
7. Hasil-hasil olahan kayu/ Wood processing products	(1)	197	208	211	109
8. Cat & sejenisnya/Paints	(1)	214	241	259	130
9. Barang-barang tembikar/ Ceramics	(1)	168	170	176	106
10. Kaca/Glass	(1)	234	247	258	116
11. Barang-barang dari tanah liat/Structural Clay Products	(3)	214	228	238	115
12. Semen/Cement	(1)	240	264	278	120
13. Barang-barang mineral bukan logam/Other Non Metallic Mineral products	(3)	205	213	219	110
14. Barang-barang dari logam besi/Iron & Steel basic Industries	(4)	198	207	220	115
15. Barang-barang dari logam bukan besi/Non Ferrous basic metal Industries	(3)	259	284	314	129
16. Barang-barang konstruksi lo- gam/Structural Metal Products	(2)	214	228	234	112
17. Barang logam lainnya/Other Fabricated Metal Products	(2)	164	169	172	106
18. Mesin-mesin kecuali listrik/ Non Electrical Machineries	(2)	139	158	160	119
19. Mesin-mesin listrik/ Electrical Machineries	(2)	208	228	245	123
20. Mesin-mesin lainnya/Other Machineries	(2)	264	316	347	134
21. Alat-alat listrik/Electrical Apparatus	(1)	274	291	302	116

Catatan/Note : - Angka dalam tanda kurung () pada kelompok barang menunjukkan banyaknya item yang dihimpun didalamnya/Figures within brackets () under column group indicate the number of items included in that group

- 1). Berdasarkan Indeks tak tertimbang (rata-rata relatif harga)
Based on Unweighted price index (price relative average)
 - 2). Rata-rata 9 bulan/Average of 9 months
- Mulai tahun 1986 IHPB bahan bangunan & Konstruksi menggunakan tahun dasar 1983 = 100

(2) 建設機械

: 現地聴き取り調査による。調査対象は p.29 参照。

Machinery Hired by Contractor

It is assumed that this machinery is acquired on a lease basis.

No.	ITEM	COST /DAY (Rp)		
		A(M)	B(L)	J(L)
1.	Motor lorry, not exceeding 5 tons	65,000.00 /day (truck)	2,500.00 /hr.	135,000.00 /day
2.	Concrete mixer 10/7	350L: 25,000.00 /day 500L: 40,000.00 /day	10,000.00 /hr.	32,500.00 /day
3.	Bar machine hand operated	6,500,000.00 /day (purchase)	1,000.00 /hr.	13,000.00 /day
4.	Mechanical excavator with single equipment	300,000.00 /day	35,000.00 /hr. (Backhoe 0.7 m ³)	350,000.00 /day (0.6 m ³ 3/4 CY)
5.	Crane	350,000.00 /day mobile 40 ton	40,000.00 /hr. 25 ton	500,000.00 /day 20 ton

- Note: *
1. Minimum rental hour per month is 200 hours.
The rental rate includes:
 - a. operator
 - b. lubricants
 - c. spare parts
 2. The rental rate excludes:
 - a. fuel
 - b. Mobilization and Demobilization of equipment
 - c. Food allowance for operator = Rp. 5,000.00/day
 - d. Accomodation for operator
 - e. VAT = 10%

2-5 工法 (A・E)

(1) 建築工法

: 現地聴き取り調査による。調査対象は p.29 参照。

METHODS OF CONSTRUCTION

- 1) Can you point out any special information which is crucial to designing a building for this country?

Specific Indonesian style like the Islamic rules, customs and the climate to be considered.

- 2) What is the main structure for the following buildings? (R.C., Steel, Brick, etc.)

- a) Housing - R.C. with brick wall
- b) Major Public Works Departmental Buildings - R.C.

- 3) What is the general construction method for each of the following trades? (ie. What equipment, labour, technology and materials are utilized?)

- a) Scaffolding Timber, bamboo (for highrise : steel frame scaffolding)
- b) Excavating Manpower (back hoe for deeper excavation)
- c) Concrete work Concrete bucket, embel (concrete pump for highrise building)
- d) Form work Plywood, timber.
- e) Reinforcement steel Round bar is common.
- f) Brick work Red brick with mortar finish.
- g) Roofing Asbestos cement sheet, roof deck, monier.
- h) Internal finishes Terrazo tile, ceramic tile, plywood ceiling.
- j) Electricity PLN power supply and stand-by generator.
- k) Plumbing High elevated water tank system, deep well.
- l) Air-conditioning Split type Air-con., package type Air-con.

(1) 入札及び契約

: 現地聴き取り調査による。調査対象は p.29 参照。

TENDERING AND CONTRACTING PROCEDURE:

1) What is the basic method of tendering and contracting for a public service project?

- An invitation to Prequalify, advertised in newspapers.
- A period of 1-3 months to prepare and submit Prequalification Documentation.
- A Tender call to prequalified contractors.
- Submission of Tender Documents.
- Evaluation and negotiation with selected contractors.

2) What is the standard method of tendering? (ie. selective or open tendering)

Selective tendering based on contractors passing a prequalification process.

3) Who acts as the Contract Manager in the case of a public service contract? (ie the contractor or a public servant)

A public servant referred to as the "Pemimpin Proyek".

For the Public Works Department:

1) Could you please provide us with an organizational chart of the Public Works Department, including descriptions of the individual positions and the number of staff involved.

2) What is the overall budget for the department for one years term?

What is the amount of the workload (ie. number of projects)?

The budget for 1988 has been restricted to maintain existing projects. New civil works may be only those involving bridges and roads.

2-7 統計及び経済指数 (A・G)

(1) 経済指数

TABEL 9. INDEKS PERKEMBANGAN PRODUK DOMESTIK BRUTO ATAS DASAR HARGA YANG BERLAKU
MENURUT LAPANGAN USAHA, (1983 = 100,00)
TABLE 9. INDEX OF GROSS DOMESTIC PRODUCT AT CURRENT MARKET PRICES BY INDUSTRIAL
ORIGIN, (1983 = 100,00)

Lapangan Usaha Industrial Origin	1983	1984 ^a	1985 ^a	1986 ^{**}
(1)	(2)	(3)	(4)	(5)
1. Pertanian, Peternakan, Kehutanan dan Perikanan Agriculture, Livestock, Forestry and Fishery	100,00	114,91	126,65	140,83
a. Tanaman bahan makanan Farm food crops	100,00	114,01	124,45	137,44
b. Tanaman perkebunan rakyat, Farm nonfood crops	100,00	119,34	129,79	152,68
c. Tanaman perkebunan besar Estate crops	100,00	158,01	190,41	213,67
d. Peternakan dan hasil-hasilnya Livestock and products	100,00	110,80	138,35	152,04
e. Kehutanan Forestry	100,00	94,45	94,23	97,82
f. Perikanan Fishery	100,00	112,54	130,67	145,77
2. Pertambangan dan penggalian Mining and quarrying	100,00	114,45	110,28	76,90
a. Minyak dan gas bumi Crude petroleum and natural gas	100,00	115,46	110,45	74,98
b. Pertambangan dan penggalian Others	100,00	92,75	106,59	118,06
3. Industri pengolahan Manufacturing industries	100,00	134,96	154,83	169,28
a. Industri pengolahan nonmigas Manufacturing without petroleum and gas	100,00	124,77	138,75	156,49
b. Pengilangan minyak bumi Petroleum refinery	100,00	483,54	1 191,50	1 435,70
c. Gas alam cair/LNG	100,00	144,65	136,51	124,13
4. Listrik, gas dan air minum Electricity, gas and water supply	100,00	124,97	149,02	163,65
5. Bangunan Construction	100,00	103,47	115,33	114,04
6. Perdagangan, hotel dan restoran Trade, hotel and restaurant	100,00	116,35	121,25	133,91
a. Perdagangan besar dan eceran Wholesale and retail trade	100,00	115,06	120,34	133,29
b. Hotel dan restoran Hotel and restaurant	100,00	119,55	127,15	137,92
7. Pengangkutan dan komunikasi Transport and communication	100,00	128,52	154,58	160,68
a. Pengangkutan Transport	100,00	124,84	149,94	154,91
b. Komunikasi Communication	100,00	176,29	214,74	235,67
8. Bank dan lembaga keuangan lainnya Banking and other financial intermediaries	100,00	132,00	137,43	160,82
9. Sewa rumah Ownership of dwelling	100,00	116,01	124,53	134,14
10. Pemerintahan dan pertahanan Public administration and defence	100,00	113,28	138,76	145,45
11. Jasa-jasa Services	100,00	123,90	133,25	137,79
12. Produk Domestik Bruto Gross Domestic Product	100,00	118,12	128,22	130,93

^a Angka diperbaiki/Revised figures

^{**} Angka sementara/Preliminary figures

2-8 地域差 (A・L)

(1) 地域別工事件数、契約総額

TABEL
TABLE : 15

BANYAKNYA PROYEK, NILAI KONTRAK DAN NILAI PEKERJAAN YANG DISELESAIKAN MENURUT LOKASI PROYEK DALAM TAHUN 1985.
NUMBER OF PROJECT, VALUE OF CONTRACT AND VALUE OF WORK COMPLETED BY LOCATION DURING 1985.

(Ribuan Rupiah / Thousand Rupiahs)

Lokasi Proyek/Provinsi Location of Project/Province	Banyaknya Proyek Number of Project	Nilai Kontrak Value of Contract	Nilai pekerjaan yang diselesaikan Value of work completed
(1)	(2)	(3)	(4)
1. Daerah Istimewa Aceh	32	49.403.174	24.192.119
2. Sumatera Utara	41	135.196.608	41.992.288
3. Sumatera Barat	64	34.096.474	18.150.126
4. R i a'u	55	74.496.942	32.221.790
5. J a m b i	7	4.951.700	2.521.654
6. Sumatera Selatan	33	42.876.739	20.277.188
7. Bengkulu	17	54.015.887	31.177.509
8. Lampung	47	51.896.738	35.162.608
9. D.K.I. Jakarta	709	1.033.568.494	426.250.428
10. Jawa Barat	276	360.383.180	183.933.128
11. Jawa Tengah	146	236.901.015	122.908.491
12. Daerah Istimewa Yogyakarta	36	43.536.461	24.869.708
13. Jawa Timur	250	300.245.811	150.650.828
14. B a l i	34	24.353.681	15.538.144
15. Nusa Tenggara Barat	20	15.472.997	10.458.368
16. Nusa Tenggara Timur	31	16.289.092	10.908.480
17. Timor Timur	20	9.171.439	5.052.043
18. Kalimantan Barat	16	18.056.755	6.314.938
19. Kalimantan Tengah	3	1.699.120	500.263
20. Kalimantan Selatan	46	47.909.413	23.847.571
21. Kalimantan Timur	14	11.844.446	9.981.098
22. Sulawesi Utara	8	13.816.891	6.386.214
23. Sulawesi Tengah	54	36.265.023	15.438.665
24. Sulawesi Selatan	40	62.370.192	23.188.579
25. Sulawesi Tenggara	10	12.185.624	4.940.592
26. M a l u k u	11	3.920.969	3.414.991
27. Irian Jaya	18	17.995.185	10.398.516
J u m l a h / T o t a l	2.038	2.712.920.050	1.260.676.327

(2) 地域別労働力

TABEL : 3.2.1. TINGKAT PARTISIPASI ANGKATAN KERJA (TPAK)
 MENURUT PROVINSI
 LABOR FORCE PARTICIPATION RATE
 BY PROVINCE
 1971, 1980, 1982, 1985

PROVINSI / PROVINCE	1971	1980	1982	1985
(1)	(2)	(3)	(4)	(5)
1. Daerah Istimewa Aceh	48.07	46.60	55.2	52.8
2. Sumatera Utara	54.31	52.25	52.0	52.5
3. Sumatera Barat	47.73	46.22	50.8	50.2
4. Riau	49.83	46.71	44.9	48.5
5. Jambi	54.25	50.91	49.2	52.2
6. Sumatera Selatan	53.10	51.75	53.5	53.2
7. Bengkulu	55.94	54.79	62.2	58.8
8. Lampung	51.43	50.04	48.4	53.4
9. D.K.I. Jakarta	43.23	42.72	42.5	42.6
10. Jawa Barat	46.39	45.04	51.2	48.2
11. Jawa Tengah	54.00	54.69	59.1	57.1
12. D.I. Yogyakarta	56.86	58.61	67.5	61.1
13. Jawa Timur	54.50	52.75	56.6	56.4
14. Bali	51.22	53.50	61.3	61.1
15. Nusa Tenggara Barat	50.41	49.69	63.0	51.6
16. Nusa Tenggara Timur	62.36	52.79	61.2	61.2
17. Kalimantan Barat	60.37	57.68	61.6	58.2
18. Kalimantan Tengah	45.71	57.54	58.7	58.2
19. Kalimantan Selatan	50.84	51.47	53.4	57.3
20. Kalimantan Timur	45.18	44.47	50.9	56.8
21. Sulawesi Utara	44.69	44.95	48.2	51.8
22. Sulawesi Tengah	53.22	49.23	53.3	48.4
23. Sulawesi Selatan	40.82	39.15	40.3	53.4
24. Sulawesi Tenggara	54.29	44.47	55.2	42.9
25. Maluku	45.33	42.00	45.3	57.0
26. Irian Jaya	44.76	48.20	44.1	48.7
27. Timor Timur	-	-	46.5	59.6
INDONESIA	51.25	49.98	54.0	53.0

Catatan : - Data tahun 1971 dan 1980 merupakan hasil Sensus Penduduk
 Notes 1971 and 1980 data are population censuses results
 - Data tahun 1982 adalah SAKERNAS 1982/1982 National Socio Economic Survey
 - Data tahun 1985 adalah SUPAS 1985/1985 International Population Survey

3. 現地建設事情についての刊行物の概要 (B)

(1) 出版刊行物リスト

1) 統計局による資料

1. Economic Census 1986 (Volume 1)
(Large and Medium Manufacturing Industries Statistics)
2. " (Volume 2)
3. " (Volume 3)
4. Provincial Income in Indonesia 1979~1984
5. Statistical Yearbook 1986
6. Economic Census 1986
Building/Construction Statistics
7. National Income of Indonesia 1983~1986
8. The Indonesia Social Accounting Matrix 1986
9. Monthly Statistical Bulletin Nov. 1987
10. 7 Macam Bahan Bangunan (建設資材単価)
11. Statistik Pendidikan 1984/1985 (教育統計)
12. Harge Perdagangan Besar Beberapa Propinsi (地域別商品価格)
13. Perkembangan Harge Perdagangan Besar 1987 (地域別商品価格の変動)

2) その他の資料

建設資材単価表 (現本)

3) 現地公共工事発注機関 (P・W・D) による資料

1. Daftar Rekanan Hampu (建設会社、コンサルタント登録表)
2. " (")
3. " (")
4. Decree of The Minister of Public Works
5. Sample Documents Procurement of International Consulting Services
6. Sample Documents Procurement of Construction of Works
International Competitive Budding Unit Price Contract
7. Guidelines to Prepare Technical Evaluation Criteria
for the Selection of Local Consultant Services
8. Standard Procurement Document for Local Consultant Services

(2) 情報及び刊行物の入手方法

: 現地聴き取り調査による。調査対象は D.29 参照。

WHERE CAN WE LOCATE THIS INFORMATION & PUBLICATIONS :

- 1) **General economic conditions statistical information.**
(eg. Gross Domestic Product, Inflation, Exchange Rate, Employment Rate, Wage Rate, Interest Rate, Industrial Production Index, Consumer Price Index, etc.)
Departemen Keuangan - Bagian Analisa Kredit dan Neraca Pembayaran Luar Negeri.
- 2) **Construction industry statistical information.**
(eg. Ratio of Public/Private Construction Activities, Materials Prices, Employment in the Construction Industry, Wage Rates)
Pusat informasi Teknik Pembangunan (Dept. P.U.)
- 3) **Construction cost statistical information.**
(eg. Past records of Construction Costs, Price Book)
Pusat informasi Teknik Pembangunan - Jl. Iskandarsyah 65 A 770465 , 717497.
- 4) **Publications of guidelines for procurement of public projects.**
(eg. Standard Conditions of Contract, Standard Method of Measurement for Building Works, Public Service Standing Order)
Bappenas - Biro Monitoring Pelaksanaan Proyek-proyek Pembangunan
- Biro Pembiayaan Proyek-proyek Pembangunan.

4. 実績コスト調査 (F)

(1) 延床面積当り建築単価及び工期

: 現地聴き取り調査による。調査対象は p.29 参照。

Local Construction Cost per m² & Estimated Construction Period

It is assumed that the construction methods and the buildings finishings are made according to local standards. The building is 1,000 m² in size and 2 stories in height. The building includes utilities, but excludes furnishings and air-conditioning.

No.	ITEM	STRUCTURE	COST/M ² (Rp)		
			MONTH		
			A(M)	B(L)	J(L)
1.	Office Building	R.C.	150,000.00 /m ² 3 mo.	375,000.00 /m ² 10 mo.	1,500,000.00 /m ² 7 mo.
	"	Brick	50,000.00 /m ² 2 mo.	350,000.00 /m ² 10 mo.	1,450,000.00 /m ² 7 mo.
	"	Steel	175,000.00 /m ² 6 mo.	360,000.00 /m ² 8 mo.	1,600,000.00 /m ² 7 mo.
2.	House	R.C.	75,000.00 /m ² 3 mo.	270,000.00 /m ² 6 mo.	1,500,000.00 /m ² 7 mo.
	"	Brick	70,000.00 /m ² 2 mo.	250,000.00 /m ² 6 mo.	1,100,000.00 /m ² 7 mo.
	"	Wood	100,000.00 /m ² 3 mo.	220,000.00 /m ² 6 mo.	900,000.00 /m ² 6 mo.

5. 詳細コスト分析 (G)

: 現地聴き取り調査による。調査対象は p.29 参照。

(1) 仮設設備価格

Site Facilities (Services)

No.	ITEM	APPLICATION	COST/UNIT (Rp)		
			A(M)	B(L)	J(L)
1.	Power Supply	basic monthly	-- /mo.	230,000.00 /mo. For consumption 100 KVA	2,900.00 /KVA +300 KVA
		cost/hour	175,000.00 /KWH	12,250.00 /KWH	205.00 /KWH 8PM - 6AM 130.00 /KWH 6AM - 8PM
2.	Water	basic monthly	-- /gal	1,000.00 /mo.	19,500.00/m ³ /mo.
		cost/gallon	5,000.00 /m ³	600.00 /m ³	650.00 /m ³ 400.00 /m ³ deep well
3.	Telephone	basic monthly	-- /mo.	3,500.00 /mo.	7,500.00 /mo.
		local/minute	75.00 /pulse 1 pulse/3 min	35.00 /each 1 pulse/3 min	35.00 /pulse
4.	Telex	basic monthly	--	7,500.00 /mo.	7,500.00 /mo.
		Installation to site office	6,500,000.00/inst.	6,000,000.00/inst.	26,000.00 /inst.

*Note: B(L): Rate does not include connection cost.

(2) 仮設建物及び敷地測量

Preliminaries

It is assumed that the project site is to be located in the central area of the city and the total floor area is 3,000 m².

NO.	ITEM	COST/UNIT (Rp)		
		A(M)	B(L)	J(L)
1.	<u>Temporary Site Office</u> Temporary site office for the Contractor and Consultant's representatives (10m x 8m).	80,000.00 /m ² (excl. M.E. works and A/C)	100,000.00 /m ² (Excl. AC & Furniture)	150,000.00 /m ²
2.	<u>Temporary Storage Shed</u> Temporary site storage shed for construction materials (6m x 10m).	50,000.00 /m ²	60,000.00 /m ²	90,000.00 /m ²
3.	<u>Temporary Enclosures</u> Barbed wire with wooden pol H=1.8m at 1.8m intervals.	6,000.00 /m	5,000.00 /m*	21,000.00 /m
4.	<u>Site Survey</u> The boundaries of the plot shall be determined and marked out.	500.00 /m ²	500.00 /m ²	1,500.00 /m ²

*NOTE: Wooden pole H=1.8m at 1.8m intervals covered with galvanised corrugated sheet BJLS 0.15 and painted -Rp. 10,750.00/m.

6. 現行通用価格及び複合単価 (H)

: 現地聴き取り調査による。調査対象は D.29 参照。

(1) 資材単価

Construction Materials Cost

Assumption: These prices should include the delivery and unloading costs to the specific site.

No.	ITEM	APPLICATION	PRICE /UNIT (Rp) A(M)	B(L)	J(L)
1.	Portland Cement		85,000.00 /ton	82,000.00 /ton	90,000.00 /ton
2.	Course aggregate	gravel	13,000.00 /m ³	11,500.00 /m ³	17,000.00 /m ³
3.	Sand	river sand	14,000.00 /m ³	12,000.00 /m ³	16,000.00 /m ³
4.	Reinforcement steel bars	round bar 20φ	575,000.00 /ton	550,000.00 /ton 160 up to 250	630.00 /ton
5.	"	ribbed bar 20φ	615,000.00 /ton	570,000.00 /ton 160 up to 250	670.00 /ton
6.	Brick	common brick one-brick thick	50,000.00 /1000 pcs.	38,000.00 /1000 pcs.	47,000.00 /1000 pcs.
7.	"	facing bricks one-brick thick	225,000.00 /1000 (52x115x240)pcs. 315,000.00 /1000 (71x115x240)pcs.	45,000.00 /1000 pcs.	220,000.00 /1000 pcs.
8.	Timber	hardwood	375,000.00 /m ³	285,000.00 /m ³ kamper wood	2,600,000.00 /m ³
9.	Plywood		9,500.00 /m ²	2,800.00 /m ² 6mm 3,385.00 /m ² 9mm 6,015.00 /m ² 12mm	6,780.00 /m ²
10.	Plaster	finish plaster	3,700.00 /m ²	2,100.00 /m ²	650.00 /m ²
11.	Glazing	float glass	15,000.00 /m ²	12,000.00 /m ² (5mm thick)	18,000.00 /m ²
12.	Paint	emulsion paint	7,600.00 /l	2,200.00 /l	13,000.00 /l

(2) 資材状況

MATERIALS AND EQUIPMENT:

1) What is the standard method of procurement?

Via contact with established suppliers for specific materials.

2) What materials utilized in this country are usually imported? And from what countries are they imported?

- PVC tile (from Japan)
- Accoustic ceiling (ditto)
- Gypsum board (Australia)
- Granite (Italy)
- Air-conditioner (from Japan)
- Generator (from Japan)
- Switch component (from Japan)

3) Are main structural materials (such as, cement, aggregate, bricks, timber, etc.) available locally?

Yes.

4) Are there shortages of any necessary materials within this country?

If so, what do you suggest as an option?

Steel bar, steel H-beam plate.

We suggest to import from other country with low import tax.

5) What standards for materials and equipment are prevailing in this country?

Local steel bars are considered to be of lower quality and expensive.

6) Is there an index of the main structural materials for this country?

If so, where can this index be acquired?

(3)-1 勞務賃金

Situation of Labor Cost

1) "All in rates" labour items:

	A(M)	B(L)	J(L)
A) GUARANTEED MINIMUM WEEKLY EARNINGS			
1) Basic rate	--	(Common Labour C) Rp. 3.000,-	--
2) Guaranteed minimum bonus (or Contractor's bonus allowance)	--	none	--
B) ANNUAL EMOLUMENTS			
1) Inclement weather		include	
2) Non-productive overtime	--	not include	--
3) Sick pay		none	
4) Trade supervision		none	
5) Working rule agreement		with gangman	
C) OVERHEADS IN EMPLOYING LABOUR			
1) C.L.T.B. Training contribution		none	
2) National insurance contribution		not include	
3) Annual holiday credit	--	none	--
4) Public holiday credit		none	
5) Severance payments and sundry costs		none	
6) Employers liability		none	

(3)-2 勞務賃金

Situation of Labor Cost (cont'd)

No.	ITEM	GRADE	RATING	WAGE/DAY (Rp)		
				A(M)	B(L)	J(L)
2)	Trade Name					
1.	Common Labourer		A	3,500.00 /day	3,750.00 /day	8,250.00 /day
			B	3,250.00 /day	3,500.00 /day	6,750.00 /day
			C	3,000.00 /day	3,000.00 /day	5,250.00 /day
2.	Carpentry	(A) Master carpenter	A	6,000.00 /day	6,500.00 /day	10,500.00 /day
		(B) Skilled helper	B	5,500.00 /day	5,000.00 /day	9,000.00 /day
		(C) Unskilled helper	C	5,000.00 /day	4,000.00 /day	7,500.00 /day
3.	Masonry	(A) Master mason	A	5,500.00 /day	6,000.00 /day	10,500.00 /day
		(B) Skilled helper	B	5,000.00 /day	4,500.00 /day	9,000.00 /day
		(C) Unskilled helper	C	4,000.00 /day	4,000.00 /day	7,500.00 /day
4.	Electrician	(A) Master electrician	A	7,500.00 /day	8,500.00 /day	18,000.00 /day
		(B) Skilled helper	B	6,000.00 /day	7,000.00 /day	13,500.00 /day
		(C) Unskilled helper	C	5,000.00 /day	6,000.00 /day	10,500.00 /day

Note: Comparative Rating of Worker's Skills and Wages

Above Average..... A

Average B

Below Average C

*.....per 7 hours

Note: 1) The above rates included:

- a. Food allowance
- b. Medical allowance
- c. Annual holiday credit
- d. Transportation allowance
- e. Living allowance

3) Overtime rate per hour:

- a. First two hours 150% basic hourly rate.
- b. In excess of the first two hours, 200% of basic hourly rate.

2) The above rates excluded:

- a. Workmen insurance (Astek)
- b. Overtime

(3)-3 勞務賃金

Wage of Engineers

NO.	ITEM	WAGE/MO. (Rp)		
		A(M)	B(L)	J(L)
1.	Accountant of site office	400,000.00 /mo.	1,000,000.00 /mo.	1,200,000.00 /mo.
2.	Draftsmen	250,000.00 /mo.	400,000.00 /mo.	800,000.00 /mo.
3.	Secretary	200,000.00 /mo.	500,000.00 /mo.	800,000.00 /mo.
4.	Junior architect	600,000.00 /mo.	700,000.00 /mo.	1,200,000.00 /mo.
5.	Junior mechanical engineer	600,000.00 /mo.	700,000.00 /mo.	1,200,000.00 /mo.

NOTE: * Jakarta area
** B(L): 1. The above wages include:
- personal income tax
- bonus
- medical allowance
2. The above wages exclude:
- overtime
- accomodation allowance
- transport allowance
*** J(L): Local staff

7. 参照用索引 (Z)

(1) 参照刊行物

1. Statistical Yearbook 1986
2. Economic Census 1986
Building/Construction Statistics
3. National Income of Indonesia 1983~1986
4. Monthly Statistical Bulletin (Nov 1987)

(2) 現地調査対象者リスト

INDONESIA QUESTIONNAIRE COMPANY LIST

- A(H) P. T. Murinda Iron Steel
B(L) P. T. Pembangunan Perumahan
J(L) P. T. Djember Djaja
G(Gov't) Public Works Department(P. W. D)

JICA