

**The 14<sup>th</sup>**

**ASIA CONSTRUCT CONFERENCE**

23-24 October, 2008

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***Indonesia Country Report***

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**PREPARED BY**

**National Construction Services Development Board**

# THE CONSTRUCTION SECTOR OF INDONESIA

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## I. EXECUTIVE SUMMARY

Economy of Indonesia is growing better since the economic turmoil 10 Years ago. This current year, GDP Per Capita At Current Market Prices is US \$ 1,663.0 and GNP Per Capita At Current Market Prices US \$ 1,591.2. The inflation rate is 6.6%. The construction sector contribution to GDP increase from 8,17% in 2004 to 8,9% in 2007. The next coming years, it is expected to account more than 9%. This expectation is applicable since Indonesia is known as the second largest construction market up to 2010 in Asia after China (ENR Singapore, 1997). The market covers infrastructure and property investment both under government spending and or private investment. For this year, the government spending for infrastructure provision accounts for almost 200 Trillion Rupiahs (1 USD= 9,300 IDR) in which for public work projects covering road networks, water resources and human settlement get the public funding almost 35.6 Trillion IDR of all 170 Trillion IDR infrastructure procurement. It was estimated that the construction market of this country for the period of 2005 – 2009 is about 1,200 Trillion IDR (Bappenas, 2005).

## II. MACRO ECONOMY REVIEW & OUTLOOK

### a. Overview of National Economy

The Indonesian economy is growing significantly since it was hit by Asia economic crisis in 1997. Now it is considered to be in stable state and to growth at 6.5%. It shows that GDP at constant price 2006 achieved US\$ 1.663,0 higher than 2005 (US\$ 1.320,6). The growht of GDP without oil and gas in 2006 achieves 6.1 %. Most of GDP is used to household consumption (62.7%), government expenditure (8.6%), gross fix capital formation (24.0%) and export netto (4.8%). The main sources of th economic growth are export (4.1%) followed by household consumption (1.9%), gross fixed capital formation (0.7%) and import (2.8%) respectively.

The business trend index in fourth quarter of 2006 was 107.3 showing that business condition in general is better than third quarter of 2006. This business condition is growing better since increased revenue due to increasing production capacity and number of working time. Higher business revenue occurs in the finance sector, property and services. The higher increased workforce occurs in the construction sector. The highest business index is 115.35 occuring in the construction sector. It shows that this sector is the most increased sector compared to other sectors. However, the agriculture sector has decreased its index (95.12%). The business trend index during first quarter of 2007 was expected about 108.79. During 2007, business condition is expecting higher than 2006 and in this year, construction sector will have higher index.

Consumer trend index across greater Jakarta during last quarter of 2006 was 106.96 showing economic condition of consumers are in better condition. Increased value of

consumer trend index is due to increasing household income and consumption of main commodities. Higher consumption occurs in the housing expenses (energy and water), transportation, and education, while recreation expenditure decreased. It was expected that economic condition of consumers during 2007 is much better than 2006.

#### b. Main Economic Indicators

The Indonesian economy is in a stable shape towards increased growth. The Indonesian gross domestic product for 2004 in constant 2000 real prices was RP. 1511 Trillion which represents a 1.03% increase on the previous year. To January 2005 the gross domestic product grew at an annual rate of 5.13% in Central Bureau of Statistics data (CBS, Economic Indicators, January 2005). During the same period the consumer price index standing at 118.53 in January 2005 grew by only 1.43 points against 0.57 the previous year (2002=100). The interest on 90-day bank deposit bills was 6.65% in October and the 10-year Treasury Bonds returned 8.31%. Rising cost of materials including that for crude oil leading to an increase in inflation from 5.06% in 2003 to 6.4% in 2004 and the cyclical Rupiah devaluation of 20% against the US\$ has forced the government to instigate minimization of energy consumption, spending and subsidy provisions nationwide. The unemployment rate however, increased from 15% in 2003 to 16% in 2004. Despite current uncertainties about the international economy and the downturn in balance of payments from US\$28.6 Billion in 2003 to 23.5 Billion in 2004, the rate of economic growth is forecast to continue to the end of 2006 at 6.5%, with the domestic economy proving to be relatively resistant to adverse global economic conditions.

The Indonesian economy continued to grow slowly between 1999-2004 after the Asia Economic crisis had affected all sectors in the regions since 1997, but will obviously be affected by what occurs in the global market. Although difficult to predict, the indications for the Indonesian economy are positive for the years after 2004 judging from the information shown in Table 1 This table shows that the Indonesian economy is getting better.

Table 1. Main Economic Indicators

INDICATORS	2003 (Real)	2004 (Real)	2005 (Real)	2006 (Real)	2007 (Proj)	2008 (Proj)
Economic Growth (%)	4.5	5.1	5.6	5.48	6.3	6.6 – 7.0
Construction Growth (%)	12	7.9	9.9	9.0	10.4	10.0 – 10.5
Inflation (%)	5.06	6.4	17.11	6.6	6.5	6.0 – 6.5
Foreign Exchange (Rp/US\$)	8.577	8.921	9.830	9.167	9.300	9.100 - 9.400
SBI-3 months (%)	8.5	7.25	12.83	9.75	8.5	7.5 – 8.0
Oil Price (US\$/barrel)	28.09	36.20	41.00	64.00	63.00	57.00 – 60.00

Source: Bank Indonesia, Finance Department of RI

According to the latest CBS the real gross domestic product (GDP) expanded by 6.17%, indicating that the economy is picking up, as the corresponding value for the previous year was 5.8%. In the past the Indonesian economy was relatively resilient against minor adverse international economic conditions. The control exercised over the relatively long recovery period since the economic crisis of 1997-2000, through

fundamental economic remedies, has provided a good basis for managing the present uncertainties thereby indicating opportunity for gradual expansion and continuing sustained growth in the key sectors of the economy. These include in particular the construction, agriculture, manufacturing and services sectors. In terms of consumption and investment ( not in the table ), for the first half of 2005 compared to the first half of 2004, retail sales at current prices increased by 16%, new capital expenditures by 27% and new government expenditures were up 10%.

**Table 2. Macro Economic Development Indicators**

	2003	2004	2005	2006	2007
<b>GDP and Components</b>					
GDP at constant prices 2000 Rp. Billion	1,423,868	1,511,757	1,750.7	1,846.7	1,963.9
GDP at current prices 2007 Rp. Billion	1,872,432	2,095,409	2,785.0	3,338.2	3,957.4
GDP growth at constant prices 2000 (%)	5.80%	6.17%	5.70%	5.50%	6.30%
Sector growth at constant prices 2000 (%) :	2003	2004	2005	2006	2007
Agriculture, Forestry and Fishing	3.5	4.06	4,166	4,356	4,619
Mining & Quarrying	2.1	4.61	5,116	5,302	5,504
Manufacturing	2	6.19	6,370	6,579	6,761
Services sector	-9.3	5.20	5,366	5,583	5,771
Construction sector	7.7	8.17	8,460	8,747	8,962
<b>Demographic Indicators</b>					
Population (Million)	213.499	215.98	219.852	222.747	225.642
Population Growth Rate (5)	1.160	1,160	1,164	1,178	1,191
Total labor force (Million)	102.541	104.62	106.28	106.39	109.94
Labor force growth rate (%)	2.03	2,05	2,07	2,07	2,10
Unemployment (Million)	10,248	11,801	11.10	10.93	10.01
Unemployment growth rate (%)	9.71	9.86	11.24	10.28	9.11
<b>Financial Indicators</b>					
Short term interest rate (%)	18.69	16.57	16.83	17.58	16.13
Long term interest rate (%)	15.07	13.41	16.23	15.07	13.00
Changes in Consumer Price Index (2007=100)	115.63	124.19	141.50	148.34	155.58
Change against US\$	8,465.00	9,290.00	9,830.00	9,020.00	9,419.00

Source : CBS (2007) & Bank Indonesia (2007)

### III. OVERVIEW OF THE CONSTRUCTION INDUSTRY

#### a. Construction Investment

The construction value completed can be seen in Tabel 3. The Government of Indonesia has expressed her desire to speed up infrastructure development in order to accelerate economic growth to levels of 7.8% through increasing the ratio of Investment to GDP to 28.4% from 19.6%, opening new job opportunities to reduce unemployment and poverty alleviation to 5.1% and 8.2%. The above investment driven development plan can be seen in Table 4 which depicts infrastructure demand between 2005-2009 to be Rp.145 Trillion or US\$15.825 Billion. A more accurate picture can be obtained in Table 5 which illustrates for construction investment and maintenance demand in the Department of Public Works to total Rp.73.59 Trillion; broken into Bina Marga (Roads and Bridges) Rp.21.27 Trillion, Sumber Day Air (Water Resources) Rp.34.53 Trillion, Cipta Karya (Human Settlements) Rp.14.60 Trillion, and Other Public Works Rp.3.18 Trillion.

Table 3. Value of Construction Completed by Type of Construction, 2002 – 2006  
Based on Contract Price

(1,000,000 IDR)

TYPE OF CONSTRUCTION		2002	2003	2004	2005	2006
(1)	(2)	(3)	(4)	(5)	(6)	(6)
1	<i>Residential</i>	4,891,746	6,155,685	4,795,995	7,495,904	9,305,172
2	<i>Non residential</i>	9,653,059	10,547,568	18,581,659	20,701,163	22,069,558
3	<i>Electrical installation.</i>	1,387,860	1,099,642	3,825,819	3,174,567	3,363,393
4	<i>Gas and Water supply installation</i>	193,528	103,114	114,635	431,511	371,544
5	<i>Sanitary installation.</i>	85,996	186,489	69,988	206,000	194,926
6	<i>Foundation</i>	146,339	294,075	353,875	1,155,892	850,095
7	<i>Sound system, AC, lift, etc</i>	85,294	73,855	2,038,887	1,090,505	1,268,817
8	<i>Water supply network</i>	317,420	269,802	447,877	487,919	512,374
9	<i>Oil and Gas pipe network</i>	148,326	314,169	759,422	650,974	648,546
10	<i>Electricity network</i>	665,628	1,679,716	1,559,105	439,088	1,027,867
11	<i>Road and bridge works</i>	9,696,851	10,460,761	15,083,795	18,844,750	19,897,065
12	<i>Irrigation/drainage</i>	2,412,684	2,106,474	4,975,447	3,845,006	4,553,470
13	<i>Electric power supply and Tele-communication Network</i>	132,198	110,385	20,973	2,823,137	1,137,230
14	<i>Construction or improvement of airport, harbor, bus station, etc</i>	728,708	637,340	1,440,669	1,688,968	1,598,572
15	<i>Other construction works</i>	4,534,600	5,011,568	1,936,391	4,282,534	5,144,678

	TOTAL	35,080,237	39,050,643	56,004,537	67,317,918	71,943,309
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Source: CBS (2006)

Table 4. Construction investment plan (2008 – 2009)

MODEL PROJECTS	US\$Million
Central Java Coal Fired Power Plant 2 x 600 MW	1,200
Pasuruan Combined Cycle Power Plant 1 x 500 MW	275
Medan Kuala Namu Tol Road 60 kms	142
Solo Kartosono Tol Road 165 kms	928
Margagiri Ferry Terminal 0.9Million Vehicles, 1.2 Million Passengers	97
Teluk Lamong Seaport (Tanjung Perak Port Expansion)	275
Bandung Water Supply Project	26
Dumai Water Supply Project	44
Tangerang Water Supply Project	37
Palapa Ring Telecommunications Projects 7 ring FO 30000 kms	1,500
Total	4,524

Table 5. Public works investment plan (2008 – 2009) (USD Million)

Public Works	Strategic Plan 2008	Indicative Investment 2008	Strategic Plan 2009	Proposed Investment 2009
Road Networks	8.80	10.02	10.30	11.25
Water Resources	13.20	15.80	15.10	18.73
Human Settlement	5.60	7.13	6.49	7.47
Others	0.88	1.42	0.95	1.77
TOTAL	28.48	34.37	32.84	39.22

#### b. Construction Companies

According to Law No. 18/1999, construction company consists of consulting and contracting company. Consulting company can be designer and also supervisor engineer. Under a new guideline for construction services certification and registration, the number of certified consulting companies was 4,389 firms consisting of 3,280 firms (G1-G2), 824 firms (G3) and 285 firms (G4) and registered by National Board of Construction Services Development (NBCSD) in 2008. In the same year, the number of certified contracting companies was 112,071 firms registered by NBCSD 2008. These contracting companies consist of G1 up to G7 qualification firms. The number of small contracting companies (G1-G3) was 101,293 firms (90%). The number of

medium contracting companies (G4-G5) was 10,083 firms (9%) and the big contracting company (G6-G7) is only 695 firms (1%). Of the figure, 263 Contractors already hold ISO-9000.

The Number of foreign construction companies has been increasing since a couple of years ago. In this year, the number of foreign contracting companies in Indonesia is 79 firms mostly coming from Japan and it is about 67 consulting companies mostly also coming from Japan. In the period of January to July 2007, 19 foreign contractors and 9 consulting firms were endorsed by the government.

**c. Construction Employees and Workforce**

Total number of registered engineers is about 71,969 professional engineers. The following table 6 shows the distribution of certificate held by professional engineers according to their expertise.

Table 6 The Number of Professional Engineer

ENGINEER	QUALIFICATION				TOTAL
	BEGINNER	LOWER MIDDLE	MIDDLE	HIGHER	
Landscaping Designer	333	3,294	756	181	4,564
Civil Engineer	4,799	47,200	14,200	1,508	67,707
Mechanical Engineer	63	1,543	437	44	2,087
Other	33	1,669	288	38	2,028
Electrical Engineer	127	4,328	2,778	361	7,594
Architecture	267	960	1,220	227	2,674

Note: a professional engineer may hold more than one certificate of competence.

The number of workforce working in the construction sector is more than 4 million people in average. The following table 7 shows annual number of construction workers.

Table 7 The number of construction workforce

Year	2001	2002	2003	2004	2005	2006	2007
Construction Labour	3,837,554	4,273,914	4,054,741	4,540,102	4,417,087	4,697,354	5,252,581

Source: CBS (2007)

**d. Construction Productivity**

Productivity in construction varies according to many factors. Current research findings (Wuryanti, 2005) on productivity measurement show different level of productivity in construction works under observation. The following table 8 figures out some findings from productivity analysis of 4 composite columns of reinforce concrete.

Table 8 Some findings of productivity analysis

No	Construction Works	Unit	Man-Minute
01	Steel cutting for reinforce concrete	M <sup>3</sup>	21.90
02	Steel fixing for reinforce concrete	M <sup>3</sup>	28.50
03	Concreting for sloof foundation	M <sup>3</sup>	16.56
04	Formwork dismantling	M <sup>3</sup>	4.10
05	Soil stabilisation under floor	M <sup>2</sup>	36.10
06	Concrete work	M <sup>3</sup>	17.11

Source: Wuryanti (2005)

**e. Construction Cost**

Indonesia is a large country with high diversity. It is very difficult to get a standard figure of construction cost across archipelago. In Jakarta, skill worker may have 100,000 rupiahs daily wage while in other regions such as Yogyakarta only 40,000 rupiahs. It is similar to natural material price such as sand and stone. In Central Java where sand and cobble stone are easier to get, the cost of sand is roughly 70,000 up to 90,000 rupiahs for 1 m<sup>3</sup>. It is quite common to buy a truck of sand which is about 2.5 – 3.5 m<sup>3</sup> will cost about 300,000 up to 350,000 rupiahs.

**f. Export & Import of Construction Services**

The Indonesian construction has been working overseas since 1980s, particularly led by State Owned Contracting Companies such as Waskita Karya, Adhi Karya, Hutama Karya in Asean and Middle East countries. Although, the construction export is not so progressive, it built confident level among construction companies working overseas. The number of construction companies doing export is still less than foreign companies coming in Indonesia.

Current figure shows that most foreign construction companies in Indonesia come from Japan, followed by US, China and then Europe. The companies come over through loan agreement policy and international competitive bidding particularly in the oil and gas sector, power plant projects and large infrastructure projects under loan or grant agreement.

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