

Minding the Builders -- The Plight of Construction Workers and Implications for ASEAN Economic Integration

By Carmel V. Abao
Faculty Member, Department of Political Science
Ateneo de Manila University

Introduction

About the Study. This study is part of a broader research project that seeks to analyze the actual and potential impact of ASEAN economic agreements on workers and unions in Southeast Asia through the lens of workers' rights and interests. Commissioned by global union federations (GUFs) that have organized the ASEAN Service Employees Trade Union Council (ASETUC) and by the Friedrich Ebert Stiftung (FES), a solidarity support organization, it initially covers four sectors: telecommunications, construction, healthcare, and finance.

As part of the abovementioned broader study, this paper attempts to analyze the construction sector in Southeast Asia in relation to regional economic integration that is unfolding under the auspices of the ASEAN. It investigates only eight out of the ten ASEAN countries because it is in these countries that the Building and Wood Workers International (BWI), one of the GUFs active in ASETUC and one of the driving forces behind this research project, has developed a membership base. The "BWI countries" are Indonesia, Malaysia, Philippines, Singapore, Thailand, Cambodia, Laos, and Vietnam.

The paper is divided into three main parts. **Part One** presents facts, figures and trends pertinent to the **construction industry in Southeast Asia**. It is further divided into several sub-sections. Section 1 discusses country-level economic indicators over a fifteen-year period (1994 to 2008). These indicators are important in determining the level, extent, and trend of economic activity in the region's construction sector before, during, and after the 1997 Asian financial crisis and the recent global financial crisis that started in the United States. Section 2 is a mapping of construction companies that are operating in the region. Aside from highlighting the key industry players, the map signals the existing level of investment in construction and points to the economic significance of the sector to the region. Section 3 is an addendum to the previous section: it presents the level of organization of employers in the Southeast Asian region as a whole, and in each of the countries. Finally, Section 4 exhibits the level of public investment in construction, particularly ongoing foreign-funded projects in each of the BWI countries.

Part Two focuses on **construction labor in Southeast Asia**. While labor is an intrinsic part of the construction "industry", it is treated in this paper as a separate subject matter for the practical purpose of organizing information and ideas. This part is also divided into several sub-sections. The first section presents facts and figures of the construction labor market in each of the BWI countries. A list and description of pressing issues and problems faced by construction workers are then presented in the succeeding section. This is followed by a list of trade unions in the construction industry in Southeast Asia, and information about them.

Part Three presents some **conclusions** – based on information presented in preceding parts – that can be directly linked to a number of ASEAN agreements. Some **recommendations** are also offered therein.

This study is primarily sourced from secondary data. It relies heavily on previous studies and “maps” done by the BWI such as (i) “Global Construction and Asian Workers: Expansion of TNCs in Asia and Implications for Labour”, researched and written by Daeoup Chang in 2008, (ii) “Evaluation of the FNV-funded BWI Project on Organizing and Networking Migrant and Cross Border Workers in Asia” conducted and written by this author in 2007, and (iii) “Potential Organizing Strategies in Construction Projects and MNCs Involved in Asian Development Bank, written by Violeta Corral in 2008.

About the Industry. The construction industry involves a wide range of economic activities that can be roughly categorized as housing projects, non-residential building projects, and civil engineering works.¹ Construction enterprises span from the production of goods to the production of services. Enterprises involved in on-site construction offer different specializations in terms of the type of work being done. Building materials and components, and building equipment and machinery are generally purchased or hired from other enterprises. Some companies focus on the supply of design and engineering services.

PART ONE: Facts, Figures and Trends: The Construction Industry in Southeast Asia

Section 1: Some Economic Indicators²

Indonesia

The Indonesian economy grew steadily in the 1990s – somewhere between 7.5 percent - 8.5 percent of GDP growth from 1994 to 1998 -- until it experienced an all-time low at the time of the Asian financial crisis. In 1997, the country’s growth dipped to 4.7 percent in 1997 and slid even further to -13.1 percent in 1998. The economy, however, bounced back in the next four years - 2001 to 2004 -- with an average growth of 4.4 percent. From 2004 to 2008, Indonesia’s growth rate ranged from 5.0 percent to 6.1 percent. According to the Asian Development Bank (ADB), Indonesia’s growth is likely to slow down this year - 2009, because of “subdued domestic and external demand, before picking up in 2010”.³

The performance of the Indonesian construction industry in the past 15 years has followed the same basic pattern. The industry experienced hyper-growth, between 7.3 percent to 14.9 percent growth rates, from 1994 to 1997. This number dipped drastically to -36.4 percent in 1998, the year after the Asian financial crisis. Recovery of the industry came only in 2001 when it posted a positive growth rate of 4.9 percent, although pre-crisis growth levels were never again achieved. In the succeeding years, from 2002 to 2008, industry growth ranged from 5.5 percent to 8.6 percent. However, the industry experienced a slight decline from 8.6

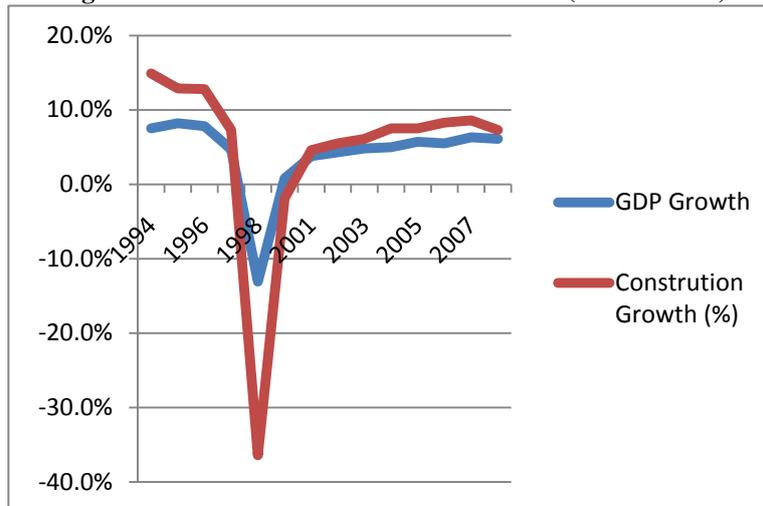
¹ Building and Wood Workers' International. (n.d.). *Building & construction*. Retrieved September 25, 2009 from <http://www.bwint.org/default.asp?Issue=CONSTR&Language=EN>

² Figures for this section were sourced largely from ADB data. A file containing the pertinent ADB tables is attached as Annex I.

³ Asian Development Bank. (2009). *Asian development outlook 2009: Rebalancing asia's growth*. Retrieved September 8, 2009 from <http://www.adb.org/Documents/Books/ADO/2009/ado2009.pdf>

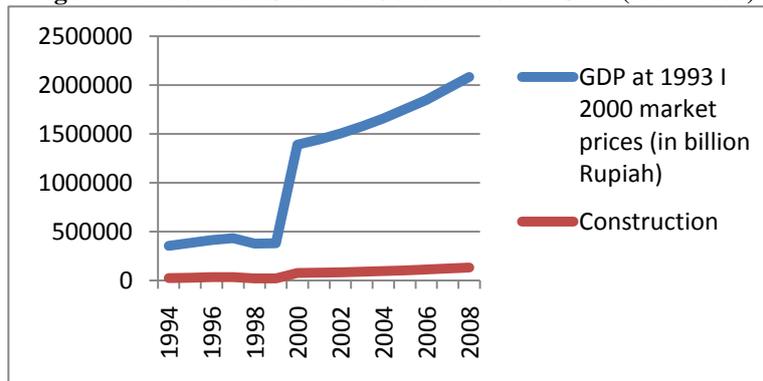
percent in 2007 to 7.3 percent in 2008, mainly due to the recent global financial crisis.

Figure 1: Indonesia: Construction and GDP (1994 to 2008)



In the years leading up to the Asian financial crisis, the Indonesian construction industry produced 7.3 percent to 8.2 percent of the country’s GDP. In 1998, this figure dropped to 6 percent but its share of GDP has since grown at a steady pace of between 5-6 percent. In 2008, the industry produced 6.3 percent of the GDP.

Figure 2: Indonesia: Share of Construction in GDP (1994-2008)



The recovery of the construction industry in Indonesia from the negative effects of the Asian financial crisis has been attributed to the development of large-scale projects such as shopping malls, power plants, oil and natural gas development and the resumption of public infrastructure projects. Moreover, in 2005, the Indonesian government organized an “Infrastructure Summit”, where it announced that there would be ninety-one construction projects with a total value of US \$22.5 billion.⁴ The Summit, organized by the Indonesian Chamber of Commerce and Industry and the Coordinating Ministry for Economic Affairs, was aimed at finalizing plans on how to “jump-start spending on infrastructure” within the context of a sharp decline in GDP growth from 5.34 percent in 1993/1994 to 2.33 percent in 2002.⁵

⁴ Chang, D. (2008). *Global construction and asian workers: Expansion of TNCs in asia and implications for labour*. Building and Wood Workers' International (BWI) and Asia Monitor Resource Centre (AMRC).

⁵ Embassy of the United States Jakarta, Indonesia. (2005). *Indonesia infrastructure summit*. Retrieved September 9, 2009 from <http://www.usembassyjakarta.org/econ/infra-summit05/infrastructure-summit.html>

According to the ASEAN Constructors Federation (ACF), the abundance of undeveloped land outside of Java is what attracts foreign investors to Indonesia. “The need for infrastructure development and cheaper land offers foreigners a greater opportunity in Indonesian construction industry”. The ACF has also taken note of the fact that the Indonesian government has encouraged foreign firms to form joint ventures with local construction firms by issuing these firms with 3-year construction licenses (although foreign capital must not exceed 55 percent in equity).⁶

This year, in the wake of the global financial crisis, the Indonesian government has announced a stimulus package of Rp 73.3 billion or US \$6.5 billion (1.4 percent of GDP). Of this package, 13 percent has been earmarked for infrastructure projects, particularly labor-intensive works such as water supply projects, low-cost housing, roads and ports.⁷

Malaysia

Malaysia is another example of an economy that was able to recover from the Asian financial crisis remarkably well. The country had experienced a steep decline in GDP growth, from 10 percent in 1996 to -7.4 percent in 1998. In 1999, the economy recovered with a growth rate of 6.1 percent. It again encountered another steep decline in 2001 when growth rate levels reached 0.5 percent. The economy bounced back in 2002 with a 5.4 percent growth rate and since then, the country’s GDP growth has averaged out at 6 percent.

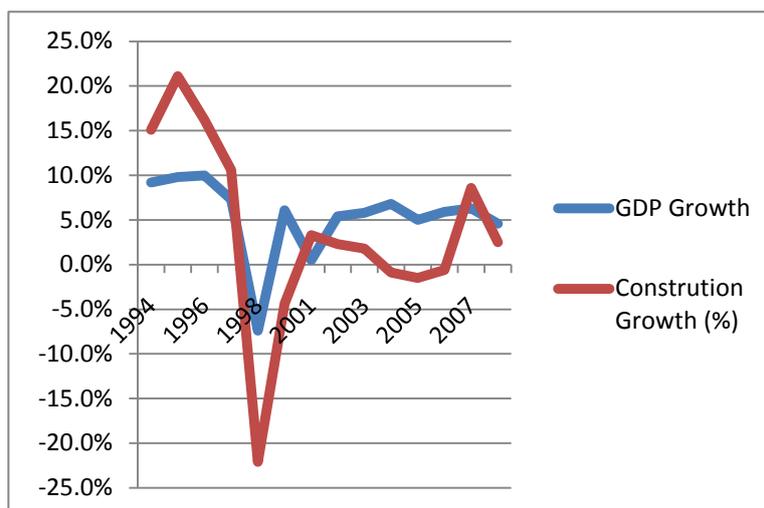
Today, Malaysia is again experiencing an economic slump as a result of the global financial crisis. The country’s growth rate dipped from 6.3 percent in 2007 to 4.6 percent in 2008. According to the ADB, “growth in this trade-sensitive economy came to a virtual halt in the second half of 2008 as the global environment deteriorated”. The Bank estimates that growth in 2009 will slide to 0.2 percent but is likely to recover in 2010 at a rate of 4.4 percent.⁸

Figure 3: MALAYSIA: Construction and GDP (1994-2008)

⁶ The ASEAN Constructors Federation (ACF) (2004). *Impact of AFTA on ACF member countries*. Retrieved September 1, 2009 from <http://www.mbam.org.my/mbam/images/Impact%20of%20AFTA.pdf>

⁷ Asian Development Bank. (2009). *Asian development outlook 2009: Rebalancing asia's growth*. Retrieved September 8, 2009 from <http://www.adb.org/Documents/Books/ADO/2009/ado2009.pdf>

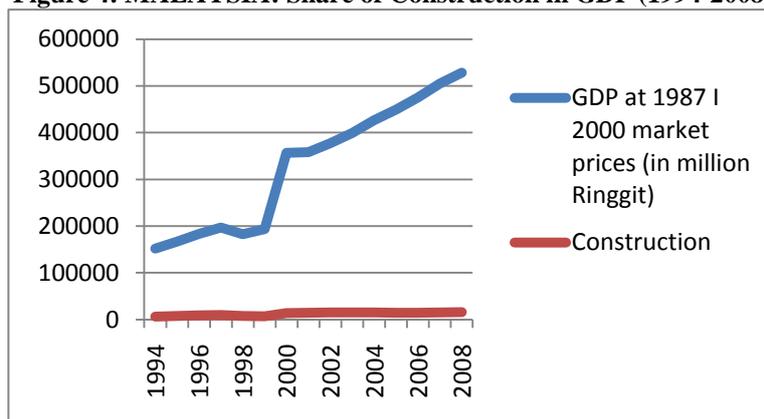
⁸ *Ibid.*



The construction industry in Malaysia also experienced hyper growth before the Asian financial crisis, reaching a high of 21.1 percent in 1995. The industry’s growth then nosedived from 10.6 percent in 1997 to -22.1 percent in 1998. The industry bounced back in 2001 when it registered a positive growth rate of 3.3 percent. From 2004-2006, the industry again experienced another slump with negative growth rates of somewhere between -1.5 percent to -0.6 percent. In the following year, 2007, growth increased to 8.6 percent. In 2008, this figure slid again to 2.5 percent due to the global financial crisis.

In the past fifteen years, the share of the Malaysian construction industry in the country’s GDP has been somewhere between 3.0 percent to 4.8 percent. Its highest share was in 1997 at 4.8 percent while the lowest was in 2007 at 3.0 percent. Its share of GDP fell immediately after the Asian financial crisis – from 4.8 percent in 1997 to 4.0 percent in 1998. Since then, industry share has been somewhere between 3.0 percent to 3.9 percent. In 2008, the industry produced 3.0 percent of the country’s GDP.

Figure 4: MALAYSIA: Share of Construction in GDP (1994-2008)



During the period of the Asian financial crisis, the following factors were said to have caused the downturn of the construction industry in Malaysia: a number of unsold properties, high vacancy rates for offices and shops and price escalation of major building materials such as steel bars.⁹

⁹ According to the ACF, , , price controls on steel bars ‘aggravated the situation’ because this resulted in the shortage of supply and delay in the implementation of certain projects.

In 2001, the construction industry was bolstered by the Eighth Malaysia Plan (2001-2005) in which the government earmarked US \$3.68 billion for new infrastructure projects.¹⁰ This package included US \$263 million for airport infrastructure aimed at developing Malaysia as a regional hub.¹¹

In 2006, the Malaysian government unveiled the Ninth Malaysia Plan.¹² The plan included strategies that clearly have an impact on the construction industry: meeting housing needs and improving urban services, building basic infrastructure, improving transportation facilities, and developing the Bumiputera Commercial and Industrial Community (BCIC). The midterm review of the Malaysian government shows that implementation of the plan is on track.

In March 2009, in response to the global financial crisis, the government announced a stimulus package of RM 60 billion, close to 8 percent of projected GDP. Part of the package is likely to directly impact the construction industry: “RM 7 billion in projects under public-private partnerships and other off-budget projects such as the low-cost carrier terminal at the Kuala Lumpur International Airport and expansion of Pulau Pinang airport”.¹³

The Philippines

The Philippines also manifested a negative growth rate (-0.6 percent) at the time of the Asian financial crisis. The economy recovered the following year with a growth rate of 3.4 percent. The country experienced another steep slump in 2001 when its growth rate dipped to -2.5 percent. This second dip can be attributed to the political upheaval that occurred in the country at that time.¹⁴

The pre-crisis growth rate of 4.4 percent was reached in 2002 and by 2004, the country was registering growth of 6.4 percent. However, the Philippine economy has been declining in the last few years, from 7.2 percent growth in 2007 to 4.6 percent in 2008. High inflation rates and weaker external demand are said to be two factors that have caused the decline. Political instability, government inefficiency and corruption have also been identified as factors that have hindered the country's economic development.

The Philippine economy is essentially a consumer-led economy, with private consumption being supported by the remittances of some 9 million Filipinos working abroad. The increase in over-all remittances from U.S \$13.7 billion in 2007 to \$16.4 billion in 2008, however, was offset by the rise of prices of basic commodities and resulted in a decrease of the country's Gross National Product, from 8.0 percent in 2007 to 6.1 percent in 2008. The ADB is

¹⁰ Economic Planning Unit: Prime Minister's Department Malaysia.(n.d). *Eighth malaysia plan (2001-2005)*. Retrieved September 9, 2009 from <http://www.epu.gov.my/eightmalaysiaplan>

¹¹ The ASEAN Constructors Federation (ACF) (2004). *Impact of AFTA on ACF member countries*. Retrieved September 1, 2009 from <http://www.mbam.org.my/mbam/images/Impact%20of%20AFTA.pdf>

¹² Economic Planning Unit: Prime Minister's Department Malaysia. (n.d.). *Ninth malaysia plan (2006-2010)*. Retrieved September 9, 2009 from <http://www.epu.gov.my/html/themes/epu/html/rm9/html/english.htm>

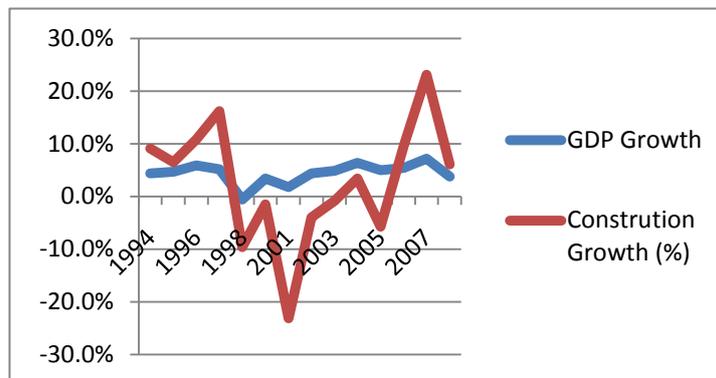
¹³ Asian Development Bank. (2009). *Asian development outlook 2009: Rebalancing asia's growth*. Retrieved September 8, 2009 from <http://www.adb.org/Documents/Books/ADO/2009/ado2009.pdf>

¹⁴ In January 2001, then-incumbent Philippine President Joseph Ejercito Estrada resigned from the presidency because of massive protest. Estrada was later convicted of plunder, sent to jail and then pardoned by his successor.

forecasting that the country's growth will slow down even further this year (2009) to 2.5 percent.¹⁵

The ebb and flow of the construction industry of the Philippines reveals a volatility that is greater than that of the country's economy. From 1994 to 1997, the industry posted impressive positive growth rates between 9.1 percent to 16.2 percent. With the Asian financial crisis, these figures nose-dived to -9.7 percent in 1998 and then dipped even further to -23.1 percent in 2001. The industry maintained these negative levels til 2005. In 2006, it registered positive growth at 9.6 percent and then moved on to a high of 23.1 percent in 2007. A sharp decline was again experienced by the industry in 2008, when the growth rate dipped to 6.1 percent, mainly due to the global financial crisis and domestic political troubles.

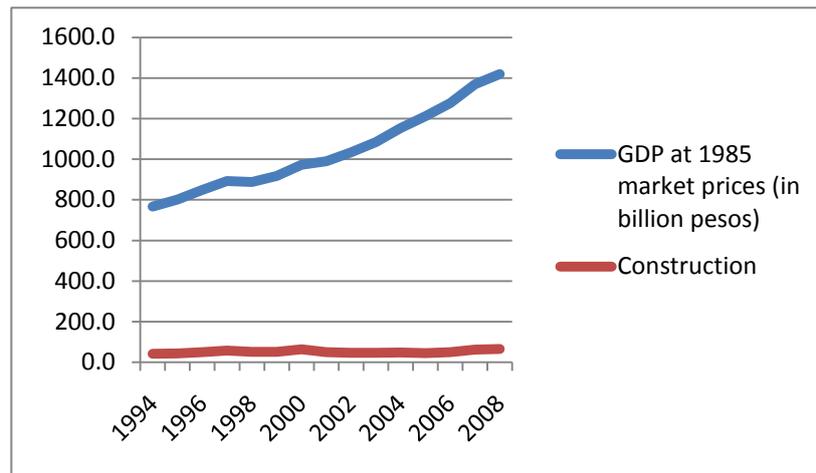
Figure 5: PHILIPPINES: Construction and GDP (1994-2008)



In 2007, the Philippine construction industry produced 4.5 percent of the country's GDP. The share of the construction industry in the country's GDP has been fairly steady and the 2007 figure is, in fact, the lowest of the past 15 years. In 1997, the industry's share of GDP was 6.4 percent and this figure dipped slightly in 1998 to 5.8 percent but in 2000, the industry's share went up again to 6.6 percent. From 2001-2008, industry share ranged from 3.8 percent to 5.0 percent. In 2008, the industry accounted for 4.6 percent of total GDP.

Figure 6: PHILIPPINES: Share of Construction in GDP (1994-2008)

¹⁵ Asian Development Bank. (2009). *Asian development outlook 2009: Rebalancing asia's growth*. Retrieved September 8, 2009 from <http://www.adb.org/Documents/Books/ADO/2009/ado2009.pdf>



In January 2009, the Philippine government announced its “Economic Resiliency Plan” containing a stimulus package of PhP 330 billion.¹⁶ According to the Philippine National Statistical Coordination Board (NSCB), as of August 2009, this package has yielded positive results. For the construction industry, “investments expanded by 11.7 percent from 1.0 percent in 2009. Public construction rebounded magnificently with 29.9 percent growth from negative 5.6 percent in the previous years as government-funded infrastructure investments to escape the threat of recession that surfaced in the first quarter”.¹⁷

Singapore

The “trade hub” of the Southeast and East Asian regions, Singapore has remained economically strong in the past decade until the most recent global economic crunch. It can be concluded that this country has been the hardest hit: its growth rate dipped markedly from a high of 7.7 percent in 2007 to a mere 1.1 percent in 2008. According to the ADB, Singapore’s nature as a trade hub – in trade-related services such as transportation services and trade finance – had made the country vulnerable to external shocks.¹⁸

Before this recent global crisis, Singapore experienced a “5-year average (growth rate) of 7.3 percent in 2003-2007”.¹⁹ Such steady growth has been linked to construction investment in the public sector that has led to an increase in domestic demand. Construction thus plays a key role in the Singaporean economy.

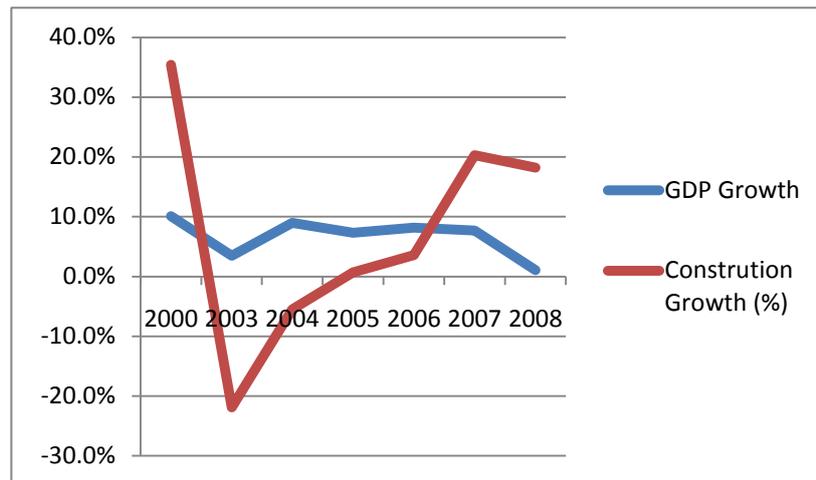
Figure 7: SINGAPORE: Construction and GDP (2000-2008)

¹⁶ Philippine Economic Resiliency Plan: Meeting the Global Crisis Head-on. (2009, January). *DevPulse NEDA Development Advocacy Factsheet*, 13(1). Retrieved August 27, 2009 from http://www.neda.gov.ph/devpulse/pdf_files/ERP%20DEVPULSE.pdf

¹⁷ National Statistical Coordination Board. (2009). *Second quarter 2009: Government stimulus resuscitates economy to 1.5 percent GDP growth*. Retrieved on September 11, 2009 from <http://www.nscb.gov.ph/sna/2009/2ndQ2009/2009qpr2.asp>.

¹⁸ Asian Development Bank. (2009). *Asian development outlook 2009: Rebalancing asia's growth*. Retrieved September 8, 2009 from <http://www.adb.org/Documents/Books/ADO/2009/ado2009.pdf>

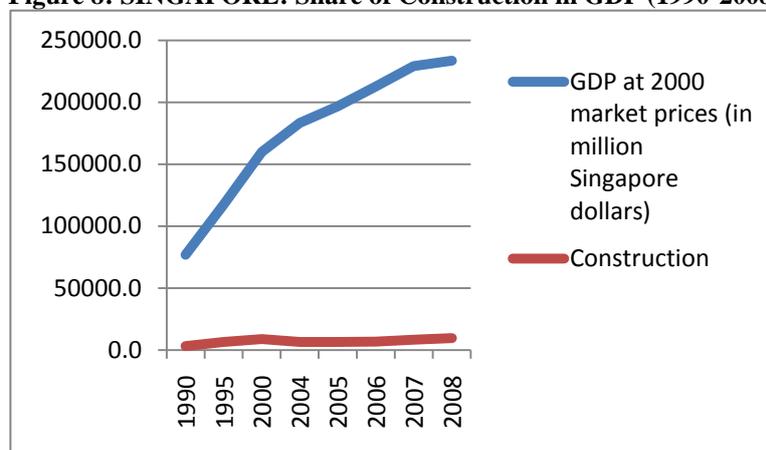
¹⁹ *Ibid.*



In 2000, the construction industry in Singapore displayed very high positive growth –35.4 percent -- despite the Asian financial crisis. However,,the industry experienced a slump in 2003-2004, with negative growth rates of -21.9 percent and -5.5 percent respectively. The industry recovered in the succeeding years, posting growth rates between 0.7 percent to 18.2 percent from 2005-2008. The industry again experienced another slump, from 20.3 percent in 2007 to 18.2 percent in 2008, mainly due to the global financial crisis.

The share of GDP that the construction industry in Singapore has been more steady compared to the other BWI countries. In the past eighteen years, this share has ranged from a low of 3.2 percent (in 2002) to a high of 5.7 percent (in 1995). In 2008, the industry accounted for 4.2 percent of the country’s GDP.

Figure 8: SINGAPORE: Share of Construction in GDP (1990-2008)



According to the ASEAN Constructors’ Federation (ACF), Singapore’s construction industry is held in high regard by foreign companies because of strict quality control, i.e. all projects are subject to review under the country’s Construction Quality Assessment System (CONQUAS). Qualifications requirements are imposed on all players, foreign as well as local, and this has created the impression that the Singaporean government has created a level playing field for all industry players.²⁰

²⁰ The ASEAN Constructors Federation (ACF) (2004). *Impact of AFTA on ACF member countries*. Retrieved September 1, 2009 from <http://www.mbam.org.my/mbam/images/Impact%20of%20AFTA.pdf>

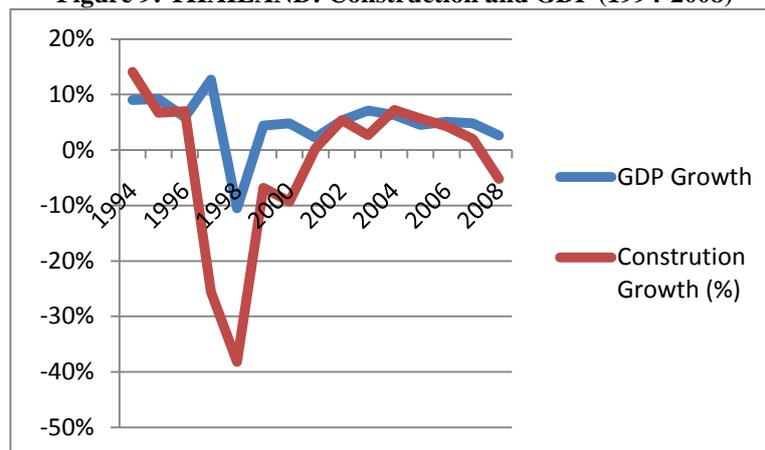
In January 2009, the Singaporean government announced an economic stimulus package of S\$ 20.5 billion.²¹ This package is meant to cushion the effects of the anticipated slump in Singapore's growth to 5 percent this year. It is also the response of the People's Action Party (PAP) to the growing joblessness that could propel a political backlash, at a time when the party is celebrating its 50th year in power.²²

Thailand

From negative growth rates in 1997 (-0.4 percent) and 1998 (-10.5 percent), the Thai economy had evidently recovered when its growth rate soared to 4.8 percent in 2000 and 7.1 percent in 2002. The country has however been experiencing an economic slump in recent years mainly due to major domestic political upheavals. In 2008, Thailand's growth rate was a meager 2.6 percent.

The country's construction industry follows the same basic trend. The industry posted a pre-crisis high of 14 percent in 1994 and then dipped to negative levels during the Asian financial crisis: -25.6 percent in 1997, -38.2 percent in 1998 and -9.3 percent in 1999. Industry slowly recovered with 0.3 percent in 2001, then 5.4 percent in 2002 and since then has been registering positive growth. However, the industry revealed a sharp decline last year, from a 2.0 percent growth rate in 2007 to -5.2 percent growth rate in 2008.

Figure 9: THAILAND: Construction and GDP (1994-2008)

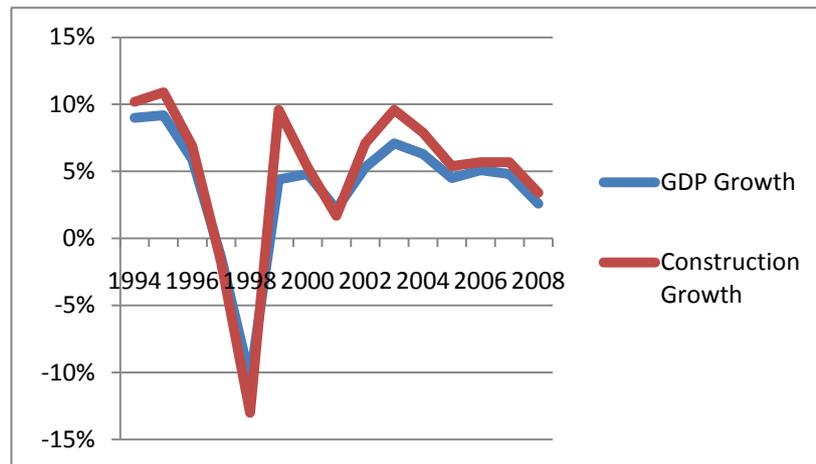


Before the Asian financial crisis, the construction industry was contributing 6.3 percent to Thailand's GDP, but immediately thereafter, industry share of GDP has remained low and has not gone above 2.9 percent. Due to intermittent political disruptions, several infrastructure projects had to be delayed or abandoned. In 2008, the construction industry accounted for only 2.2 percent of GDP growth.

Figure 10: THAILAND: Share of Construction in GDP (1994-2008)

²¹ Burton, J. (2009, January 23). Singapore reveals S\$20.5bn economic stimulus package. *Financial Times*. Retrieved September 14, 2009 from http://www.ft.com/cms/s/b8710d3e-e8ef-11dd-a4d0-0000779fd2ac.Authorised=false.html?_i_location=http%3A%2F%2Fwww.ft.com%2Fcms%2Fs%2F0%2Fb8710d3e-e8ef-11dd-a4d0-0000779fd2ac.html%3Fnclck_check%3D1&_i_referer=&nclck_check=1

²² *Ibid.*



In January 2009, the Thai cabinet approved an economic stimulus package of B116.7 billion or US \$3.4 billion. Part of this package has been earmarked for large-scale infrastructure projects such as the expansion of the mass transit rail lines in Bangkok.

Cambodia

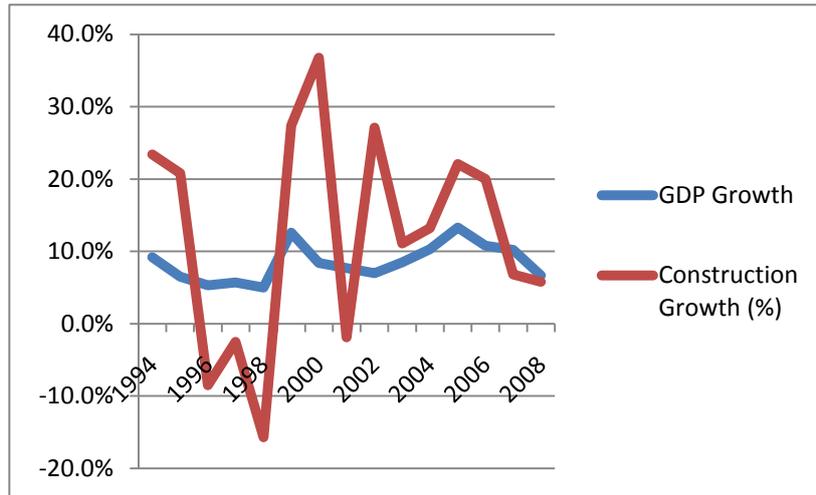
Given the positive growth rates in the past fifteen years, one can readily conclude that the Cambodian economy has remained steady and robust. The figures exhibit the seeming insulation of this economy from external shocks. In 1999, two years after the Asian financial crisis, Cambodia registered a growth rate of 12.6 percent, a figure that is even higher than the pre-crisis high of 9.2 percent in 1994. Moreover, in the past decade, the country witnessed very steady growth ranging between 7.0 percent and 13.3 percent.

Cambodia has not been spared from the negative effects of the recent global financial crisis, the political upheavals of neighboring Thailand and the upsurge in food and oil prices. In 2008, the country's growth rate dipped to 6.5 percent from 10.2 percent in 2007. Inflation also skyrocketed to double digit numbers: from 6.4 percent in September 2007 to 25.8 percent in May 2008. The ADB is now predicting that Cambodia's growth will decline further to 2.5 percent in 2009. Recent reductions in foreign direct investment in the construction industry has been cited as one of the reasons for this anticipated slump. In response, the Cambodian government declared in March 2009 that it would double public spending on "transport, public infrastructure, and irrigation".²³

The performance of the construction industry of Cambodia has been highly erratic. In the aftermath of the Asian financial crisis, the industry posted a very low negative growth rate of 15.7 percent in 1998. This figure rose quickly to 27.4 percent in 1999 and 36.8 percent in 2000. The rate again declined sharply to -1.9 percent in 2001. In 2002, the industry again rebounded with a 27.1 percent growth rate and since then has been registering positive growth. However, the industry experienced slackening in 2008 when growth fell to 5.8 percent from 6.8 percent in 2007.

Figure 11: CAMBODIA: Construction and GDP (1994-2008)

²³ Asian Development Bank. (2009). *Asian development outlook 2009: Rebalancing asia's growth*. Retrieved September 8, 2009 from <http://www.adb.org/Documents/Books/ADO/2009/ado2009.pdf>

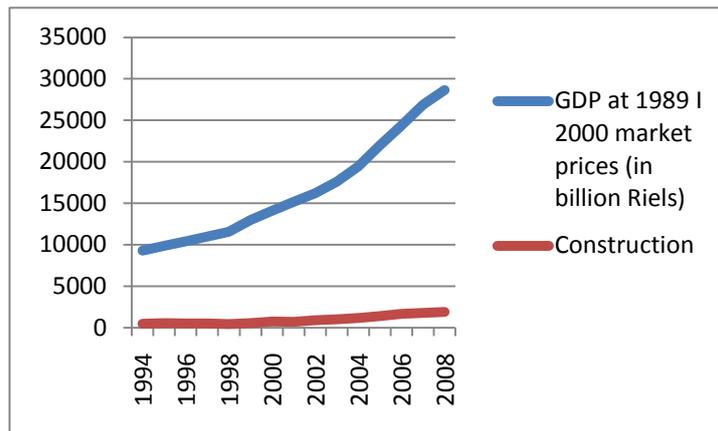


In the past fifteen years, the industry has produced between 3.6 percent - 6.8 percent of the country's GDP. The figures show that there was a slight dip during the Asian financial crisis, but this was only from 4.5 percent in 1997 to 3.6 percent in 1998. Moreover, the industry evidently bounced back in just a few years, registering a growth rate of 5.1 percent in the year 2000. In 2008, the construction industry produced 6.6 percent of the country's GDP.

Current developments are not very encouraging. It is now being predicted that Cambodia's growth rate will decline to 2.5 percent this year, largely due to contraction in the garment, tourism and construction industries. However, it is anticipated that with increase government spending, the economy will bounce back in 2010 with a growth rate of 4.0 percent.²⁴

Figure 12: CAMBODIA: Share of Construction in GDP

²⁴ *Ibid.*



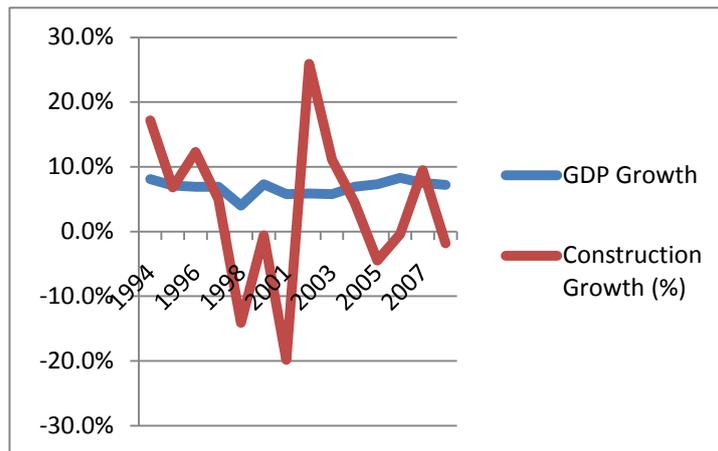
Laos

Laos is another Southeast Asian country that did not experience negative growth rates in the aftermath of the Asian financial crisis. The country's growth experienced a downturn at the time, registering a decline from 6.9 percent in 1997 to 4.0 percent in 1998. The economy quickly bounced back in the following year, with a high growth rate of 7.3 percent. This level has been maintained over the years. In 2008, the growth rate was 7.2 percent. Such steady economic growth has been attributed to the "continuing expansion of industry (especially mining and hydropower) and services".²⁵

The construction industry in Laos posted positive growth rates from 1994 to 1997, with a low of 5.0 percent in 1997 and a high of 17.2 percent in 1994. In 1998, the industry slid to a -14.1 percent growth rate and continued to post negative rates until 2001. By 2002, the industry had recovered with a positive growth rate of 25.9 percent. This growth continued up to 2004, dipping to -4.5 percent in 2005 and 0.5 percent in 2006. The industry experienced yet another decline in 2008 when the growth rate slid to -1.8 percent from the previous year's 9.5 percent rate. Evidently, Laos too was affected by the recent global financial crisis.

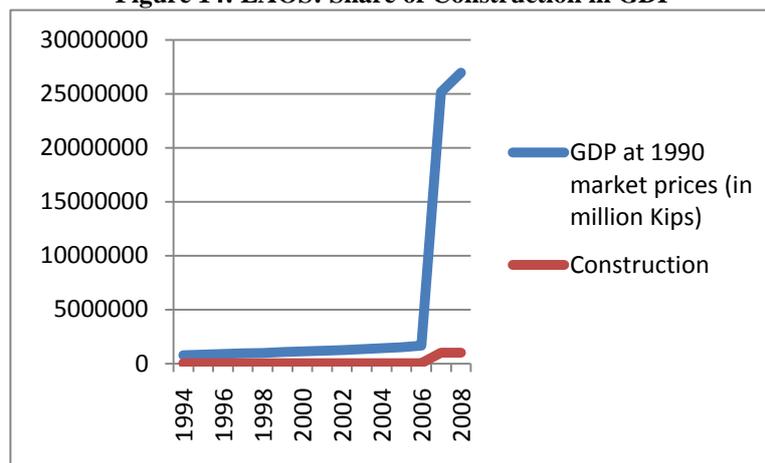
Figure 13: LAOS: Construction and GDP (1994-2008)

²⁵ Asian Development Bank. (2009). *Asian development outlook 2009: Rebalancing asia's growth*. Retrieved September 8, 2009 from <http://www.adb.org/Documents/Books/ADO/2009/ado2009.pdf>



Between 1994 to 1999, the share of Laos' GDP that the construction industry made up was somewhere between 2.6 percent to 3.3 percent. This number increased significantly to a range of 56.2 percent to 74.2 percent from 2000 to 2006. The's industry share of GDP then dropped sharply to 4.1 percent in 2007 and 3.7 percent in 2008.

Figure 14: LAOS: Share of Construction in GDP



In the immediate term, the government of Laos intends to increase public spending, especially on facilities for special events such as the 25th Southeast Asian Games²⁶ that will be held in Vientiane in December this year, and the 450th anniversary celebration of Vientiane²⁷ as the country's capital that will be held January of next year. These special events involve major public works – sports facilities, a new administration headquarters, and a new landmark in Vientiane -- that could boost Laos' economy, including its construction industry.

Vietnam

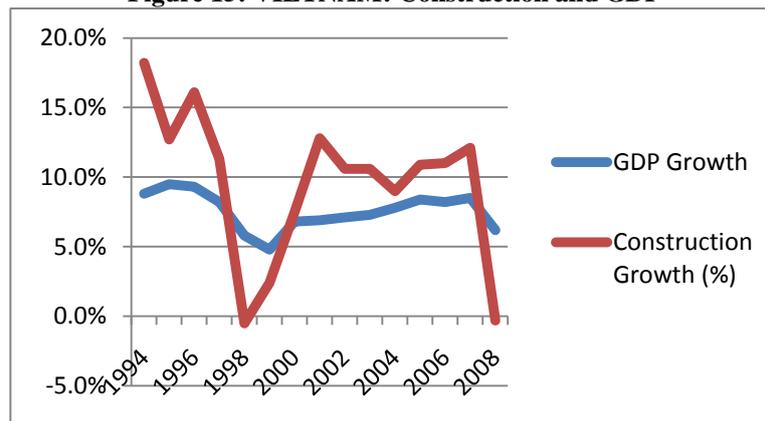
²⁶ 25th Sea Games. (2009). Retrieved September 12, 2009 from <http://25thseagames.blogspot.com/>

²⁷ Baccam, D. (2008, February 20). Vientiane Prepares to Commemorate 450th Anniversary. *Voice of America*. Retrieved September 12, 2009 from <http://www.voanews.com/lao/archive/2008-02/2008-02-25-voa3.cfm?moddate=2008-02-21>

Vietnam's economy can be considered one of the fastest-growing ones in the region. Despite the Asian financial crisis, the country never experienced negative growth and in the years immediately following this crisis, the economy bounced back. In 2000, Vietnam's GDP growth was at 6.8 percent. In 2007, it went up to as high as 8.5 percent. In the following year, 2008, the economy slackened by only very slightly, with the growth rate dipping to 7.2 percent. Vietnam's growth has been attributed to the performance of its industry and services sectors. In the mid-2000s, these sectors combined accounted for more than 90 percent of the country's GDP.

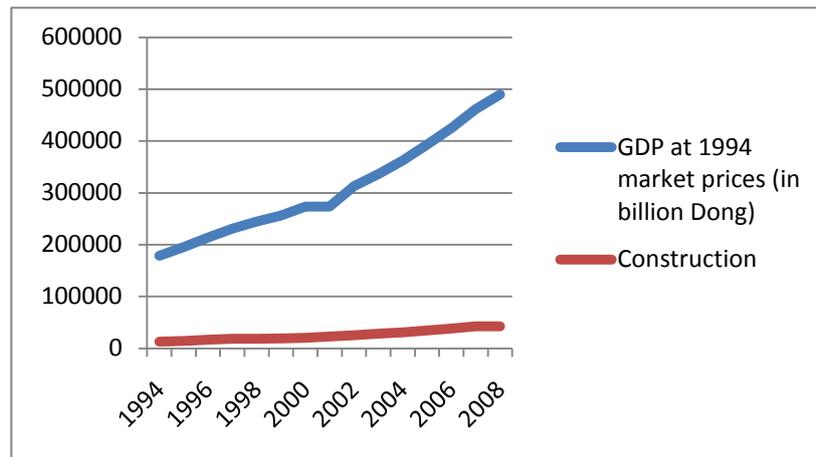
Growth of the Vietnamese construction industry was quite steady in the years leading to the Asian financial crisis. It posted growth levels of 18.2 percent in 1994, 12.7 percent in 1995 and 16.1 percent in 1996. In the following year, industry performance slid to 11.3 percent and nose-dived to a negative rate of -0.5 percent in 1998. The industry quickly recovered to a positive growth rate of 2.4 percent in 1999, and registered growth rates that ranged from 7.5 percent to 12.8 percent up until 2007. In the past year (2008), the industry again experienced negative growth rates, plunging to -0.3 percent from the previous year's 12.1 percent. Evidently, the Vietnamese construction industry has also been affected by the recent global financial crisis.

Figure 15: VIETNAM: Construction and GDP



The construction industry's contribution to Vietnam's GDP has been substantial and steady in the past fifteen years: between 7.3 percent and 9.3 percent. In the recent past, from 2007 to 2008, the industry's share of GDP dipped slightly from 9.3 percent to 8.7 percent.

Figure 16: VIETNAM: Share of Construction in GDP (1994-2008)



The construction industry has been a beneficiary of the country's growth, particularly the growth of its urban centers such as Ho Chi Minh City. The largest city and the economic hub of the country, Ho Chi Minh City currently has a population of almost 8 million people. This growth in population has resulted in increased demand for motor vehicles and the government has responded to the problem of congestion by expanding the highways in the city, including the road network that links it to the Greater Mekong Sub-region. International agencies such as the ADB have invested and continue to invest heavily in infrastructure projects in Vietnam and the Mekong region.²⁸

According to the ASEAN Constructors' Federation (ACF), the growth of Vietnam's construction industry can be attributed to the opening up of the economy to the global market. The Vietnamese government has been successful in creating a business-friendly environment through a number of measures such as the liberalization of construction investment, extension of permits issued to foreign-invested firms and tariff reductions for the import of construction materials.²⁹ The government itself has invested in the construction industry by investing in huge infrastructure projects, with funding sourced largely from foreign funders.

Today, it is being predicted that Vietnam's economy will decline slightly in the immediate term due to the global financial crisis. The construction industry is also likely to contract given the "cooling real estate market".³⁰ To arrest further decline, the Vietnamese government has recently announced a stimulus package of U.S \$ 1 to 6 billion.

Section 2: Major Construction Companies in Southeast Asia

Below is a list of major construction companies operating in Southeast Asia. The list shows that multinational companies from Europe and East Asia, along with a number of local construction companies, play a key role in the region's construction industry.

²⁸ Asian Development Bank. (n.d.). *Ho Chi Minh City-Long Thanh-Dau Giay expressway construction project: Viet nam soc rep of*. Retrieved September 8, 2009 from <http://pid.adb.org/pid/LoanView.htm?projNo=40198&seqNo=02&typeCd=3>

²⁹ The ASEAN Constructors Federation (ACF) (2004). *Impact of AFTA on ACF member countries*. Retrieved September 1, 2009 from <http://www.mbam.org.my/mbam/images/Impact%20of%20AFTA.pdf>

³⁰ Asian Development Bank. (2009). *Asian development outlook 2009: Rebalancing asia's growth*. Retrieved September 8, 2009 from <http://www.adb.org/Documents/Books/ADO/2009/ado2009.pdf>

Multinational Corporations Operating In Southeast Asia

*Heidelberg Cement*³¹, a German company, is one of the world's largest manufacturers of building materials. With a history dating back to 1873 -- when it established its first cement company in Heidelberg, the company now employs 57,000 employees in more than 2,600 locations in 50 countries. In Southeast Asia, it has operations in Indonesia, Malaysia, Singapore and Brunei. The company also has a presence in other parts of Asia, such as Bangladesh, China and India.

In 2007, Heidelberg embarked on "the biggest acquisition in the building materials industry" through its acquisition of the building materials manufacturer Hanson. In 2008, Heidelberg's profit share reached EUR 1.8 billion. Its core activities include the production of cement and aggregates, two raw materials essential for the production of concrete. Heidelberg's products also include ready-mixed concrete, concrete products and concrete elements.

*Hochtief*³² is another German construction company founded in the 1870s by the Hellman brothers. It has become a worldwide construction services corporation with a sales volume of EUR 19.10 billion in 2008 and about 68,000 employees. The corporation consists of a management holding company and six corporate divisions. In the Asia Pacific, Hochtief operates mainly through its majority shareholding in the Leighton Group (*see profile of Leighton group below*).

*Lafarge*³³ has its origins in France in 1833, counts the Suez Canal as one of its first projects, and has since grown into a world leader in building materials (i.e. Number 1 in cement, Number 2 in aggregates and Number 3 in concrete and gypsum). Lafarge is now present in 79 countries and has developed 2,187 production sites that employ 84,000 workers. More than 60 percent of Lafarge's workforce is located outside its country of origin (i.e. Asia, Africa, Central and Eastern Europe, the Mediterranean Basin, Middle East and Latin America). Its headquarters, however, remains located in Paris, France. In 2008, company revenues reached EUR 19.033 billion.

In Asia, Lafarge employs 21,000 workers across 50 cement production sites, 5 aggregates quarries and 120 ready-mix plants. In Southeast Asia, it has a presence in Indonesia, Malaysia, Philippines, Thailand and Vietnam. Lafarge also has plants in China, India, Pakistan, North Korea, South Korea and Japan.

*Holcim*³⁴ is a global company that employs some 83,000 people with production sites in over 70 countries. It was founded in Switzerland in 1912 and is one of the world's leading suppliers of cement and aggregates (crushed stone, sand and gravel). Holcim is also a global supplier for ready-mix concrete and asphalt and a provider of various services related to the construction industry. In Southeast Asia, Holcim has a presence in Indonesia, Philippines, Malaysia, Thailand, Singapore and Vietnam. Its headquarters is in Zurich, Switzerland.

³¹ Heidelberg Cement. (n.d.). *Indonesia: Overview*. Retrieved August 19, 2009 from http://www.heidelbergcement.com/global/en/company/group_areas/asia_australia_africa/indonesia.htm

³² Hochtief. (n.d.). *History*. Retrieved August 19, 2009 from http://www.hochtief.com/hochtief_en/71.jhtml

³³ Lafarge. (n.d.). *Profile: Lafarge at a glance*. Retrieved August 19, 2009 from http://www.lafarge.com/wps/portal/1_2_1-Lafarge_en_un clic

³⁴ Holcim. (n.d.). *About us*. Retrieved August 19, 2009 from <http://www.holcim.com/CORP/EN/id/1610644011/mod/2/page/channel.html>

*Leighton Holdings Limited*³⁵ was established in Victoria, Australia in 1949 as a small civil engineering firm. It is now the parent company of Australia's largest project development and contracting group, and includes subsidiaries such as Leighton Contractors, Thiess, John Holland, Leighton International, Leighton Properties and Leighton Asia.

The Leighton group now employs 37,000 workers across the Asia-Pacific region. In Southeast Asia it is present in Indonesia, Malaysia, Singapore, Philippines, Thailand, Vietnam, Laos, Cambodia and Brunei. It also has projects in Australia, New Zealand, Hongkong, China, Mongolia, Taiwan, Sri Lanka, Macau, India, United Arab Emirates, Qatar and Brunei. Its head office is located in Sydney, Australia. The Leighton group focuses on specific market segments such as civil works and infrastructure, mining, industrial and building sectors. Today, Leighton-Asia employs around 5,500 people. Its annual revenue is over U.S \$500 million.

The *Hazama Corporation*³⁶, established in Japan in 1889, is now a leading global construction company. Its presence is visible in more than 30 countries around the world. In Southeast Asia, Hazama has been instrumental in constructing several landmark buildings and important public infrastructure. Some of Hazama's civil and architectural works include the Balikpapan International Airport (Indonesia), LRT System Two for Kuala Lumpur (Malaysia), Expansion of Water Supply System in Hai Duong City (Vietnam), Bridge Reconstruction in National Road Route 13 (Laos), Monya Copper Refining Plant (Myanmar), Cavendish Condominium (Singapore), Cold Rollong Mill for NKK Corporation (Thailand), and Sanyo Philippines Semi-Conductor Manufacturing Factory (Philippines). According to the company's 2009 annual report, the company earned 224.2 billion Yen in consolidated revenues and employs some 2,070 employees.³⁷

The *Kajima Corporation*³⁸ is another leading Japanese construction company. Established in 1840, the corporation now operates with 13 domestic branches and numerous project offices throughout Japan and a global reach of over 20 countries in such regions as Asia, Europe, Africa, the Middle East and the United States. Kajima employs over 9,200 workers and generates annual consolidated sales of approximately 15 billion USD. Kajima's expertise is extensive and spans the development, design, and construction of practically all types of structures. Most of its construction work in Southeast Asia has involved building factories for Japanese-affiliated corporations.

*Kinden Corporation*³⁹ is one of Japan's leading integrated systems engineering companies and a pioneer in the overseas market. Kinden has completed projects in more than 80 countries and now maintains an international sales network of overseas affiliate companies including those in Singapore, Malaysia, Indonesia, Thailand, the Philippines, Vietnam, the United States, China and Egypt. Moreover, Kinden has a track record in electrical infrastructure projects such as the Kuala Lumpur City Center Tower 2, Shanghai Shigeru

³⁵ Leighton Holdings. (n.d.). *About us: Profile*. Retrieved August 19, 2009 from http://www.leighton.com.au/about_us/profile/profile.html

³⁶ Hazama Corporation. (n.d.). *General contractors, architects & engineers*. Retrieved September 23, 2009 from <http://www.hazama.co.jp/english/>

³⁷ Hazama Corporation. (2009). *Annual report 2009*. Retrieved September 23, 2009 from <http://www.hazama.co.jp/english/annual/pdf/annual2009.pdf>

³⁸ Kajima Corporation. (2007). *Corporate profile*. Retrieved September 23, 2009 from <http://www.kajima.co.jp/profile/overview/index.html>

³⁹ Kinden Corporation. (n.d.). *Overseas projects*. Retrieved September 23, 2009 from http://www.kinden.co.jp/english/business/overseas_constr.html

Mori International Senmao Building and the Tao Dan Vietnam 200kV electrical power transmission project.

The *Kumagai Gumi Company Ltd*⁴⁰ of Japan was established in 1938, currently employs around 2,587 employees and maintains 13,341 million Yen worth of capital. It engages in design and actual construction work and has overseas branches in Hongkong, Shanghai, Taiwan, the Philippines, Thailand, Vietnam, Sri Lanka and Papua New Guinea.

Established in 1937, the *Nishimatsu Construction Co. Ltd*⁴¹ is another leading general contractor, renowned for its expertise in the planning, design and construction of a wide range of projects such as marine and harbor projects, airports, highways, dams, tunnels, railways, high-rise buildings and power plants. It now maintains overseas offices in 16 countries, including the following countries in Southeast Asia: Philippines, Thailand, Malaysia, Vietnam, Laos and Singapore. Nishimatsu employs some 3,641 workers worldwide.

The *Obayashi Corporation*⁴² is among the top five general contractors in Japan. Founded in 1892, the corporation is now equipped to do feasibility studies, and plans and implements civil engineering and heavy construction works. It now employs 9,280 employees and maintains offices in North America: New York, Los Angeles, San Francisco, North Carolina and Honolulu), Europe: London & Amsterdam, and Asia: Bangkok, Jakarta, Singapore, Kuala Lumpur, Manila, Hanoi, Ho Chi Minh, Phnom Penh, Shanghai, Beijing, Dalian & Taipei.

The *Shimizu Corporation*⁴³ was established only in 1987 but traces its roots to the incorporation of Shimizu Gumi Ltd in 1937. It is now a leading Japanese general contractor. The corporation employs some 11,535 employees and implements domestic and overseas projects, including in Southeast Asian countries such as Malaysia, Singapore, Indonesia, Vietnam, Thailand, Laos, and the Philippines.

The *Taikisha Ltd*⁴⁴ was established in 1913 and has grown into a leading Japanese multinational company involved in the design, construction, and administration of a wide range of construction activities. It now has 3,669 employees and maintains Group Companies in Asia – China, Taiwan, Korea, Thailand, Vietnam, the Philippines, Singapore, Malaysia, Indonesia, India, as well as the Americas and Europe.

Established in 1873, the *Taisei Corporation*⁴⁵ has undertaken several noteworthy construction projects in Japan and overseas. Its projects include the construction of dams and other infrastructure projects in developing countries. It currently has 8,787 employees and

⁴⁰ Kumagai Gumi. (2009). *Corporate Information*. Retrieved September 23, 2009 from <http://www.kumagaigumi.co.jp/english/corp/profile.html>

⁴¹ Nishimatsu Construction Co., Ltd. (2008). *Profile*. Retrieved September 23, 2009 from http://www.nishimatsu.co.jp/eng/sitemap_eng.html

⁴² Obayashi Corporation. (n.d.). *Corporate data*. Retrieved September 23, 2009 from <http://www.obayashi.co.jp/english/company/index.html>.

⁴³ Shimizu Corporation. (2009). *Corporate profile*. Retrieved September 23, 2009 from <http://www.shimz.co.jp/english/about/profile.html>

⁴⁴ Taiki-sha Ltd. (2009). *Corporate overview*. Retrieved September 23, 2009 from http://www.taikisha-group.com/corporate/comp_info.html.

⁴⁵ Taisei Corporation. (2009). *Profile*. Retrieved September 23, 2009 from <http://www.taisei.co.jp/english/profile/index.html>

maintains overseas offices in the Middle East: Abu Dhabi, Dubai and Doha; in Seoul; Taipei; Manila, the Philippines; Kuala Lumpur; Jakarta; New Delhi, India; North Africa: Libya and Egypt; California, the U.S.A; Lima, Peru; Hanoi and Ho Chi Minh City, Vietnam; and Islamabad, Pakistan.

The *Takenaka Corporation*⁴⁶ is Japan's oldest architecture, engineering and construction firm. Since 1960, the corporation has been expanding overseas and now boasts of having the largest construction R&D laboratory in the world, 7,983 employees and 5,839 architects and engineers. It has yearly sales of USD 9 billion and maintains 20 overseas offices. In Southeast Asia, it has offices in Thailand, Indonesia, Malaysia and Singapore. Other Takenaka offices are in China, the Middle East, Europe and the Americas.

*Toda Corporation*⁴⁷ is another Japanese multinational engaged in the construction business. It was established in 1936 and is known for its expertise in almost all the phases of construction work, including investment projects in the field of real estate development. It has a domestic as well as an overseas network that spans Brazil, Thailand, China, Vietnam and the United States.

*China Harbour Engineering Co. (CHEC)*⁴⁸ was established in December 2005 as the result of a merger between the China Harbour Engineering Company Group (founded 1980) and the China Road and Bridge Corporation. As far back as the early eighties, CHEC had already begun operating in the international market. Henceforth, the company developed into a major international enterprise with branches in more than 20 countries and business activities spanning the continents of Asia, North and South America, Europe, Africa and Australia. CHEC is a full service provider in five core business areas, namely: marine engineering; dredging and reclamation; road and bridge; port machinery; and survey and design.

Established in 1978, *China National Machinery & Equipment Corporation (CMEC)*⁴⁹ was the first large national corporation to integrate foreign trade with industry. CMEC is engaged in the business of acting as main contractor of the international engineering projects and the export of complete plants, covering a trade network of 120 countries and regions worldwide. Its business sectors include power generation, transmission and transformation, light industry, textiles, food, building materials, communication, railway, harbor, telecommunication, broadcasting and TV, ship-building, metallurgy and mining.

*China Railway Engineering Corporation (China Railway Group Limited)*⁵⁰ is an integrated construction group that encompasses infrastructure construction, survey, design and consulting services, engineering equipment and component manufacturing, property development and other businesses. Since the 1970s, it has undertaken the construction of and provided construction-related services for more than 230 overseas projects including railway,

⁴⁶ Takenaka Corporation. (n.d.). *Corporate profile*. Retrieved September 23, 2009 from http://www.takenaka.co.jp/takenaka_e/company/corpo.html

⁴⁷ Toda Corporation. (n.d.). *Company overview*. Retrieved September 23, 2009 from <http://www.toda.co.jp/english/company/overview.html>

⁴⁸ China Harbour Engineering Company Ltd. (2006). *CHEC introduction*. Retrieved September 24, 2009 from <http://www.chec.bj.cn/ens/gsgk/zgjj/index.html>.

⁴⁹ CMEC (n.d.). *Introduction to CMEC*. Retrieved September 24, 2009 from <http://www.cmec.com/en/contents/121/383.aspx>.

⁵⁰ China Railway Engineering Corp. (n.d.). *Corporate information*. Retrieved September 24, 2009 from <http://www.crec.cn/en/news/mid.aspx?type=1>.

expressway, highway, bridge, tunnel, building construction, dredging, airport and municipal work projects in more than 55 countries and regions globally.

As China's largest construction and design company for transport infrastructures (port, tunnel, road and bridge), *China Road and Bridge Corporation (CRBC)*⁵¹ has established branches in over forty countries and regions globally and has formed an efficient and rapid network for operation, development and management in Asia, Africa and Europe. In 1979, CRBC entered the international contracting market, undertaking more than 600 engineering and labor projects in Asia, Africa, and Middle East, and achieving revenues of over 10 billion US dollars. CRBC has succeeded in constructing many famous projects like the Fourth and Fifth Mosul Bridges in Iraq, the Friendship Harbor in Mauritania, Malta Dry Dock (300,000 DWT), Kenya A109 National Highway, Addis Ababa Ring Road in Ethiopia, the North Section of West Kowloon Expressway in Hong Kong, China-Kyrgyzstan-Uzbekistan Highway and Suramadu Sea-Cross Bridge in Indonesia among others.

*Hanjin Heavy Industries and Construction Co. Ltd (HHIC)*⁵² was the first shipbuilding company in South Korea established in 1937. With a variety of projects completed in Korea and abroad, Hanjin is now a global construction industry leader particularly in the areas of housing, construction, and civil engineering. Its global network extends to London, Los Angeles, Guam, Dubai, Athens, Hong Kong and the Philippines.

Established on February 1974 as Hyundai Technology Development Co., Ltd., *Hyundai Engineering Co., Ltd.*⁵³ has extensive experience in the transportation industry, with projects including highways, subways, airports, harbors and evaluation on transportation impact studies. It has a wide range of experience in the design and engineering sectors for bridges, tunnels and inland channels. It has completed overseas highway construction projects in Iraq, Libya, Saudi Arabia, Kuwait, Malaysia and Nepal, as well as a high-speed railroad in Northern Iraq, a metropolitan subway and Seoul-Busan high-speed railroad in South Korea, Changi Airport in Singapore and Gimpo and Jeju Airports in South Korea. In ASEAN countries, it has been responsible for the Northern Luzon 230kV Substation Project in the Philippines, the Tawau Diesel Power Plant in Malaysia, the West Seno Field Production Project in Indonesia, the Cambodia 22kVD/L Project in eight towns in Cambodia, and a Ba RIA Add-On Combined Cycle Power Plant in Vietnam.

Founded in 1973, *Daewoo Engineering & Construction (Daewoo E&C)*⁵⁴ has led the development of South Korea's construction industry, while carrying out projects in more than 30 countries across the world. The Company's core business divisions include: civil and housing, power and industrial plants, architecture, LNG facilities, and large-scale overseas projects. Its overseas network in Asia & Oceania (apart from its presence in the Middle East, Europe, Africa and America) include: China, India, Japan, Malaysia, Pakistan, Palau, the Philippines, Singapore and UAE.

⁵¹ China Road & Bridge Corporation. (n.d.). *Brief introduction*. Retrieved September 23, 2009 from <http://www.crbc.com/en/about.asp>

⁵² Hanjin Heavy Industries and Construction Co., Ltd. (n.d.). *About HHIC: Overview*. Retrieved August 19, 2009 from <http://www.hanjinsc.com/eng/company/about.aspx>

⁵³ Hyundai Engineering Corporation. (2009). *Business: Infrastructure*. Retrieved October 6, 2009 from <http://eng.hec.co.kr/eng/biz/civil/intro.asp>

⁵⁴ Daewoo E&C. (n.d.). *About daewoo E&C*. Retrieved October 6, 2009 from <http://www.daewoenc.com/>

Since its founding in 1970, *Samsung Engineering*⁵⁵ marked the genesis of South Korea's engineering industry, expanded its presence in the international plant and infrastructure construction market, and today oversees numerous mega projects all over the globe using its comprehensive engineering services that range from feasibility study to project financing, engineering, procurement, construction, and pre-commissioning. As of June 2009, Samsung Engineering employs 4,100 skilled professionals and is in charge of multiple petrochemical plants, industrial plants, environmental facilities, and infrastructure projects valued in excess of US\$10 billion. It has offices in Hungary, Saudi Arabia, UAE, Kazakhstan, India, Japan, China, Vietnam, Thailand, Malaysia, U.S.A., Mexico and Trinidad & Tobago.

*Opus Group Berhad*⁵⁶ is a world leader in consultancy on asset development and asset management in infrastructure and the built environment. With 2,500 professionals under its wing, the Opus Group has a global reach, with over 90 offices worldwide including in Malaysia, New Zealand, Australia, United Kingdom, Canada, Vietnam and India.

Indonesia

*Semen Gresik*⁵⁷ is the largest cement producing company in Indonesia. With the capacity to produce 16.92 million tons of cement per year, Semen Gresik accounts for 46 percent of the domestic cement market in the country.

In Indonesia, the multinational corporation *Heidelberg* took over Indo-cement *Tunggal Prakasa* in 2001, then the second largest cement producing company in the country. As of June 2009, Heidelberg has 3 cement plants, 4 cement terminals, 1 aggregate and 10 ready-mixed concrete plants in Indonesia. Indonesia's total cement consumption of 34 million tons per year is one of the highest consumption levels in South East Asia.

Malaysia

*Lafarge Malayan Cement Berhad (LMCB)*⁵⁸ is a leader in the Malaysian cement industry and a major player in the Asian export market. It is part of the multinational corporation Lafarge.

LMCB has served as the supplier for mega-projects such as the KL Twin Towers, Sepang circuit, Kuala Lumpur International Airport, Sungai Pair Bridge, and the Pavilion Kuala Lumpur. It currently employs 1,350 people. The company has a wholly-owned subsidiary, the CMCM Perniagaan Sdn. Bhd (CMC), which is one of the largest building materials trading companies in Malaysia.

The *Cement Industries of Malaysia Berhad*⁵⁹ or the "CIMA Group" is the third largest cement manufacturer in Malaysia and takes up approximately 18 percent of the country's

⁵⁵ Samsung Engineering. (2006). *Company profile*. Retrieved October 6, 2009 from <http://www.samsungengineering.co.kr/eng/company/CompanyProfile.jsp>

⁵⁶ Opus Group Berhad. (n.d.). *About us: Corporate profile*. Retrieved August 19, 2009 from http://www.opusbhd.com/index.php?option=com_content&task=view&id=15&Itemid=11

⁵⁷ PT Semen Gresik (PERSERO) Tbk. (n.d.). *Brief history*. Retrieved August 19, 2009 from <http://www.semengresik.com/eng/perusahaanRiwayat.aspx>

⁵⁸ Lafarge Cement Malaysia. (n.d.). *Company overview*. Retrieved August 18, 2009 from http://www.malayacement.com.my/wps/portal/tut/p/kcxml/04_Sj9SPykssy0xPLMnMz0vM0Y_QjzKLN4q3dNcvyHZUBAB4NUrp

⁵⁹ Cement Industries of Malaysia Berhad (CIMA). (n.d.). *Corporate Profile*. Retrieved August 18, 2009 from http://www.cima.com.my/corporate_profile.php

cement market share. Since 1975, it has been involved in the manufacturing and distribution of cement and related products. The CIMA Group has ventured into international markets such as Singapore, Indonesia, and the Middle East. Operations of the Group are said to be environmentally friendly and compliant to the requirements and recommendations of the Malaysian Department of Environment. The CIMA Group has also been involved in reforestation and greening programs, and has reported that it has taken steps to manage and control its air emission impacts.

Heidelberg Cement is a market leader in Malaysia in the areas of aggregates, asphalt and ready-mixed concrete. It maintains and operates 40 ready-mixed concrete plants, 17 aggregate quarries, and 20 asphalt plants. It has been active in the country since 2007.

Opus Berhad is involved in a number of major public works in Malaysia. Some of these works include the widening of the existing Penang Bridge, the Batu Gajah Railway Development, the Johor State New Administrative Centre and the Cikampek-Palimanan Toll Road. The Opus Group also continues to provide technical and management advisory services for the 848 km North-South Expressway, the 60 km North-South Expressway Central Link and the 44 km Malaysia-Singapore Second Crossing.⁶⁰

The Philippines

Lafarge Cement Services Philippines, Inc. (LCSPI) is part of the Lafarge associated companies. Its cement products have been used in most of the major infrastructure projects in the country such as the Light Rail Transit or LRT Line 2, North Luzon Expressway, and in commercial and residential projects such as The Medical City, PBCOM Tower, SM Dasmariñas, Market Market and Verdana Homes. LCSIPI has received awards for being one of the safest and most energy efficient cement plants in the Philippines.

In the Philippines, *Leighton* started its operations in the 1970s with a series of civil engineering projects in the province of Zamboanga del Sur. It is now one of the leading international contractors in the country. Its projects in the Philippines include: Masbate Gold Mine Project (Mining), Masbate Gold EPC Project (Civil and Infrastructure, Industrial), Rapu Rapu Polymetallic Mine (Mining), Rapu Rapu Polymetallic Mine EPC Contract (Civil and Infrastructure, Industrial), Manila North Tollways Project (Civil and Infrastructure), Philip Morris Greenfield Project (Building, Industrial), Mariveles Jetty (Civil and Infrastructure), Rockwell Retail Center and Carpark Development (Building), Sual Civil Works Package (Civil and Infrastructure), Hardie Jardine Fibre-Cement Plant (Building, Industrial), Sual Coal Unloading Jetty (Civil and Infrastructure) and Sibutad Gold Mine (Mining).

Holcim Philippines Ltd was established in 1974 by the Holcim Global Group. Since then, Alsons Cement Corporation and Union Cement Corporation, two of the country's local cement companies have merged with Holcim Philippines. It employs over 1,400 workers and operates four cement plants in the country which a combined annual cement production

⁶⁰ Opus Group Berhad. (n.d.). *Operational highlights: Malaysia*. Retrieved August 25, 2009 from http://www.opusbhd.com/index.php?option=com_content&task=view&id=23&Itemid=18

capacity of 8.7 million metric tons. Holcim also maintains two ready-mix concrete plants in the country.

Hanjin has been operating in the Philippines since the 1970s. One of its earliest projects was the Marbel-General Santos Highway in Mindanao, completed in August 1976. Recently, in 2006, Hanjin signed a memorandum of agreement with the Subic Bay Management Authority (SBMA) to establish a shipyard in the Subic area. The shipyard now employs between 12,000 to 15,000 workers and produces two ships a year. Since 2006, however, according to community groups and trade unions at least 19 deaths have been recorded in the shipyard, prompting authorities such as the SBMA and the Philippine Senate to undertake investigations. Initial results from the investigations have shown that the shipyard does not have a medical facility and has disregarded the safety of its workers. Government agencies such as the SBMA, Senate and the Department of Labor and Employment have already called these lapses to the attention of Hanjin, but according to the accounts of representatives from these agencies, the company has insisted that “they want to finish 10 ships first”, instead of installing safety measures in the shipyard. The controversy over Hanjin’s accountability for the deaths in the Subic Shipyard continues to this day.

Established in 1931, the *Engineering Equipment Incorporated (EEI)*⁶¹ is now one of the Philippines’ leading construction companies. EEI has a long track record of involvement in the construction of large-scale heavy and light industrial projects, infrastructure and property development projects in the Philippines and abroad. Its shares are listed on the Philippine Stock Exchange.

*FF Cruz and Co. Inc.*⁶² began as a small survey firm in 1949 and quickly grew into a full-service engineering company. The company has earned an “AAA” rating from the Philippine Contractors Accreditation Board, being the only “complete engineering firm” that offers all types of services such as surveying, design, construction and maintenance. FF Cruz and Co. has completed a number of landmark projects in the country, from bridges to major thoroughfares and urban road networks. The company has also developed its capacity for port and marine engineering.

Established in 1954, *D.M. Consunji Inc.* or DMCI⁶³ is now known as the “Builder of Landmarks” and a pioneer in advanced engineering technology in Philippine construction. Some of the DMCI-constructed landmarks include the Philippine International Convention Center, the Cultural Center of the Philippines, the Manila Hotel and the Shangrila Hotels in the country. DMCI also holds a track record in building heavy infrastructure such as dams, roads, bridges and power plants.

Singapore

The *CSC Holdings Limited Group of Companies*⁶⁴ was established in 1975 and has since become Singapore’s largest foundation and geotechnical engineering specialist. Listed on the

⁶¹ EEI Corporation. (2007). *EEI - our company*. Retrieved September 24, 2009 from <http://www.eei.com.ph/>.

⁶² FF Cruz & Co. Inc. (n.d.). *Company milestones*. Retrieved September 24, 2009 from <http://server.dynasoft.com.ph/~ffcruz/index.php>.

⁶³ D.M.Consunji, Inc. (2009). *About us – overview*. Retrieved September 24, 2009 from http://www.dmcinet.com/Abt_Overview.asp.

⁶⁴ CSC Holdings Limited. (2007). *CSC corporate profile*. Retrieved August 28, 2009 from http://www.cschl.com.sg/index.php?option=com_content&task=view&id=27&Itemid=2

Main Board of the Singapore Stock Exchange since 1998, the CSC Group is also one of Southeast Asia's leading solutions provider for private and public sector residential, commercial, industrial, and infrastructure projects. The Group is associated with some high-profile projects such as the \$12 million foundation for The Pinnacles, a 50-storey public housing project at Duxton Hill, Singapore and a \$16 million foundation for 32 large oil storage tanks for Horizon Singapore Projects Pte Ltd at Jurong Island. The CSC Group currently operates in Singapore and Malaysia and employs over 2,000 workers. The Group is also involved in the precast concrete products business through its associated company Excel Precast Pte Ltd which provides a wide range of custom-made precast concrete building materials to the construction industry in Singapore.

The *Hor Kew Corporation Limited*⁶⁵ has been providing an integrated range of construction-related products and services in Singapore since its creation in 1979. Currently, it is principally a contractor for residential, commercial, institutional and industrial projects. It is also a designer, manufacturer and supplier of pre-stressed and precast reinforced concrete building components and prefabricated architectural metal components.

The *Lian Beng Group Ltd*⁶⁶ is one of Singapore's major homegrown building construction groups, in existence since 1973. To date, the Group has been mainly involved in the construction of residential, industrial and commercial projects and civil engineering projects as a main contractor. It has been given an A1 and A2 grade registration by the Singapore Building and Construction Authority. This standing allows the group to tender for public sector building projects with unlimited contract value and civil engineering projects with contract value of up to \$105 million.

In Singapore, *Heidelberg Cement* is a major producer of asphalt and operates one batching plant.

Thailand

The *Siam Cement Group (SCG)*⁶⁷ has been a major player in Thailand's construction industry since the founding of its forerunner The Siam Cement Company Limited in 1913. The SCG thus has had a long history of producing and supplying cement, ready-mixed concrete, concrete products, white cement and refractory. It has also provided customers within and beyond the Group with technical services and consultation on plant installation. Currently, the SCG has five core businesses namely chemicals, paper, cement, building materials, and, distribution. It has operations and investments in Thailand and in the South East Asian region (i.e. a grey cement plant in Cambodia and a ready-mixed concrete plant network in the ASEAN region). SCG now spans over 100 companies under its five business groups and employs approximately 24,000 workers.

Cambodia

⁶⁵ Hor Kew Corporation Limited. (2006). *Corporate profile*. Retrieved August 28, 2009 from http://www.horkew.com.sg/about_us.htm

⁶⁶ Lian Beng Group Ltd. (2009, August 14). *About us*. Retrieved August 28, 2009 from <http://www.lianbeng.com.sg/01%20company%20profile.htm>

⁶⁷ Siam Cement Group (SCG) (2008). *Corporate profile*. Retrieved August 27, 2009 from <http://www.siamcement.com/en/index.php>

The *Sea Union Construction (Cambodia) Co. Ltd*⁶⁸ was established and approved by the Royal Government of Kingdom of Cambodia to address “the needs of development in all infrastructures in our national society”. It has undertaken various large and medium-scale projects in industrial construction and high-level building coverings for homes. It also has rights to contract domestic construction of all kinds of industrial and civil buildings as well as piled foundations, schools, roads, bridges, culverts, equipment installations, and, renovation and decoration projects. The company now employs 140 workers and staff which include civil engineers, architects, site workers and other technicians.

The *Kampot Cement Co. Ltd*⁶⁹ was formed in 2005 as a joint venture between Siam Cement and the Khaou Chuly Group -- Cambodia’s top construction and engineering firm. It is now the largest cement producer in Cambodia. Its cement production facility in Kampot Province opened in 2008 and has a production capacity of 95,000 tons of cement per year.

Laos

*Leighton Contractors (Laos) Co. Ltd*⁷⁰ of Leighton Asia and the Leighton Group, is Australia’s largest project development and contracting group. Leighton in Laos was established in 1993 and has since carried out major building and industrial projects in Vientiane. Some of these projects include the Australian Chancery Building, Vientiane Diamond Factory Expansion, Vientiane Diamond Cutting Factory and Lao Star Satellite Earth Station. Leighton also operates a heavy vehicle maintenance facility in Vientiane.

The *Tong Integrated Construction Co. Ltd (TCIC)*⁷¹ was formed in 2001 by some of Laos’ leading professional and structural engineers to provide consultancy services in both the public and private sectors. In eight years, TCIC has become the leading construction firm in Laos. It has completed a number of major construction projects for the Ministry of National Defense and other governmental departments, including the Lao PDR National Telecommunications Project. TCIC was also selected to complete the Lao-Cambodian border road construction and the Lao-Vietnamese border road construction. TCIC has developed a wide range of expertise in building construction: commercial, industrial and residential buildings, and major public works.

Vietnam

The *Siam Cement Group (SCG)*⁷² began operating in Vietnam in 1992 and has since developed seven business units specialized in building materials, distribution, paper, chemicals, and four representative offices to initiate local programs and coordinate with local partners. SCG’s total investment in Vietnam is now US \$150 million and the Group employs more than 400 workers in the country.

⁶⁸ Sea Union Construction Cambodia Co., Ltd. (n.d.). *Company profile*. Retrieved August 24, 2009 from <http://www.seaunion.com.kh/aboutus.php>

⁶⁹ Siam Cement Group (SCG). (2008). *Businesses*. Retrieved August 25, 2009 from http://www.scg.vn/en/02_scg_businesses/03.html

⁷⁰ Leighton Asia. (2009). *Laos*. Retrieved August 28, 2009 from <http://www.leightonasia.com/v4/default.asp?lid=1&sec=Locations&subsec=Laos>

⁷¹ TCIC Construction Co. Ltd.(2009). *Construction*. Retrieved August 28, 2009 from http://www.tcic.com.la/tong_integrated_construction_company.html

⁷² SCG Vietnam. (2008). *Business in brief*. Retrieved August 25, 2009 from http://www.scg.vn/en/03_scg_vietnam/01_business_in_brief.html

The *Vietnam Cement Industry Corporation (VICEM)*⁷³ is merely the new name of the Vietnam Cement National Corporation, one of several corporations established by the Vietnamese government in the 1980s-1990s. VICEM was formally created in 1993 to respond to the growing demand for cement in the country. Aside from its plants in Vietnam, VICEM also has some joint-venture plants that enable it to produce more than 5 million tons of cement per year. These plants include the Chinfon Cement Corporation of the Chinfon Global Group (Taiwan), Holcim Vietnam Cement Company of the Holcim Global Group, Nghi Son Cement Corporation of the Taiheiyo Cement Group and Mitsubishi Materials Corporation (Japan). VICEM has also ventured into real estate development, ores mining and building materials, ports construction and industrial and civil construction.

*Holcim Vietnam Ltd*⁷⁴ of the Holcim Global Group employs 1,661 people in Vietnam and has a production capacity of 4.7 million tons of cement per year.

Section 3: Mapping of Employers' Organizations in the Construction Sector in Southeast Asia

Region-Wide Organizations

ASEAN Constructors Federation (ACF)

The ASEAN Constructors Federation or ACF⁷⁵ is considered as an “Accredited Civil Society Organization” in the ASEAN Charter (Annex 2) under the Committee on Industry, Mineral and Energy (COIME). This status was granted at the 4th Meeting of the 20th ASEAN Standing Committee (ASC) held on March 3-5, 1987 in Singapore.

The ACF consists of six (6) members: the Indonesia Contractors Association (ICA), Master Builders Association Malaysia (MBAM), Philippines Constructors Association, Inc. (PCA), Singapore Contractors Association Ltd. (SCAL), Thai Contractors Association (TCA) and the Vietnam Association of Construction Contractors (VACC).

The ACF was established on May 30, 1985 in Jakarta, Indonesia, two years before its accreditation by the ASEAN. The Federation's declared purposes and objectives are as follows:

- To provide a forum for dialogue among the construction contractors in the ASEAN regions through which to evolve a collective and more effective role for the construction industry in the economic development of the ASEAN region;
- To foster closer co-operation among the construction contractors in the ASEAN region and thereby promote joint ventures and joint operations for enhancement of

⁷³ Vietnam Cement Industry Corporation (VICEM). (n.d.). *Process of foundation and development*. Retrieved August 25, 2009 from <http://www.vicem.vn/EN/?Tabid=KMABOUTQT>

⁷⁴ Holcim. (n.d.). *Holcim Ltd. Vietnam*. Retrieved August 25, 2009 from http://www.holcim.com.vn/CORP/EN/mod/7/id/-1610625224/page/group_company.html

⁷⁵ The ACF has no official website. Information for this section was taken from: Master Builders Association Malaysia. (n.d.). *Courtesy visit by ASEAN constructors federation (ACF) delegation to ASEAN secretariat*. Retrieved September 1, 2009 from http://www.mbam.org.my/mbam/index.php?option=com_content&task=view&id=619&Itemid=331

their construction contracting capabilities through complementation and/or supplementation;

- To promote mutual consultation among construction contractors in the ASEAN region and thereby encourage exchange of information and know-how for improvement of construction technology and management, upgrading of construction labour skills and standards, and ultimately, advancement of the construction industry in the ASEAN region; and
- To unify efforts of the construction contractors in the ASEAN region in promoting export of construction services to countries outside of the ASEAN region, and to pool resources, if necessary or desirable, to attain the goal.

ASEAN Federation of Cement Manufacturers (AFCM)

The ASEAN Federation of Cement Manufacturers (AFCM)⁷⁶ was established in Bangkok, Thailand on March 5, 1977, in line with the aims of the ASEAN Chambers of Commerce and Industry (ASEAN-CCI). In particular, the AFCM sought to foster cooperation and coordination among the cement manufacturers in the ASEAN region. Today, AFCM focuses on two major strategic areas, namely that of sustainable development.

AFCM's membership includes the following national employers' organizations: Bultra Heidelberg Cement Sdn. Bhd (Brunei Darussalam), Indonesia Cement Association, Cement and Concrete Association of Malaysia, Cement Manufacturers' Association of the Philippines, Cement and Concrete Association of Singapore, Thai Cement Manufacturers Association, Vietnam National Cement Association. The AFCM secretariat for the period of November 2007 to 2009 is the Cement Manufacturers' Association of the Philippines, which has its head office in Manila, Philippines.

The AFCM held its 15th Congress in Hanoi on November 1, 2007. Participants included representatives from Brunei, Indonesia, Malaysia, Singapore, Thailand, the Philippines and Vietnam. The Congress discussed the status and future of the industry.

In March 2008, the AFCM, together with the Thai Cement Manufacturers Association (TCMA), organized its 21st Technical Symposium and Exhibition in Bangkok with the theme "Progress and Sustainability in ASEAN Cement Industry". Preparations are now underway for the Federation's 22nd Symposium and exhibition scheduled in April 2010 in Danang City, Vietnam. The theme for this upcoming symposium is "Green Productivity in the Cement Industry" and the host will be the Vietnam Cement Association (VNCA).⁷⁷

Indonesia

Indonesia Contractors Association (ICA)

The Indonesia Contractors' Association (ICA) is one of the founders of the International Federation of Asian and Western Pacific Contractors Association or IFAWPCA that was founded in Manila, Philippines in March 1958. Under the IFAWPCA, ICA generates

⁷⁶ ASEAN Federation of Cement Manufacturers (AFCM). (n.d.). *ASEAN cement manufacturers met in hanoi*. Retrieved September 7, 2009 from http://afcm-org.net/news_03.html

⁷⁷ AFCM 2010 Vietnam. (2009, August 17). *AFCM 2010 - first announcement*. Retrieved September 7, 2009 from <http://afcm2010.com/index.php?mod=article&cat=AFCM2010ANNOUNCEMENT&article=134>

bilateral and/or multilateral cooperation with contractors' associations belonging to its network.

In Indonesia, ICA played an active role in the creation of the Construction Services Development Board or CSDB. Established by virtue of the Construction Service Law No. 18 of 1999, CSDB is responsible for the development of the construction industry in Indonesia.

ICA's aim is "to promote and encourage a highly relative, independent, productive, accountable and competitive national construction industry". To date, ICA has become an umbrella grouping of the best contractors and dominant players in Indonesia, including not just domestic companies but also multinational companies that operate in Indonesia.

Indonesia Cement Association

*** Note: Indonesia Cement Association's official website (<http://www.asi.or.id>) was under construction at the time of writing.

Malaysia

Master Builders Association Malaysia (MBAM)

The Master Builders Association Malaysia or MBAM⁷⁸ was established in 1954 to promote cooperation and coordination among the various players in the Malaysian construction industry. The group has since been recognized as representative of the Malaysian construction industry and services sector. In the establishment of the ASEAN Constructors Federations (ACF), for example, 3 representatives from the MBAM were founding members of the ACF.

Cement and Concrete Association (C&CA)

The Cement and Concrete Association (C&CA)⁷⁹ was created in 1965 to maximize opportunities opened up by the steady growth of the cement industry in Malaysia at the time and to look after the interests of the cement manufacturers. It is a member of the ASEAN Federation of Cement Manufacturers (AFCM).

The Philippines

Philippine Constructors Association, Inc. (PCA)

Having been established in 1956, the Philippine Constructors Association, Inc. or PCA⁸⁰ is the oldest trade organization in the country. Over the years, PCA has been "recognized as the voice of the construction industry" and has participated in several governmental bodies

⁷⁸ Master Builders Association Malaysia. (n.d.). *About us - association profile*. Retrieved August 18, 2009 from http://www.mbam.org.my/mbam/index.php?option=com_content&task=view&id=104&Itemid=

⁷⁹ The Cement and Concrete Association (C&A). (n.d.). *Association overview*. Retrieved August 18, 2009 from <http://www.cnca.org.my/over.html>

⁸⁰ Philippine Constructors Association, Inc. (n.d.). *PCA services*. Retrieved August 17, 2009 from http://www.philconstruct.com/index.php?option=com_content&task=view&id=92&Itemid=37

tasked with “policy formulation and implementation, drafting of laws, rules and regulations, and administrative directives.

The PCA is a regular member of the International Federation of Asian and Western Pacific Contractors’ Association (IFAWPCA) and the ASEAN Constructors Federation (ACF). Moreover, the PCA often organizes delegations to attend international conferences and conventions particularly those that offer information on new construction technologies, equipment and materials.

Internally, the PCA holds periodic Council Meetings as the venue for members to report on and discuss the status of the Philippine construction industry.

Cement Manufacturers’ Association of the Philippines (CeMAP)

The Cement Manufacturers’ Association of the Philippines or CeMAP⁸¹ traces its roots to the Cement Institute of the Philippines (1957), the Cement Association of the Philippines (1965), the Philippine Cement Corporation (1973) and the Philippine Cement Manufacturers’ Corporation (1980).

CeMAP was formally established in August 2003 with a membership of 14 cement manufacturing companies. It was envisioned as a reflection of the industry’s reinvigorated image, one geared towards meeting the challenge of deregulation that started under the Cory Aquino administration. CeMAP’s stated mission is to “promote the cement industry as a key partner in contributing to infrastructure development and economic growth”.

CeMAP is a member of the Federation of Philippine Industries (FPI), an umbrella organization of Philippine-based industries committed to “more active participation in joint efforts to attain sustainable development”.

Chamber of Real Estate and Builders’ Associations (CREBA), Inc.

The Chamber of Real Estate and Builders’ Associations (CREBA)⁸² was established in October 1973 and started out as a coming together of Philippine business and trade associations in the real estate, housing, and construction industries. Today, CREBA is a recognized umbrella organization of some 4,000 firms, individuals and associations across 32 local chapters and 7 chapters overseas – directly or indirectly involved in land and housing, construction, allied industries and various professional fields of discipline.

CREBA has been an active participant in many governmental efforts to establish the administrative and regulatory infrastructure that now governs land and housing development in the country. CREBA continues to work with the Philippine government particularly on four major concerns: equitable land access, permanent and sustainable homebuyer financing assistance program, elimination of inequitable taxes, and the creation of a Department of Housing and Urban Development.

⁸¹ Cement Manufacturers' Association of the Philippines. (n.d.). *About CeMAP*. Retrieved August 17, 2009 from <http://www.cemap.org.ph/about.html>

⁸² Chamber of Real Estate and Builders' Associations (CREBA), Inc. (2007). *Fast facts*. Retrieved on August 17, 2009 from http://creba.ph/index.php?option=com_content&task=view&id=36&Itemid=47

Singapore

Singapore Contractors Association Ltd. (SCAL)

The Singapore Contractors Association Ltd or SCAL⁸³ was established in 1937 with only 30 members. Today, SCAL has a membership of more than 2000 members and has become a recognized and official representative of the construction industry in Singapore. Works of SCAL members – housing estates, hi-tech factories, commercial buildings, MRT stations, ports, tunnels, civil works, drainage and sewerage works – represent more than 75 percent of all projects within the industry in Singapore. SCAL is also an important “stopover” for foreign dignitaries and visitors of the construction industry. SCAL has also been involved in several overseas missions, exhibitions and trade fairs.

SCAL is well represented in several policy-making committees in both the private and public sectors. It regularly holds dialogues with various Ministries on pertinent industry issues. At the regional and global levels, SCAL is a member of the International Federation of Asian and Western Pacific Contractors Associations (IFAWPCA), Confederation of International Contractors’ Association (CICA) and the ASEAN Constructors’ Federation (ACF).

Thailand

Thai Contractors Association (TCA)

The Thai Contractors Association or TCA⁸⁴ was established in 1928. In 1965, TCA joined the International Federation of Asian and Western Pacific Contractors Association (IFAWPCA). “Key management policies” of the association include the following: gather and use lessons of the downturn period particularly in terms of strengthening the industry for global competition, create proper roles and responsibilities of and between construction companies and the general public, and to convince government to support the construction industry as a main exporter of construction materials in the foreign market.

Federation of Design and Construction Services of Thailand (FEDCON)

The Federation of Design and Construction Services of Thailand (FEDCON)⁸⁵ was created as a Thai-government sponsored organization in 2001 to promote the services of Thai professionals in architecture, interior design, engineering, construction and project management in overseas markets. Its membership includes nine (9) Thai professional associations: Thai Contractors Association, Association of Siamese Architects, Engineering

⁸³ The Singapore Contractors Association Ltd. (n.d.). *Association profile*. Retrieved August 28, 2009 from <http://www.scal.com.sg/index.cfm?GPID=1>

⁸⁴ Thai Contractors Association. (n.d.). *History*. Retrieved August 27, 2009 from <http://www.tca.or.th/html/history.asp?Lang=EN>. Only selected parts of the TCA website are accessible in English.

⁸⁵ The Federation of Design and Construction Services of Thailand (FEDCON). (n.d.). Retrieved August 27, 2009 from <http://www.fedconthai.com/>

Institute of Thailand, Consulting Engineers Association of Thailand, Thailand Interior Designers Association, Environmental Engineering Association of Thailand, Thai City Planner Society, Thai Electricity and Mechanical Contractors Association, and Thai Association of Landscape Architects. Because of its broad membership, FEDCON is recognized in Thailand as a dynamic design and construction provider well equipped for global competition.

Thai Cement Manufacturers Association

The Thai Cement Manufacturers Association (TCMA)⁸⁶ was established in 2006 to serve as a coordinating office for Thai cement manufacturers and government agencies, as well as non-government organizations on country and international levels. TCMA's eight (8) co-founders are Thai leading cement manufacturers. TCMA was the co-founder of the ASEAN Federation of Cement Manufacturers (AFCM). In addition, TCMA is a member of the Asian Cement Forum (ACF) and the Asian Cement Producers Amity Club (ACPAC). The Association's objectives are to promote closer relations and cooperation among the cement manufacturers in the country; to conduct researches, implement, disseminate and promote new technologies, seminars and workshops relating to cement industry among cement manufacturers, emphasizing sustainable development and energy conservation; to promote a close relation and cooperation among international cement manufacturers; and to create and preserve the stability of the cement industry in the country.

Vietnam

Vietnam Association of Construction Contractors (VACC)

The Vietnam Association of Construction Contractors (VACC)⁸⁷ was established in 1999 and its members are mostly big contractors. Generally, contractors can participate in this association by paying an annual association fee of at least 10 million Vietnamese Dong. VACC organizes seminars and training courses, and contractors can participate in them by paying the appropriate course fee. Apart from the VACC in Ha Noi, there are some provincial offices in Ho Chi Minh City and Ninh Binh. The VACC was admitted as a member of the ASEAN Constructors Federation (ACF) at the ACF Council meeting held in October 2003 in Singapore.

⁸⁶ AFCM 2010 Vietnam (2009, June 24). *Thai cement manufacturers association*. Retrieved September 14, 2009 from <http://afcm2010.com/index.php?mod=article&cat=AFCMmembership&article=162>

⁸⁷ Development of Medium and Small Size Private Contractors. (2002, October). *Road & Bridge Magazine*. Retrieved September 13, 2009, from <http://rt.mt.gov.vn/gtnt2/05%20PDF%20Files/03%20Article/02%20RT2%20VN%20Contract%20Study%20Oct%2002/RT2%20VNContractorStudyEng.pdf>; Master Builders Association Malaysia. (n.d.). *International ACF - ACF milestones*. Retrieved September 13, 2009 from http://www.mbam.org.my/mbam/index.php?option=com_content&task=view&id=133&Itemid; Vietnam Second Rural Transport Project, Technical Assistance to Ministry of Transport. (2003, May). *Contractor capacity final report*. Retrieved September 13, 2009 from <http://rt.mt.gov.vn/gtnt2/05%20PDF%20Files/Technical%20Report/Contractor%20Capacity/Contractor%20Capacity%20Eng.pdf>

Vietnam National Cement Association

The Vietnam National Cement Association (VNCA)⁸⁸ is an organization that comprises enterprises operating in Vietnam's cement industry. The association's aim is to facilitate cooperation among its members in order to boost the development of each enterprises and the cement industry as a whole, and to protect the interest of its members within the legal framework of the Socialist Republic of Vietnam. It is one of the seven members of the ASEAN Federation of Cement Manufacturers (AFCM).

Section 4: Ongoing Foreign-Funded Infrastructure Projects in Southeast Asia

World Bank Projects - Indonesia

*Strategic Roads Infrastructure Project*⁸⁹

This is a US \$ 208 million loan by the Republic of Indonesia that aims to improve the country's economic competitiveness by (i) improving the capacity and quality of national roads in the islands of Java and Sumatra: 155 km of urban and inter-urban roads; extension of road capacity on approximately 85 km of roads, including bridges; construction of 55 km of new urban and inter-urban roads, including bridges; construction of a new bridge of 50 meters; implementation of a performance-based contract pilot program on an approximately 110 km section of the North Java Corridor; (ii) improving road safety: supporting Indonesia's overall road safety strategy; training of project staff in the application of the project management manual; and (iii) increasing the efficiency, quality and transparency of the procurement and implementation processes of Indonesia's Ministry of Public Works (MPW): support to the Directorate of Planning of the Ministry of Public Works and the Project Management Unit in project implementation, design of works, and pre-contract activities; assistance in preparation and implementation of the performance-based contract pilot program; assistance in the procurement of consultancy services, including the implementation of the anti-corruption plan; and assistance in carrying out financial and technical audits on project works. The duration of the project is from 06 July 2006 to 31 December 2011.

World Bank Projects - The Philippines

*National Roads Improvement and Management (APL) Phase 2*⁹⁰

⁸⁸ Vietnam National Cement Association. (n.d.). *VNCA introduction: charters*. Retrieved September 14, 2009 from http://www.vnca.org.vn/en/index.php?page=intro_chart

⁸⁹ The World Bank. (2006, June 14). *Strategic roads infrastructure project*. Retrieved August 19, 2009 from <http://web.worldbank.org/external/projects/main?Projectid=P079906&Type=Overview&theSitePK=40941&pagePK=64283627&menuPK=64282134&piPK=64290415>

This is a US \$ 232 million loan by the Government of the Philippines, with funds allocated through the Department of Finance (DOF) and implemented by the Department of Public Works and Highways (DPWH). The project involves (i) improvement of 450 km of national arterial roads and bridges, including upgrading 146 kilometers and rehabilitation or widening of 304 km; (ii) a comprehensive road maintenance program through long-term performance-based contracts and expansion of the national preventive maintenance program; (iii) reforms in the organization and the service delivery processes that will improve the effectiveness and the integrity of the Department of Public Works and Highways in managing the road system; and (iv) implementation of a framework to strengthen the operation of the special road funds and to restructure the roads sector. The duration of the project is from 13 May 2008 to 31 December 2012.

World Bank Projects - Vietnam

*Vietnam Priority Infrastructure Project*⁹¹

This is a US \$ 152.44 million loan of the Socialist Republic of Vietnam, with the Da Nang City People's Committee implementing the project. The project seeks to improve the efficiency, effectiveness and sustainability of urban services that fall under the ambit of Da Nang city and has four components: (i) urban area upgrading; (ii) environment infrastructure improvement; (iii) urban roads and bridges: two major road links for improving access to the fast growing new district of Cam; and (iv) capacity building and project implementation support. The duration of the project is from 22 May 2008 to 30 June 2013.

Asian Development Bank (ADB) Projects - Cambodia

*GMS Rehabilitation of the Railway in Cambodia*⁹²

This is a US \$42 Million loan by the Kingdom of Cambodia, with its Ministry of Public Works and Transport as the implementing agency. The project involves (i) approximately 600 km of railway infrastructure, including rail tracks and damaged bridges on the Southern and Northern Lines; (ii) about 48 km of railway line to the Thai border; and (iii) rail links from the Sihanoukville container port to the port in Phnom Penh. The duration of the project is from 30 January 2008 to 30 June 2010.

*Greater Mekong Subregion (GMS) Southern Transport Corridor Project (Cambodia and Vietnam)*⁹³

⁹⁰ The World Bank. (2008, April 29). *National roads improvement and management (APL) phase 2*. Retrieved August 17, 2009 from

<http://web.worldbank.org/external/projects/main?Projectid=P079935&Type=Overview&theSitePK=40941&pagePK=64283627&menuPK=64282134&piPK=64290415>

⁹¹ The World Bank. (2008, May 7). *VN-priority infrastructure investment project*. Retrieved August 25, 2009 from

<http://web.worldbank.org/external/projects/main?Projectid=P086508&Type=Overview&theSitePK=40941&pagePK=64283627&menuPK=64282134&piPK=64290415>

⁹² Asian Development Bank. (n.d.). *CAM: GMS rehabilitation of the railway in cambodia: Regional*. Retrieved August 25, 2009 from <http://pid.adb.org/pid/LoanView.htm?projNo=37269&seqNo=01&typeCd=3>

⁹³ Asian Development Bank. (n.d.). *CAM: Greater mekong subregion southern transport corridor project (Cambodia and Vietnam): Regional*. Retrieved August 25, 2009 from <http://pid.adb.org/pid/LoanView.htm?projNo=36353&seqNo=02&typeCd=3>

This is a US \$7 Million loan that involves the following: (i) rehabilitation of transport infrastructure (in Cambodia, 15km of NR 33 to the border with Vietnam at Preak Chak); (ii) new cross border facilities, as part of the implementation of the Greater Mekong Subregion Cross-border Transport Agreement (iii) HIV/AIDS and trafficking awareness and prevention, and (iv) road maintenance in Cambodia. The duration of the project is from 12 August 2008 to 31 December 2012.

*Cambodia Road Improvement Project*⁹⁴

This is a US \$50 Million loan that includes the following: (i) Rehabilitation of a road section on National Roads 5 and 6 (completed); (ii) Reconstruction of bridges on National Roads 56 and 68 (completed); (iii) Construction of weigh stations (completed); and (iv) Construction of cross border facilities in Poipet and common control area in Bavet. The duration of the project is from 20 May 2003 to 30 June 2010.

Asian Development Bank (ADB) Projects - Vietnam

*Greater Mekong Subregion Southern Transport Corridor Project (Cambodia and Vietnam)*⁹⁵

This is a US\$ 75 Million loan by the Socialist Republic of Vietnam, implemented by the Vietnam Road Administration, Ministry of Transport. The project includes the following: (i) Rehabilitation of transport infrastructure in Viet Nam: 89.5 km of National Highway (QL) 80 and QL63 will be improved, including the construction of two large bridges across the Cai Be and Cai Lon Rivers; (ii) Cross-border facilities as part of the implementation of the GMS Cross-Border Transport Agreement; (iii) Raising awareness and prevention of HIV/AIDS transmission and trafficking. The duration of the project is from 29 May 2008 to 30 June 2015.

*Japan International Cooperation Agency (JICA) Projects - Indonesia*⁹⁶

In 2008, Japan signed an agreement with Indonesia to provide official development assistance (ODA) loans of up to 120 billion yen for five projects. These projects include: (i) a climate change program; (ii) the Infrastructure Reform Sector Development Program; (iii) construction of the Jakarta Mass Rapid Transit Project; (iv) engineering services for the Java-Sumatra Interconnection Transmission Line Project; and (v) assistance for higher education institutions, in particular, the Bandung Institute of Technology.

*Japan International Cooperation Agency (JICA) Projects - The Philippines*⁹⁷

⁹⁴ Asian Development Bank. (n.d.). *GMS: Cambodia road improvement project: Cambodia*. Retrieved August 25, 2009 from <http://pid.adb.org/pid/LoanView.htm?projNo=30240&seqNo=01&typeCd=3>

⁹⁵ Asian Development Bank. (n.d.). *VIE: Greater mekong subregion southern coastal corridor project (Cambodia and Vietnam): Regional*. Retrieved August 25, 2009 from <http://pid.adb.org/pid/LoanView.htm?projNo=36353&seqNo=01&typeCd=3>

⁹⁶ Japan International Cooperation Agency. (2009, March 31). *Press releases: JICA signed japanese ODA loan agreements with indonesia-support of efforts to improve the investment climate and enact climate change adaptation measures*. Retrieved September 16, 2009 from http://203.179.38.26/english/news/press/2009/090331_01.html

⁹⁷ Japan International Cooperation Agency. (2009, July 15). *Project news: Philippines strengthening the flood management function of DPWH*. Retrieved September 16, 2009 from <http://www.jica.go.jp/project/philippines/0600933/english/news/index.html>

In 2008-2009, Japan provided the Philippine government with loans of approximately 20 million yen for the construction of river banks and protection works in the Kinanliman River in Quezon Province, the Digmala River in the Nueva Ecija Province and the Sabo dam in the Santa Fe River in the Nueva Vizcaya Province.

Japan International Cooperation Agency (JICA) Projects - Thailand⁹⁸

JICA is providing Thailand with approximately 62 million Yen for the construction of the Mass Transit System Purple Line I Project that will connect Bang Sue and Bang Yai. Approved in 2008, the project is being implemented by the Mass Rapid Transit Authority of Thailand (MRTA).

Japan International Cooperation Agency (JICA) Projects - Cambodia⁹⁹

In August 2009, JICA signed an agreement with Cambodia for an ODA loan of up to 7,176 million Yen for the Sihanoukville Port Multipurpose Terminal Development Project. This project is meant to upgrade the capacity of the Sihanoukville Port, the only international deep-sea port in Cambodia. An oil supply base will also be built at this Port to promote oil production activities in the country. JICA has also been supportive of the idea to develop a coastal industrial zone in the Sihanoukville area, including the establishment of a special economic zone.

Japan International Cooperation Agency (JICA) Projects - Laos¹⁰⁰

JICA has provided Laos with a grant for the Construction of the new Hin-Heup bridge over Nam Lik on National Road Route No. 13 North in Vientiane. The duration of the project is from November 2006 to December 2009.

Japan International Cooperation Agency (JICA) Projects - Vietnam

In March 2009, JICA signed an agreement with Vietnam to provide an ODA loan of up to 83.2 billion Yen for four infrastructure projects:

*Hanoi City Urban Railway Construction Project: Nam Thang Long – Tran Hung Dao Section (Line 2)*¹⁰¹

JICA is providing Vietnam with 14.688 billion Yen for the construction of the first underground urban rail line in Hanoi. This project is meant to ease the traffic in the country's capital, which has a population of more than 3 million. Hanoi is also touted as the gateway to NorthEast Asia for ASEAN countries.

⁹⁸ Japan International Cooperation Agency. (n.d.). *Activities in thailand: Loan projects*. Retrieved September 16, 2009 from <http://www.jica.go.jp/thailand/english/activities/loan02.html#03>

⁹⁹ Japan International Cooperation Agency. (2009, August 21). *Press releases: Signing of japanese ODA loan agreement with cambodia supporting industrial development of cambodia through port infrastructure development*. Retrieved September 16, 2009 from <http://www.jica.go.jp/english/news/press/2009/090821.html>

¹⁰⁰ Japan International Cooperation Agency. (n.d.). *List of JICA's cooperation in laos*. Retrieved September 16, 2009 at <http://www.jica.go.jp/laos/english/activities/activity.html#04>

¹⁰¹ Japan International Cooperation Agency. (n.d.). *Press conference signing of japanese ODA loan with vietnam for fiscal year 2008*. Retrieved September 16, 2009 at http://www.jica.go.jp/vietnam/office/information/press/pdf/press2008/200903_01e.pdf

*Construction of Thanh Tri and Nhat Tan Bridge*¹⁰²

Also in Hanoi, this JICA-funded project is aimed at improving the efficiency of the transportation network in the Northern region. It consists of three packages. The first package consists of the construction of the main bridge with a length of 1,500 m. The second package consists of the South road and the third package, the North Road. The project is now being undertaken by Japanese contractors Tokyo Corporation, Consortium of Chodai C. Ltd, the Nippon Engineering Consultants, and the Vietnamese Transport Engineering Design Incorporation. The project owner is Project Management Unit 85 or PMU85.

Chinese ODA to Southeast Asia

This year, China unveiled a new investment fund and loan package to assist ASEAN countries respond to the global financial crisis.¹⁰³ The package includes a US\$ 10 billion investment fund for infrastructure construction, energy and natural resource development and improvements in information and communications. According to a November 2008 report by the Taiwan Center for Asia-Pacific studies, China's aid to Southeast Asia has already exceeded that of the United States.

In June 2009, the Malaysian government publicly announced its openness to the enhancement of cooperation with China in the fields of economy, finance, resources, energy and infrastructure construction.¹⁰⁴ As early as 2006, the Philippine government presented China with a US \$32 billion "wish list" of possible projects with China, including the now controversial \$10-billion interconnection of the North and South Luzon Expressways, and at least \$1 billion worth of tourism facilities.¹⁰⁵ In Cambodia, China is the country's biggest aid donor, providing US \$600 million in 2007 and about \$260 million in 2008.¹⁰⁶

PART TWO: Construction Labor in Southeast Asia

Section 1: Some Facts and Figures

According to the International Labor Organization (ILO), there are more than 100 million construction workers worldwide. More than half of these workers are found in Asia, home to two of the biggest developing countries, China and India.¹⁰⁷ The construction industry thrives in places with great need for physical infrastructure development, in both the private and public sectors.

¹⁰² Japan International Cooperation Agency. (2009, March 6). *Ground breaking ceremony for package 3 under Nhat Tan Bridge (Japan-Vietnam friendship bridge) construction project*. Retrieved September 16, 2009 at http://www.jica.go.jp/vietnam/office/information/press/pdf/press2008/200903_05e.pdf

¹⁰³ For details of this account, please see McCartan, B. (2009, April 30). A helping Chinese hand. *Asia Times Online*. Retrieved September 17, 2009 from http://www.atimes.com/atimes/Southeast_Asia/KD30Ae01.html

¹⁰⁴ Beijing Review. (2009, June 4). *China raises four-point proposal on tackling financial crisis with malaysia*. Retrieved September 17, 2009, from http://www.bjreview.com.cn/quotes/txt/2009-06/04/content_198995.htm

¹⁰⁵ Go, M. & Calica, A. (2006, June 6). RP presents China with \$32-B funding 'wish list'. *The Philippine Star*. Retrieved on September 17, 2009 from <http://www.newsflash.org/2004/02/hl/hl104227.htm>

¹⁰⁶ TVNZ. (2009, September 14). *Cambodia PM lauds china's aid*. Retrieved September 17, 2009 from <http://tvnz.co.nz/world-news/cambodia-pm-lauds-china-s-aid-2990315>.

¹⁰⁷ Chang, D. (2008). *Global construction and asian workers: Expansion of TNCs in asia and implications for labour*. Building and Wood Workers' International (BWI) and Asia Monitor Resource Centre (AMRC).

In the Southeast Asian region, Indonesia, with a total of 4.4 million workers, absorbs the largest number of construction workers. It is followed by the Philippines with 1.8 million construction workers, Malaysia with 800,000 workers, Thailand with 395,000 workers and Singapore with 64,000 workers.

At a global scale, construction workers account for seven percent (7 percent) of the labor force.¹⁰⁸ In the Southeast Asian region, the percentage of construction workers to the labor force ranges from 1.04 percent (Thailand) to 7.1 percent (Malaysia). These figures have remained more or less constant in the past decade except for Thailand where, in 2004, construction workers accounted for 5.3 percent of the then-total workforce of 35,712,000.¹⁰⁹

Table 1: Total Labor Force and Construction Workers

Country	Total Labor Force	Construction Workers	Percent of Construction Workers to TLF
Indonesia	112 M	4.4 Million	3.9
Malaysia	11.2 M	800,000	7.1
Philippines	36.81 M	1.8 M	4.8
Singapore	2.96 M	64,100	2.1
Thailand	37.78 M	395,000	1.04
Cambodia	8.6 M	Data not available	
Laos	2.1 M	Data not available	
Vietnam	47.41 M	Data not available	

It is also interesting to note that current unemployment levels in the foregoing Southeast Asian countries are quite high. As construction work is often project-based and seasonal, construction workers have been considered as making up the bulk of the pool of surplus labor abundant in the region.

Table 2: Unemployment Rates

Country	Unemployment Rate (percent)* 2005/2008
Indonesia	8.4
Malaysia	3.6
Philippines	7.4
Singapore	2.2
Thailand	3.2
Cambodia	0.8
Lao PDR	1.3
Vietnam	1.3

*Source: ASEAN official website

One of the unique features of the construction industry is the fact that products are often produced or assembled at the point of consumption, requiring the workforce to be highly

¹⁰⁸ Building and Wood Workers' International. (n.d.). *Building & construction*. Retrieved September 25, 2009 from <http://www.bwint.org/default.asp?Issue=CONSTR&Language=EN>

¹⁰⁹ Chang, D. (2008). *Global construction and asian workers: Expansion of TNCs in asia and implications for labour*. Building and Wood Workers' International (BWI) and Asia Monitor Resource Centre (AMRC).

mobile.¹¹⁰ The industry thus employs a significant number of migrant workers, especially from developing countries.

In the construction sector in Southeast Asia, Malaysia employs the most foreign workers. Statistics released by the Ministry of Home Affairs show that in 2008 there were 307,873 construction workers out of 2,062,596 general workers or 14.9 percent of the total migrant population in Malaysia.¹¹¹ The majority of these workers are Indonesians as Bahasa is a shared language. Some also come from South Asian countries such as Bangladesh, Pakistan and India.¹¹² Indonesia also accepts foreign construction workers, albeit in lesser numbers. In 2002, there were 1,902 migrant workers out of 91,647 construction workers, comprising roughly 2 percent of construction workers. Meanwhile, Singapore's construction industry relies heavily on Malaysian and Thai workers.¹¹³

Across sectors, Southeast Asia is known to have absorbed most migration flows in Asia largely due to “widening income differentials, demographic factors, and in some instances by the violence of internal strife”.¹¹⁴ Malaysia, Thailand, Singapore and Brunei are the main receiving countries while the Philippines, Indonesia, Burma, Vietnam, Cambodia, Laos and East Timor are the sending countries.

Section 2: Issues and Problems of Construction Workers

Irregular, Informal Labor

According to the BWI study on Global Construction and Asian Workers, “the construction site is increasingly becoming a site where informal labor meets global capital”. Because of economic globalization, there is now increased pressure on individual construction firms to keep labor as informal as possible so as to cut off production costs. Keeping labor “informal” primarily refers to employers obscuring employee-employer relationships through subcontracting and hiring migrant workers from developing countries where unemployment and underemployment levels are high.

Although subcontracting is a common business practice outside Asia it takes center stage in the construction industry in Asia, including Southeast Asia. The centrality of subcontracting is best explained in the BWI study:

“What is particular about Asia is this: lacking pressure from unionised workers, the Asian construction industry has traditionally been using subcontractors rather than direct employment for most of its labour supply, even before the restructuring trend

¹¹⁰ Building and Wood Workers' International. (n.d.). *Building & construction*. Retrieved September 16, 2009 from <http://www.bwint.org/default.asp?Issue=CONSTR&Language=EN>

¹¹¹ Ministry of Home Affairs, Malaysia. (2009). Retrieved September 16, 2009 from <http://www.moha.gov.my/eng/index.asp>

¹¹² The ASEAN Constructors Federation (ACF) (2004). *Impact of AFTA on ACF member countries*. Retrieved September 1, 2009 from <http://www.mbam.org.my/mbam/images/Impact%20of%20AFTA.pdf>

¹¹³ Ofori, G. (n.d.). *Foreign construction workers in singapore*. Retrieved October 12, 2009 from <http://www.ilo.org/public/english/dialogue/sectors/papers/forconst/forcon4.htm>

¹¹⁴ Ducanes, J., & Abella, M. (2009). *The Future of International Migration to OECD Countries: Regional Note – China and Southeast Asia*. Bangkok: ILO Regional Office.

became widespread”.¹¹⁵

Thus, indirect hiring is the norm rather than the exception in this part of the world.¹¹⁶ Recruiting workers has become the job of subcontractors rather than major construction companies or contractors. The hiring and management of workers have been ‘decentralized’ to multiple layers within subcontracting chains. The most unfortunate are those who find themselves at the bottom of the subcontracting ladder. Indeed, construction workers in Southeast Asia are probably the worst victims of subcontracting. Irregular and informal work essentially means ‘unprotected’ labor: low wages, unhealthy working conditions, long work hours, and the absence of entitlements such as paid days-off and vacation-sick leaves, health insurance, social security benefits and pension funds. A worker who does not ‘know’ who her/his employer is would not know where to file claims for proper pay and other rights and entitlements. Needless to say, work contracts are often verbal, neither written nor legally binding.

In Indonesia, large-scale construction projects are said to consist of major contractors at the top of the subcontracting chain, and subcontractors and working units of 10 to 20 workers at the bottom of the chain. Thus, a project with 500 workers would involve 10 to 15 subcontractors in 3 to 4 layers. In each of these layers, there is an informal ‘team leader’ charged by subcontractors to hire general workers -- those at the bottom of the chain. These ‘team leaders’ often hire workers with whom they have personal ties, such as those who share the same hometowns or work in similar trades.

In Malaysia, subcontracting chains could also involve between one to four layers of hiring. In construction sites with more than 200 workers, as in the case of most housing projects in Kuala Lumpur, only 5 to 10 are directly hired by the principal contractor while the rest of the workers are hired by 20 to 25 different subcontractors depending upon their skill or trade. Most of the general workers in these sites are migrant workers, employed on a per project basis through subcontractors or agents. Even professional workers such as crane operators have to confront the multiple layers of the subcontracting chain.

In the Philippines, the trend is for major Filipino contractors to work as subcontractors for transnational corporations. This has led to the downsizing of regular, directly-hired construction workers, as major contractors choose to keep a lean regular workforce (especially skilled professionals) and hire/subcontract general workers whenever they need to do so. A case in point is EEI-Philippines, a major contractor in the country. In the 1990s, EEI employed 8,000 workers directly. Since 2004, only 900 remain as company-hired, regular employees.

In Cambodia, subcontracting is said to come in a simpler form owing largely to the fact that construction companies tend to be small. The subcontracting chain usually consists of major contractors and just one layer of subcontractors who serve as some sort of “middle men” and who, more often than not, are skilled workers themselves. Just as in Indonesia, the hiring of general workers is often done through informal connections between workers and the middle

¹¹⁵ Chang, D. (2008). *Global construction and asian workers: Expansion of TNCs in asia and implications for labour*. Building and Wood Workers' International (BWI) and Asia Monitor Resource Centre (AMRC).

¹¹⁶ Country-level experiences of subcontracting and downsizing presented herein were culled largely from the BWI, Daeoup Chang study.

men. In Siem Reap, most of the workers come from either Preyveng or the Khandang province.

Problems Faced by Migrant Construction Workers

The trend of employment patterns becoming more informal is evident in the plight of migrant workers in the construction industry. Migration of construction workers is an irreversible trend. This was concluded by the BWI in October 2007, in an evaluation report on its project in “Organizing and Networking Migrant and Cross Border Workers in Asia” -- implemented with the assistance of FNV-Netherlands from 2004-2007. Two Southeast Asian countries, Malaysia and Philippines, were included in the report. However, the issues raised in the report are representative of the migrant experience in the rest of Southeast Asian.

Some of the conclusions presented in the report are as follows:

- Migrant workers are paid *lower wages for the same kind of work* done by local workers.
- On top of lower wages, migrants often have to pay “*wrongful deductions*” or levies. Needless to say, they *do not enjoy “economic benefits” other than their low wages*. Their *living conditions* are often as bad if not worse than their working conditions.
- Migrant workers are often *deprived of labor rights*, particularly the right to join unions, and thus are often unable to protect themselves and their jobs. Moreover, most of these workers often have *very little knowledge about their rights and entitlements*.
- Most employers do not treat migrant workers well.
 - *Abusive practices* by employers often start at the hiring process. This is often done in *connivance with recruitment agents*. Furthermore, a lot of migrant workers *do not have written employment contracts*.
 - Employers often *hold the passports* of their employees. Some employers even *physically abuse* their employees.
 - Employers are very smart in escaping from or *circumventing the law* and the bureaucracy.
- Most governments neglect the plight of migrant workers.
- Problems suffered by migrant workers often begin back home (i.e in sending countries).
 - Sending countries are often developing countries where the unemployment rate is high. Nationals leave these countries *in search of better economic opportunities*. In some cases, workers leave to *escape conflicts* or wars.
 - Most of the migrant workers are *cheated by recruitment agencies* in the sending country.

Moreover, it is very difficult for migrant workers to organize themselves into trade unions. The BWI raised this reality during the 2nd Global Forum on Migration and Development (GFMD) held in Manila in October 2007.

“One of the major obstacles to organizing migrant workers is the existence of clauses in employment contracts that prohibit migrant workers from joining trade unions. This is the case in Malaysia, for example, even though this contravenes provisions in the Industrial Relations Act and the Trade Union Act of Malaysia, which allow migrant workers to join trade unions. BWI affiliates have been faced with situations where their successful organizing drives among migrant workers are thwarted by employers utilizing this infamous clause to fire and deport the workers concerned.” - Global Unions Statement to the 2nd GFMD, Manila, Philippines, October 27-30, 2007

Occupational Safety and Health Issues

According to the ILO, some two million deaths due to work-related causes are reported each year and around 354,000 of these are due to fatal accidents. Moreover, around 340,000 million workers die each year because of exposure to hazardous substances. The rate of fatal accidents in developing countries is four times higher than that in developed countries. In the developing countries, the most accidents occur in construction, farming, fishing, logging and mining industries.¹¹⁷

Construction work is known to be dirty, difficult and dangerous. The construction industry is a major source of pollution and construction workers are constantly exposed to chemicals and dusts. Construction work is difficult, often involving manual handling of heavy materials and equipment, and also dangerous, as it includes having to climb high scaffoldings or taking on otherwise risky physical activities. According to the BWI, at least 108,000 workers are killed in construction sites every year. This figure represents some 30 percent of all fatal injuries. These occupational deaths and injuries may be caused by a variety of work-related incidents such as falls, being struck by falling objects, the collapse of building or structure, electrocution, suffocation, and exposure to hazardous chemicals such as asbestos.

In Southeast Asia, occupational safety and health in the construction industry is definitely a grave concern for workers and unions. In Malaysia, occupational accidents in the construction sector in 2009 alone included 43 deaths, 6 cases of permanent disability and 18 cases of non-permanent disability.¹¹⁸ In the Philippines, a 1999 report of the Department of Labor and Employment (DOLE) showed that with 78 cases, the construction industry ranked highest in terms of the number of accident cases. These cases involved 52 fatalities and 21 injuries.¹¹⁹ In Vietnam, around 90 percent of high-rise construction works have accidents.¹²⁰ Moreover, most of the deaths and injuries in the construction sector are highly preventable. Construction workers, especially those hired through subcontracting and other irregular hiring practices, are often not provided with the appropriate safety tools and equipment. In many instances, employers and subcontractors view safety mechanisms as unnecessary costs rather than as necessary investments or part of their accountability in keeping to safety standards.

The Hanjin-Philippine Case

The Hanjin-Philippine case is presented herein to illustrate the problem of subcontracting and occupational safety and health in the construction sector. This presentation is sourced mainly from

¹¹⁷ Markkanen, P. (2004, April). *Occupational safety and health in Indonesia*. Manila: International Labor Organization.

¹¹⁸ Department of Occupational Safety and Health Ministry of Human Resources (Malaysia). (n.d.). *Statistics of the department*. Retrieved September 15, 2009 from http://www.dosh.gov.my/wps/portal/lut/p/kcxml/04_Sj9SPykssy0xPLMnMz0vM0Y_QjzKLN4g3sfQASYGYxqb6kWhCjgiRIH1vfV-P_NxU_QD9gtzQiHJHR0UA6x_o5A!!/delta/base64xml/L3dJdyEvd0ZNQUFzQUMvNEIVRS82XzBfNE1L

¹¹⁹ Republic of the Philippines, Department of Labor and Employment Occupational Safety and Health Center. (n.d.). *Philippine OSH situationer*. Retrieved September 15, 2009 from <http://www.oshc.dole.gov.ph/page.php?pid=23>

¹²⁰ Vietnam News (2009, August). *It's time project managers paid more attention to labour safety*. Retrieved September 15, 2009 from <http://www.lookatvietnam.com/2009/08/its-time-project-managers-paid-more-attention-to-labour-safety.html>

internal reports and documents of the Building and Wood Workers International (BWI), and researched and written by its local organizers and contacts, including those of its Philippine affiliate -- the NUBCW.

Start and Purpose/s of Hanjin Operations in the Philippines

Hanjin, the South Korean shipbuilding conglomerate, began operating in the Philippines in 2005, particularly in the Central Luzon area touted by the Philippine government as the “global gateway into the future”. This area is home to two former U.S military bases – Subic and Clark – that have been converted into economic zones. Hanjin’s counterpart in the country, the Hanjin Heavy Industries and Construction or HHIC-Philippines brought in investments totaling US\$1 billion and occupied 349 hectares of land in the Subic Freeport Zone in Zambales. The Philippine government had leased the facility to Hanjin for fifty years in exchange for much-needed jobs and skills training. Thus far, the Hanjin project is the biggest foreign direct investment in this Philippine region. The project is aimed at producing the world’s largest gas tanker and cargo ship.

As of October 2007, the capital stock of HHIC-Philippines is more than PhP 5 billion. The shipyard has begun to build six 4,300 TEUs (twenty-foot equivalent units) ships and has accepted orders for 12 ships, each valued at US \$60 million, from three different companies from Greece, France and Germany.

The Workforce: Hiring Practices and Terms of Employment

The first phase of the operation began with the construction and building of the infrastructure for the shipbuilding facilities. An estimated 7,000 to 10,000 construction were hired during this phase. In the succeeding phase, which began in 2008, another 30,000 shipbuilding workers were scheduled to be hired.

Although the workers were promised permanent full-time employment, the majority ended up working on a contractual basis for a series of subcontractors. There are 40 subcontractors working under HHIC-Philippines. Some of these subcontractors are Filipinos but the major subcontracting firms are run by Korean nationals.

The main provider of manpower of Hanjin in the field of shipbuilding is KC Tech. The corporation is engaged in shipbuilding and ship repairing and is now in charge of the world’s largest single shipbuilding training center (worth P240 million investments)—constructed by Hanjin, inside Subic that could accommodate 500 Filipino trainees per batch.

In the recruitment process, the individual/potential shipbuilding worker will have to go through one to three months training in the skills development center. Each trainee who takes the training under KC Tech is provided with Php150.00 (\$3.12) a day as training allowance. There are also trainees who get trained in Korea for another 3 months and are compensated with Php7000 (\$145.83) per month.

Once evaluated and deemed qualified, the worker/former “trainee” will then be employed in the HHIC-Philippines Shipyard in the Redondo Peninsula under a KC Tech contract as a probationary employee for 6 months.

The probationary employees under KC Tech contract are entitled to receive a basic salary of Php239.50 (\$4.99) per day plus the “cost of living allowance”: Php38.50 (\$0.80) per day for those who were trained locally and Php309.55 (\$6.45) for those trained abroad. They are also entitled to benefits mandated by Philippine law. In addition, the worker is entitled to boarding allowance, meal allowance, transportation allowance, etc., if applicable.

After successfully passing the requirements of the probationary period under KC Tech, the workers are then assigned to other companies— i.e. to subcontractors engaged in shipbuilding and ship repair such as Subic Bay PowerTech Corporation, Redondo BayTech Corporation, Kalayaan I.Tech Corporation and Subic Shipbuilding Corporation. These workers sign their regularization contract with the abovementioned companies (i.e subcontractors) according to their line of work or department — without an increase in salary. The major lines of work or departments of the shipbuilding facility are assembly, fabrication, outfitting, pre-outfitting, designing, painting and erection. Moreover, KC Tech

has issued a memorandum to its trainees that training fees of between P150,000.00 to 200,000.00 will be collected from those who were trained either locally or in Korea.

As for the construction aspect of the shipbuilding facility, there are about 147 subcontractors employing 4,500 construction workers and foremen. The major subcontractors are Tierra (all aspects of construction), Buddha (roofing), Hacor, SH Enterprise, CMZ, Sung Son and Markbuilt (for different aspects).

Some of the construction workers and electricians are directly employed by HHIC-Philippines but none consider themselves as “regular employees” because they are made to sign termination papers every three months by their respective administrators. This also means signing a new contract every 3 months. The salaries of construction workers at the shipyard range from PhP 239.50 (\$4.99) per day for ordinary labor to PhP 350.00 (\$7.27) per day for drivers and equipment operators.

The Workforce: Working Conditions and Safety Measures

Shipbuilding workers

These workers work in two shifts, from 7:00 am to 4:00 pm for the day shift and 7:00 pm to 4:00 am for the night shift. Aside from this, workers often have to put in overtime of roughly 3 hours per day. Thus, workers often work 12-hour days in practice. Moreover, they are only given the 1st and 3rd Sundays of the month as “days-off” – contrary to Philippine law that stipulates 1 rest day per week.

Workers often experience illnesses such as fever and headaches due to the noise and heat inside the shipbuilding facility. Also, the shipyard clinic often does not provide medicine, and workers who are seriously ill or injured have to go to the nearest hospital in Olongapo -- an hour’s ride from the shipyard.

The shipyard management provides safety gadgets such as leather gloves, safety shoes, helmets, air plugs, gaggles, gas masks and uniforms but these are not given on a regular basis and are not replaced once worn out. Portable toilets are also provided inside the workplace but are not kept clean. The food provided by the shipyard canteen concessionaire (also owned by Hanjin) is reportedly not prepared in a sanitary manner. Drinking water has also been found dirty and unsafe for consumption.

Construction Workers

The working conditions of the construction workers are no better than that of the shipyard builders. These workers often work a minimum of 10 hours per day and often have to put in “extra-labor” or overtime work without clearly-defined corresponding compensation. They do not enjoy rest day pay or holiday pay.

Construction workers often experience illnesses due to continuous exposure to direct sunlight during the day. Safety gadgets and other protection gear are limited, and in some instances, the shipyard company does not issue safety shoes, helmets or leather gloves. Consequently, there are rampant cases of accidents such as cut fingers or hands, wounds, and even deaths due to falls or being struck by heavy metals that fall from the buildings. Furthermore, the workers who experience these accidents, or their families, are often not justly compensated for their woes.

For temporary shelter at the construction site, most workers are made to live in large container vans or small tents that serve as barracks. These unsafe and unplanned shelters create environments that cause illnesses such as malaria among the workers. However, these workers do not have much choice as they often live far from the site. Renting houses near the site is not an option given that workers receive very little pay and no housing allowance.

Deaths at the Shipyard

On December 24, 2007, one worker at the shipyard died when several steel pipes being loaded onto a truck fell on the road where he was standing. A Korean national was reportedly driving the truck when the accident happened. Barely a month later, another worker was run over by a truck.

On January 18, 2008 an explosion killed two welders and injured four other construction-shipyard workers. An investigation launched by the Subic Bay Metropolitan Authority found HHIC-Philippines guilty of violating at least seven safety standards. By February 2009, the Philippine government had recorded and reported 17 deaths while the BWI affiliate, the NUBCW, had recorded 24 deaths.

Responses

A few months after the 2008 explosion, around 300 workers organized a local union in the shipyard. This union was supported by the NUBCW and BWI. A “task force” composed of different citizens’ groups was also set up to monitor the situation in the Hanjin shipyard in Subic. The company, however, responded by harassing elected union officers and members by transferring them to a new site in Mindanao -- the Southern part of the country, demoting them, and downgrading their salaries. It has also terminated the employment of fourteen (14) union leaders and members.

The Philippine government, particularly the SBMA and the Department of Labor and Employment, also stepped in and undertook investigations that found Hanjin culpable. The Philippine Senate also conducted its own inquiry. Hanjin, however, has yet to respond positively to the demands of the labor union and the calls of Philippine government.

Construction-Related Trade Unions in Southeast Asia

According to the BWI website and some internal documents, a number of construction unions in the Southeast Asia region exist.¹²¹ In Indonesia, there is the Federation of Construction, Informal and General Workers Union or FKUI-SBSI. In Malaysia, there exists the Union of Employees in the Construction Industry or UECI. In the Philippines, there exists the National Union of Building and Construction Workers (NUBCW), the Alliance of Filipino Workers (AFW), the Associated Labor Unions (ALU), the Association of Construction and Informal Sector Workers and the National Federation of Labor (NFL). In Singapore, there exists the Building, Construction and Timber Industries Employees Union. In Cambodia, there exists the BWTUC, the result of the merger between the Cambodia Federation of Building Workers or CFBW (Phnom Penh), and the Cambodian Construction Workers Trade Unions Federation or CCTUF (Siem Reap).¹²² In Laos, there exists the Laos Federation of Trade Unions of LFTU. In Vietnam, there exists the Vietnam National Union of Building Workers or VNUBW.

Given the context of construction workers in the Southeast Asia, particularly the irregularity and flexibility of construction work, union organizing in the region has been an uphill struggle. Moreover, unions have had to deal with the issue of highly mobile construction workers, and local/national unions have had to factor in inter-country or intra-regional dynamics. Some of the unions have come up with very innovative ideas such as the “BWI passport” which contains information about the rights of migrants and serves as an information kit for migrant construction workers. Unions at the national and regional levels

¹²¹ Building and Wood Workers' International. (n.d.). *Trade union organizing and bargaining*. Retrieved August 25, 2009 from <http://www.bwint.org/default.asp?index=512>

¹²² A more detailed study is provided in a 2009 BWI-commissioned report titled “The Construction Industry in Cambodia and Implications for Workers and Trade Unions” researched and written by Prof. Rainier V. Almazan of the University of the Philippines.

have also been active in advocating for occupational safety and health, particularly against the hazards of exposure to asbestos. Work has also been done to disseminate information on HIV-AIDs among workers and union members.

Construction unions in Southeast Asia are embedded in the broader environment of industrial relations systems in the various Southeast Asian countries that are evidently lacking, from the perspective of workers' rights and interests, either in substance or in implementation.¹²³ Trends of unionization in the construction industry in Southeast Asia also reflect the general decline that unions across industries are now suffering in the region.¹²⁴ Moreover, at the ASEAN level, construction unions have yet to participate in ASEAN processes in a more structural and deliberative matter.

PART THREE: Some Conclusions and Recommendations (Implications for ASEAN Economic Integration)

1. The construction industry is vital to development efforts at the national and regional levels. Despite the recent global financial crisis, this industry will remain a major contributor to economic and social development in Southeast Asia.

The construction industry is capital and labor-intensive. It spans private investments, public initiatives and public-private partnerships. Key investors include governments, multinational corporations, local contractors, joint ventures between local contractors and multinational corporations, joint ventures between private companies and governments, and partnerships between governments and international financial institutions. It also involves huge infrastructure projects that require large numbers of construction workers, both professional and general workers.

As shown in Part One, Section 1 of this report, in 2008, the construction industry in the eight ASEAN countries covered in the study produced somewhere between 2.0 percent to 8.7 percent of national-level GDP. The report also reveals that the highs and lows of the industry are linked closely to that of the macro-economy. Moreover, increasing investments in the construction industry becomes crucial at a time of global crisis in boosting the demand needed to resuscitate failing domestic economies. By way of illustration, all the economic stimulus packages mentioned in this study include infrastructure development and construction-related projects.

2. Although vital to the construction industry in the region, construction workers are unfortunately among the most vulnerable and exploited of workers. This is true especially for migrant workers in the industry. As shown in many studies, including this one, such vulnerability often stems from the practice of "illegal" subcontracting that

¹²³ For details, please see the framework chapter written for ASETUC on October 9, 2009 entitled "ASEAN Economic Integration and Decent Work: Inclusion for Workers and Unions" by Dr. Mar S. Amante.

¹²⁴ Soriano, M. (2005, May). *Addressing union decline in the era of globalization: Some strategies and initiatives*. Paper presented in the conference on "The Effects of Globalisation on National Economic Policies and Trade Union Strategies" convened by the Hans-Bockler-Stiftung, the International Labour Organisation, Friedrich-Ebert-Stiftung and the Berlin School of Economics in Germany, Berlin.

make workers prone to exploitation, low wages, poor and unsafe working conditions and job instability. Governments in the Southeast Asian region have yet to introduce limitations on the multiple layering of subcontracting and impose penalties for violations by subcontractors. Governments must also find a way to exact accountability from main/principal construction contractors who often refuse responsibility for the actions of their subcontractors.

Moreover, even though many ASEAN member-governments invest in construction activities to ease unemployment and boost domestic consumption, they often do not question the quality of employment being generated by these projects, i.e. whether or not these activities result in good and decent work. Some governments also talk about providing “green jobs” but unfortunately such pronouncements are often rhetorical rather than substantive commitments.

3. At the outset, the above-mentioned situation -- of the strategic nature of the construction industry alongside the vulnerability of construction workers -- implies at least three things for ASEAN economic integration:

- (i) The ASEAN 2020 vision of “equitable economic development and reduced poverty and socio-economic disparities” is far from being actualized.

- (ii) ASEAN economic integration must take on the intra-regional migration of construction workers and its attendant problems as a central concern. ASEAN agreements often refer to “skilled labor” or “professional services” but the reality in the construction sector points to the fact that the intra-regional flow of labor is mostly that of unskilled labor.

- (iii) ASEAN economic integration will have to consider the reality that the construction industry involves movement of goods, investment, capital and services. The plight of the industry must be seriously considered in the implementation of the various ASEAN agreements particularly the ASEAN Free Trade Area –Common Effective Preferential Tariff (AFTA-CEPT) and most especially the ASEAN Framework Agreement on Services (AFAS).

4. On AFTA: According to the ASEAN Constructors’ Federation, tariff for all construction-related goods and materials had already fallen within the 0-5 percent tariff band by 2003, with the exception of Vietnam. However, the claimed benefits of such a reduction in tariffs may have been mitigated by the fact that a lot of construction materials are better sourced locally than abroad because of the sheer weight of these materials. As shown in Part 1, Section 2, several multinational corporations have set up production bases such as cement factories all over Southeast Asia.

The reduction of non-tariff barriers may be more of an issue to the construction industry than tariff reduction, particularly financial and technical requirements. Evidently, local construction companies cannot match the resources or technologies of foreign companies and some, in fact, have opted to serve as the local counterparts of these foreign companies and have gone into joint ventures with them.

The possibility of having more and more construction companies serving as partners or adjuncts of foreign companies will have severe effects on the construction workforce. Under such arrangements, foreign companies merely put in the capital, claim the designing and “knowledge production part” of the construction process and leave the rest to local companies. This could mean that local companies will have to downsize their local staff, including their professional staff, and instead hire general workers on a seasonal and project-basis. This could also lead to the exacerbation of the problem of subcontracting practices that is at the root of a lot of vulnerabilities that construction workers face. Local contracting companies, after all, could and do in fact hire workers indirectly through subcontracting layers. As shown in Part 3, Section 2, this kind of practice obscures employee-employer relationships, leaving construction workers at a loss as to who should be held accountable for work-related issues and problems.

Thus, national governments should also consider the state of local companies in the course of regional economic integration. More importantly, they should look into the business practices of these companies, especially those pertaining to hiring general workers.

4. In this sense, the ASEAN agreement with the most impact on construction workers is the AFAS that is modeled after the General Agreement on Trade in Services under the World Trade Organization (GATS-WTO), that in turn specifies four modes of supply of services. Under the AFAS, ASEAN countries should go beyond their WTO-GATS commitments. This means that ASEAN members should commit themselves to reducing or eliminating discriminatory measures, including market-access restrictions like the acquisition of business permits and licensing of professionals which restrict trade in services, and thereby improve the efficiency and competitiveness of ASEAN service suppliers.

According to the ASEAN official website, since January 1, 1996, seven packages of services commitments have been concluded through five rounds of negotiations. These packages were signed by the ASEAN Economic Ministers (AEM) and provide the details of commitments made by ASEAN countries to each other in the area of business services and construction services. “Construction services” therein refer to “construction of commercial buildings, civil engineering, installation works, rental of construction equipments, etc.”

Moreover, the ASEAN has clinched mutual recognition agreements (MRAs) that form part of country-level commitments to AFAS.¹²⁵ Out of the seven MRAs, two agreements involve the construction industry, namely the MRA on Engineering Services and the MRA on Architectural Services. These agreements pertain more to professional services or skilled laborers.

The AFAS will definitely increase intra-regional flow of general construction workers, especially in terms of negotiations for “commercial presence” (i.e. suppliers establish local offices or subsidiaries to provide supply of services) and “presence or movement of natural persons” (suppliers are physically present on at temporary basis). Without the

¹²⁵ Refer to the Association of Southeast Asian Nations (ASEAN) website at <http://www.aseansec.org/>

ASEAN insisting on labor standards for both local and foreign construction workers -- most of whom are contractual or project-based -- the idea of “national treatment” will be pure rhetoric. As it is, construction workers in Southeast Asia, especially migrant workers, are clearly discriminated against in terms of economic benefits and other entitlements.

5. The ASEAN Declaration on the Protection and Promotion of the Rights of Migrant Workers is a step in the right direction but the fulfillment of commitments therein must be strictly monitored. More importantly, ASEAN must insist on the right of migrant workers to join unions and other workers’ associations. These groups would allow migrant workers access to vital information, such as their rights as migrant-construction workers and the courses of action available to them, especially in cases of work-related problems. Union membership may be the workers’ best guarantee of protection and security, especially given temporary work contracts and obscure employee-employer relationships.
6. Given the character of construction work as “dirty, difficult and dangerous” and given the high numbers of preventable deaths and injuries, the issue of occupational safety and health should also be high on the agenda of ASEAN, particularly the OSH-NET. This issue is most crucial to the construction industry, given the context of rampant subcontracting and obscure employee-employer relationships that enable main-and-subcontractors to evade their accountability.
7. The “Roadmap for an ASEAN Community 2009-2015” includes a section on “infrastructure development” (under the AEC roadmap). One of the items therein includes “land transport” that pertains to some priority projects, such as the completion of the Singapore-Kunming Rail and the ASEAN Highway Network (AHN) projects. ASEAN must take into consideration the welfare of construction workers who will build and develop such physical infrastructure.

ASEAN should also work closely with international financial institutions and international aid agencies such as the Asian Development Bank, World Bank and JICA in terms of ensuring that labor standards, particularly the ILO core conventions, will be complied with in the implementation of infrastructure projects. It should also be noted that all ASEAN countries are members of the ILO and therefore, should comply with the core labor standards and insist that all other pertinent institutions do so as well.

8. It is evident in this study that East Asian countries -- Japan, South Korea and China -- are investing heavily in the construction sector. Thus, ASEAN Plus Three will be crucial to the industry and most especially to construction workers.
9. The “Socio-cultural Community Blueprint”, not just the economic blueprint, contains several provisions that affect construction workers in both direct and indirect ways. Workers should be cognizant, for example, that there are provisions on urban development, safer cities and environmental sustainability that are likely to impact on their lives as construction workers. For one, much of construction work is in urban

centers. Moreover, the construction industry -- in its production of building materials and in actual infrastructure development – produces a lot of pollutants and this should be a collective concern of workers, employers/investors, and governments. The cement industry, for example, is undeniably a major source of pollutants, and governments in the ASEAN countries must invest in research geared towards producing alternative materials or alternative processes of production that will prevent further environmental degradation as well as loss of jobs for construction workers.

10. Construction companies have been able to participate in the ASEAN process in a more structured manner. The ASEAN Constructors' Federation (ACF), for example, has been accredited as a social dialogue partner of ASEAN. This development should lead to discussions on how construction workers, through local/national unions and global union federations such as the BWI, can participate more substantially in ASEAN processes. In this area, ASEAN may well learn from the experiments of its European counterparts, such as the European Works Councils that serve as the institutional forum and facilitates consultation between employers and employees within and across national borders upon the directive of the European Commission. ASEAN must draw lessons from both the strengths and weaknesses of such European initiatives.

To ensure that ASEAN economic integration does not neglect the plight of construction workers, the voice of construction workers must be heard in pertinent bodies such as the Construction Committee of the Coordinating Committee on Services under the Senior Economic Officials Meeting of the AFTA Council, the Senior Labor Officials Meeting (SLOM) and the ASEAN OSH-NET, and, eventually, in the ASEAN Plus Three processes.

Finally, information on ASEAN and its agreements should be disseminated to the broadest possible number of construction workers in a popularized (but not simplistic) manner. These workers must be made aware of the effects of regional economic integration and of the fact that the ASEAN could be another platform upon which they can forward their collective voice and interests.

Acknowledgments:

The author would like to acknowledge Anne Kristine D. Salvador, research assistant, for her involvement in this study.

REFERENCES

- 25th Sea Games. (2009). Retrieved September 12, 2009 from <http://25thseagames.blogspot.com/>
- AFCM 2010 Vietnam. (2009, June 24). *Thai cement manufacturers association*. Retrieved September 14, 2009 from <http://afcm2010.com/index.php?mod=article&cat=AFCMmembership&article=162>
- AFCM 2010 Vietnam. (2009, August 17). *AFCM 2010 - first announcement*. Retrieved September 7, 2009 from <http://afcm2010.com/index.php?mod=article&cat=AFCM2010ANNOUNCEMENT&article=134>
- Almazan, R. V. (2009). *The construction industry in cambodia and implications for workers and trade unions*. Report commissioned by BWI for the University of the Philippines.
- Amante, M. S. (2009, October 9). *ASEAN economic integration and decent work: Inclusion for workers and unions*. Framework chapter written for ASETUC.
- ASEAN Federation of Cement Manufacturers (AFCM). (n.d.). *ASEAN cement manufacturers met in hanoi*. Retrieved September 7, 2009 from http://afcm-org.net/news_03.html
- Asian Development Bank. (2009). *Asian development outlook 2009: Rebalancing asia's growth*. Retrieved September 8, 2009 from <http://www.adb.org/Documents/Books/ADO/2009/ado2009.pdf>
- Asian Development Bank. (n.d.). *CAM: GMS rehabilitation of the railway in cambodia: Regional*. Retrieved August 25, 2009 from <http://pid.adb.org/pid/LoanView.htm?projNo=37269&seqNo=01&typeCd=3>
- Asian Development Bank. (n.d.). *CAM: Greater mekong subregion southern transport corridor project (Cambodia and Vietnam): Regional*. Retrieved August 25, 2009 from <http://pid.adb.org/pid/LoanView.htm?projNo=36353&seqNo=02&typeCd=3>
- Asian Development Bank. (n.d.). *GMS: Cambodia road improvement project: Cambodia*. Retrieved August 25, 2009 from <http://pid.adb.org/pid/LoanView.htm?projNo=30240&seqNo=01&typeCd=3>
- Asian Development Bank. (n.d.). *Ho Chi Minh City-Long Thanh-Dau Giay expressway construction project: Viet nam soc rep of*. Retrieved September 8, 2009 from <http://pid.adb.org/pid/LoanView.htm?projNo=40198&seqNo=02&typeCd=3>
- Asian Development Bank. (n.d.). *VIE: Greater mekong subregion southern coastal corridor project (Cambodia and Vietnam): Regional*. Retrieved August 25, 2009 from <http://pid.adb.org/pid/LoanView.htm?projNo=36353&seqNo=01&typeCd=3>

- Baccam, D. (2008, February 20). Vientiane Prepares to Commemorate 450th Anniversary. *Voice of America*. Retrieved September 12, 2009 from <http://www.voanews.com/lao/archive/2008-02/2008-02-25-voa3.cfm?moddate=2008-02-21>
- Beijing Review. (2009, June 4). *China raises four-point proposal on tackling financial crisis with malaysia*. Retrieved September 17, 2009, from http://www.bjreview.com.cn/quotes/txt/2009-06/04/content_198995.htm
- Building and Wood Workers' International. (n.d.). *Building & construction*. Retrieved September 25, 2009 from <http://www.bwint.org/default.asp?Issue=CONSTR&Language=EN>
- Building and Wood Workers' International. (n.d.). *Trade union organizing and bargaining*. Retrieved August 25, 2009 from <http://www.bwint.org/default.asp?index=512>
- Burton, J. (2009, January 23). Singapore reveals S\$20.5bn economic stimulus package. *Financial Times*. Retrieved September 14, 2009 from http://www.ft.com/cms/s/b8710d3e-e8ef-11dd-a4d0-0000779fd2ac,Authorised=false.html?_i_location=http%3A%2F%2Fwww.ft.com%2Fcms%2Fs%2F0%2Fb8710d3e-e8ef-11dd-a4d0-0000779fd2ac.html%3Fnclick_check%3D1&_i_referer=&nclick_check=1
- Cement Industries of Malaysia Berhad (CIMA). (n.d.). *Corporate Profile*. Retrieved August 18, 2009 from http://www.cima.com.my/corporate_profile.php
- Cement Manufacturers' Association of the Philippines. (n.d.). *About CeMAP*. Retrieved August 17, 2009 from <http://www.cemap.org.ph/about.html>
- Chamber of Real Estate and Builders' Associations (CREBA), Inc. (2007). *Fast facts*. Retrieved on August 17, 2009 from http://creba.ph/index.php?option=com_content&task=view&id=36&Itemid=47
- Chang, D. (2008). *Global construction and asian workers: Expansion of TNCs in asia and implications for labour*. Building and Wood Workers' International (BWI) and Asia Monitor Resource Centre (AMRC).
- China Harbour Engineering Company Ltd. (2006). *CHEC introduction*. Retrieved September 24, 2009 from <http://www.chec.bj.cn/ens/gsgk/zgjj/index.html>
- China Railway Engineering Corp. (n.d.). *Corporate information*. Retrieved September 24, 2009 from <http://www.crec.cn/en/news/mid.aspx?type=1>
- China Road & Bridge Corporation. (n.d.). *Brief introduction*. Retrieved September 23, 2009 from <http://www.crbc.com/en/about.asp>
- CMEC (n.d.). *Introduction to CMEC*. Retrieved September 24, 2009 from <http://www.cmec.com/en/contents/121/383.aspx>

- CSC Holdings Limited. (2007). *CSC corporate profile*. Retrieved August 28, 2009 from http://www.cschl.com.sg/index.php?option=com_content&task=view&id=27&Itemid=2
- D.M.Consunji, Inc. (2009). *About us – overview*. Retrieved September 24, 2009 from http://www.dmcinet.com/Abt_Overview.asp.
- Daewoo E&C. (n.d.). *About daewoo E&C*. Retrieved October 6, 2009 from <http://www.daewooenc.com/>
- Department of Occupational Safety and Health Ministry of Human Resources (Malaysia). (n.d.). *Statistics of the department*. Retrieved September 15, 2009 from http://www.dosh.gov.my/wps/portal/!ut/p/kcxml/04_Sj9SPykssy0xPLMnMz0vM0Y_QjzKLN4g3sfQASYGYxqb6kWhCjgiRIH1vfV-P_NxU_QD9gtzQiHJHR0UA6x_o5A!!/delta/base64xml/L3dJdyEvd0ZNQUFzQUMvNEIVRS82XzBfNE1L
- Development of Medium and Small Size Private Contractors. (2002, October). *Road & Bridge Magazine*. Retrieved September 13, 2009, from <http://rt.mt.gov.vn/gtnt2/05%20PDF%20Files/03%20Article/02%20RT2%20VN%20Contract%20Study%20Oct%2002/RT2%20VNContractorStudyEng.pdf>; Master Builders Association
- Ducanes, J., & Abella, M. (2009). *The Future of International Migration to OECD Countries: Regional Note – China and Southeast Asia*. Bangkok: ILO Regional Office.
- Economic Planning Unit: Prime Minister's Department Malaysia. (n.d.). *Ninth malaysia plan (2006-2010)*. Retrieved September 9, 2009 from <http://www.epu.gov.my/html/themes/epu/html/rm9/html/english.htm>
- Economic Planning Unit: Prime Minister's Department Malaysia.(n.d). *Eighth malaysia plan (2001-2005)*. Retrieved September 9, 2009 from <http://www.epu.gov.my/eightmalaysiaplan>
- EEI Corporation. (2007). *EEI - our company*. Retrieved September 24, 2009 from <http://www.eei.com.ph/>.
- Embassy of the United States Jakarta, Indonesia. (2005). *Indonesia infrastructure summit*. Retrieved September 9, 2009 from <http://www.usembassyjakarta.org/econ/infra-summit05/infrastructure-summit.html>
- FF Cruz & Co. Inc. (n.d.). *Company milestones*. Retrieved September 24, 2009 from <http://server.dynasoft.com.ph/~ffcruz/index.php>.
- Go, M. & Calica, A. (2006, June 6). RP presents China with \$32-B funding 'wish list'. *The Philippine Star*. Retrieved on September 17, 2009 from <http://www.newsflash.org/2004/02/hl/hl104227.htm>

- Hanjin Heavy Industries and Construction Co., Ltd. (n.d.). *About HHIC: Overview*. Retrieved August 19, 2009 from <http://www.hanjinsc.com/eng/company/about.aspx>
- Hazama Corporation. (2009). *Annual report 2009*. Retrieved September 23, 2009 from <http://www.hazama.co.jp/english/annual/pdf/annual2009.pdf>
- Hazama Corporation. (n.d.). *General contractors, architects & engineers*. Retrieved September 23, 2009 from <http://www.hazama.co.jp/english/>
- Heidelberg Cement. (n.d.). *Indonesia: Overview*. Retrieved August 19, 2009 from http://www.heidelbergcement.com/global/en/company/group_areas/asia_australia_africa/indonesia.htm
- Hochtief. (n.d.). *History*. Retrieved August 19, 2009 from http://www.hochtief.com/hochtief_en/71.jhtml
- Holcim. (n.d.). *About us*. Retrieved August 19, 2009 from <http://www.holcim.com/CORP/EN/id/1610644011/mod/2/page/channel.html>
- Holcim. (n.d.). *Holcim Ltd. Vietnam*. Retrieved August 25, 2009 from http://www.holcim.com.vn/CORP/EN/mod/7/id/-1610625224/page/group_company.html
- Hor Kew Corporation Limited. (2006). *Corporate profile*. Retrieved August 28, 2009 from http://www.horkew.com.sg/about_us.htm
- Hyundai Engineering Corporation. (2009). *Business: Infrastructure*. Retrieved October 6, 2009 from <http://eng.hec.co.kr/eng/biz/civil/intro.asp>
- Japan International Cooperation Agency. (2009, August 21). *Press releases: Signing of japanese ODA loan agreement with cambodia supporting industrial development of cambodia through port infrastructure development*. Retrieved September 16, 2009 from <http://www.jica.go.jp/english/news/press/2009/090821.html>
- Japan International Cooperation Agency. (2009, July 15). *Project news: Philippines strengthening the flood management function of DPWH*. Retrieved September 16, 2009 from <http://www.jica.go.jp/project/philippines/0600933/english/news/index.html>
- Japan International Cooperation Agency. (2009, March 31). *Press releases: JICA signed japanese ODA loan agreements with indonesia-support of efforts to improve the investment climate and enact climate change adaptation measures*. Retrieved September 16, 2009 from http://203.179.38.26/english/news/press/2009/090331_01.html
- Japan International Cooperation Agency. (2009, March 6). *Ground breaking ceremony for package 3 under Nhat Tan Bridge (Japan-Vietnam friendship bridge) construction project*. Retrieved September 16, 2009 at http://www.jica.go.jp/vietnam/office/information/press/pdf/press2008/200903_05e.pdf

- Japan International Cooperation Agency. (n.d.). *Activities in thailand: Loan projects*. Retrieved September 16, 2009 from <http://www.jica.go.jp/thailand/english/activities/loan02.html#03>
- Japan International Cooperation Agency. (n.d.). *List of JICA's cooperation in laos*. Retrieved September 16, 2009 at <http://www.jica.go.jp/laos/english/activities/activity.html#04>
- Japan International Cooperation Agency. (n.d.). *Press conference signing of japanese ODA loan with vietnam for fiscal year 2008*. Retrieved September 16, 2009 at http://www.jica.go.jp/vietnam/office/information/press/pdf/press2008/200903_01e.pdf
- Kajima Corporation. (2007). *Corporate profile*. Retrieved September 23, 2009 from <http://www.kajima.co.jp/profile/overview/index.html>
- Kinden Corporation. (n.d.). *Overseas projects*. Retrieved September 23, 2009 from http://www.kinden.co.jp/english/business/overseas_constr.html
- Kumagai Gumi. (2009). *Corporate Information*. Retrieved September 23, 2009 from <http://www.kumagaigumi.co.jp/english/corp/profile.html>
- Lafarge Cement Malaysia. (n.d.). *Company overview*. Retrieved August 18, 2009 from http://www.malayacement.com.my/wps/portal!/ut/p/kcxml/04_Sj9SPykssy0xPLMnMz0vM0Y_QjzKLN4q3dNcvyHZUBAB4NUrp
- Lafarge. (n.d.). *Profile: Lafarge at a glance*. Retrieved August 19, 2009 from http://www.lafarge.com/wps/portal/1_2_1-Lafarge_en_un_clic
- Leighton Asia. (2009). *Laos*. Retrieved August 28, 2009 from <http://www.leightonasia.com/v4/default.asp?lid=1&sec=Locations&subsec=Laos>
- Leighton Holdings. (n.d.). *About us: Profile*. Retrieved August 19, 2009 from http://www.leighton.com.au/about_us/profile/profile.html
- Lian Beng Group Ltd. (2009, August 14). *About us*. Retrieved August 28, 2009 from <http://www.lianbeng.com.sg/01%20company%20profile.htm>
- Malaysia. (n.d.). *International ACF - ACF milestones*. Retrieved September 13, 2009 from http://www.mbam.org.my/mbam/index.php?option=com_content&task=view&id=133&Itemid
- Markkanen, P. (2004, April). *Occupational safety and health in Indonesia*. Manila: International Labor Organization.
- Master Builders Association Malaysia. (n.d.). *About us - association profile*. Retrieved August 18, 2009 from http://www.mbam.org.my/mbam/index.php?option=com_content&task=view&id=104&Itemid=

- Master Builders Association Malaysia. (n.d.). *Courtesy visit by ASEAN constructors federation (ACF) delegation to ASEAN secretariat*. Retrieved September 1, 2009 from http://www.mbam.org.my/mbam/index.php?option=com_content&task=view&id=619&Itemid=331
- McCartan, B. (2009, April 30). A helping Chinese hand. *Asia Times Online*. Retrieved September 17, 2009 from http://www.atimes.com/atimes/Southeast_Asia/KD30Ae01.html
- Ministry of Home Affairs, Malaysia. (2009). Retrieved September 16, 2009 from <http://www.moha.gov.my/eng/index.asp>
- National Statistical Coordination Board. (2009). *Second quarter 2009: Government stimulus resuscitates economy to 1.5 percent GDP growth*. Retrieved on September 11, 2009 from <http://www.nscb.gov.ph/sna/2009/2ndQ2009/2009qpr2.asp>.
- Nishimatsu Construction Co., Ltd. (2008). *Profile*. Retrieved September 23, 2009 from http://www.nishimatsu.co.jp/eng/sitemap_eng.htm
- Obayashi Corporation. (n.d.). *Corporate data*. Retrieved September 23, 2009 from <http://www.obayashi.co.jp/english/company/index.html>.
- Ofori, G. (n.d.). *Foreign construction workers in singapore*. Retrieved October 12, 2009 from <http://www.ilo.org/public/english/dialogue/sectors/papers/forconst/forcon4.htm>
- Opus Group Berhad. (n.d.). *About us: Corporate profile*. Retrieved August 19, 2009 from http://www.opusbhd.com/index.php?option=com_content&task=view&id=15&Itemid=11
- Opus Group Berhad. (n.d.). *Operational highlights: Malaysia*. Retrieved August 25, 2009 from http://www.opusbhd.com/index.php?option=com_content&task=view&id=23&Itemid=18
- Philippine Constructors Association, Inc. (n.d.). *PCA services*. Retrieved August 17, 2009 from http://www.philconstruct.com/index.php?option=com_content&task=view&id=92&Itemid=37
- Philippine Economic Resiliency Plan: Meeting the Global Crisis Head-on. (2009, January). *DevPulse NEDA Development Advocacy Factsheet, 13(1)*. Retrieved August 27, 2009 from http://www.neda.gov.ph/devpulse/pdf_files/ERP%20DEVPULSE.pdf
- PT Semen Gresik (PERSERO) Tbk. (n.d.). *Brief history*. Retrieved August 19, 2009 from <http://www.semengresik.com/eng/perusahaanRiwayat.aspx>
- Republic of the Philippines, Department of Labor and Employment Occupational Safety and Health Center. (n.d.). *Philippine OSH situationer*. Retrieved September 15, 2009 from <http://www.oshc.dole.gov.ph/page.php?pid=23>

- Samsung Engineering. (2006). *Company profile*. Retrieved October 6, 2009 from <http://www.samsungengineering.co.kr/eng/company/CompanyProfile.jsp>
- SCG Vietnam. (2008). *Business in brief*. Retrieved August 25, 2009 from http://www.scg.vn/en/03_scg_vietnam/01_business_in_brief.html
- Sea Union Construction Cambodia Co., Ltd. (n.d.). *Company profile*. Retrieved August 24, 2009 from <http://www.seaunion.com.kh/aboutus.php>
- Shimizu Corporation. (2009). *Corporate profile*. Retrieved September 23, 2009 from <http://www.shimz.co.jp/english/about/profile.html>
- Siam Cement Group (SCG) (2008). *Corporate profile*. Retrieved August 27, 2009 from <http://www.siamcement.com/en/index.php>
- Siam Cement Group (SCG). (2008). *Businesses*. Retrieved August 25, 2009 from http://www.scq.vn/en/02_scq_businesses/03.html
- Soriano, M. (2005, May). *Addressing union decline in the era of globalization: Some strategies and initiatives*. Paper presented in the conference on “The Effects of Globalisation on National Economic Policies and Trade Union Strategies” convened by the Hans-Bockler-Stiftung, the International Labour Organisation, Friedrich-Ebert-Stiftung and the Berlin School of Economics in Germany, Berlin.
- Taiki-sha Ltd. (2009). *Corporate overview*. Retrieved September 23, 2009 from http://www.taikisha-group.com/corporate/comp_info.html
- Taisei Corporation. (2009). *Profile*. Retrieved September 23, 2009 from <http://www.taisei.co.jp/english/profile/index.html>
- Takenaka Corporation. (n.d.). *Corporate profile*. Retrieved September 23, 2009 from http://www.takenaka.co.jp/takenaka_e/company/corpo.html
- TCIC Construction Co. Ltd.(2009). *Construction*. Retrieved August 28, 2009 from http://www.tcic.com.la/tong_integrated_construction_company.html
- Thai Contractors Association. (n.d.). *History*. Retrieved August 27, 2009 from <http://www.tca.or.th/html/history.asp?Lang=EN>. Only selected parts of the TCA website are accessible in English.
- The ASEAN Constructors Federation (ACF) (2004). *Impact of AFTA on ACF member countries*. Retrieved September 1, 2009 from <http://www.mbam.org.my/mbam/images/Impact%20of%20AFTA.pdf>
- The Cement and Concrete Association (C&A). (n.d.). *Association overview*. Retrieved August 18, 2009 from <http://www.cnca.org.my/over.html>
- The Federation of Design and Construction Services of Thailand (FEDCON). (n.d.). Retrieved August 27, 2009 from <http://www.fedconthai.com/>

- The Singapore Contractors Association Ltd. (n.d.). *Association profile*. Retrieved August 28, 2009 from <http://www.scal.com.sg/index.cfm?GPID=1>
- The World Bank. (2006, June 14). *Strategic roads infrastructure project*. Retrieved August 19, 2009 from <http://web.worldbank.org/external/projects/main?Projectid=P079906&Type=Overview&theSitePK=40941&pagePK=64283627&menuPK=64282134&piPK=64290415>
- The World Bank. (2008, April 29). *National roads improvement and management (APL) phase 2*. Retrieved August 17, 2009 from <http://web.worldbank.org/external/projects/main?Projectid=P079935&Type=Overview&theSitePK=40941&pagePK=64283627&menuPK=64282134&piPK=64290415>
- The World Bank. (2008, May 7). *VN-priority infrastructure investment project*. Retrieved August 25, 2009 from <http://web.worldbank.org/external/projects/main?Projectid=P086508&Type=Overview&theSitePK=40941&pagePK=64283627&menuPK=64282134&piPK=64290415>
- Toda Corporation. (n.d.). *Company overview*. Retrieved September 23, 2009 from <http://www.toda.co.jp/english/company/overview.html>
- TVNZ. (2009, September 14). *Cambodia PM lauds china's aid*. Retrieved September 17, 2009 from <http://tvnz.co.nz/world-news/cambodia-pm-lauds-china-s-aid-2990315>.
- Vietnam Cement Industry Corporation (VICEM). (n.d.). *Process of foundation and development*. Retrieved August 25, 2009 from <http://www.vicem.vn/EN/?Tabid=KMABOUTQT>
- Vietnam National Cement Association. (n.d.). *VNCA introduction: charters*. Retrieved September 14, 2009 from http://www.vnca.org.vn/en/index.php?page=intro_chart
- Vietnam News (2009, August). *It's time project managers paid more attention to labour safety*. Retrieved September 15, 2009 from <http://www.lookatvietnam.com/2009/08/its-time-project-managers-paid-more-attention-to-labour-safety.html>
- Vietnam Second Rural Transport Project, Technical Assistance to Ministry of Transport .(2003, May). *Contractor capacity final report*. Retrieved September 13, 2009 from <http://rt.mt.gov.vn/gtnt2/05%20PDF%20Files/Technical%20Report/Contractor%20Capacity/Contractor%20Capacity%20Eng.pdf>