

# MALAYSIA COUNTRY REPORT

## 1.0 EXECUTIVE SUMMARY

The year 2008 was the year that witnessed the onslaught of challenges from the economic environment and global finance that dove-tailed the inflationary pressures resulting from the unexpected increase in global crude oil price during the first half of the year. This scenario had eventually lapsed into a weakening global economy that worsened during the second half of 2008. However, despite the looming negative impact of the economic downturn, the Malaysian economy remained resilient with a positive growth rate in 2008.

The growth was supported by domestic demand, driven mainly by private consumption and public spending. Public spending expanded strongly underpinned by higher expenditure on emoluments as well as supplies and services. Private consumption grew at a more moderate pace as manufacturing sector retrenchments, lower customer confidence and a reduction in smallholders' income arising from the significant drop in commodity prices, constrained spending activity. Gross fixed capital formation was affected by uncertainties in the external environment, although higher public development expenditure supported its moderate growth.

## 2.0 MACRO ECONOMIC REVIEW AND OUTLOOK

### 2.1 Overview of National Economy

The Malaysian economy registered a growth of 4.6% in 2008, amidst the international financial turmoil and sharp deterioration in global economic environment. Robust domestic demand, in particularly sustained private consumption and strong public spending, supported growth during the year. While external demand was strong in the first half of 2008, the sharp and rapid deterioration in the global economic conditions as well as major correction in commodity prices in the second half led to a contraction in Malaysia's export performance in the second half of the year. The contraction in export adversely affected income and domestic demand. Private investment activities and private consumption moderated significantly in the fourth quarter of 2008.

### 2.2 Main Economic Indicator

At the fundamental level, the Malaysian economy had demonstrated the existence of a fairly impressive threshold in 2008, despite being affected, in some way or another, by the negative effects of the global economic downturn. Malaysia has 'risen to the occasion' by registering a moderate growth rate although it was a slight decline against the rising trend that has been evident since 2005 [2005: 5.3%; 2006: 5.8%; 2007: 6.2%].

A major part of the growth in 2008 was fueled by the robust growth registered during the first half of 2008 at 7%, was more marked in comparison to the drop in growth rate to 2.5% during the second half of 2008. This resulting scenario was caused by the under-performance of manufacturing sector resulting from the decreased of international export towards the end of 2008. However, domestic demand generated from the domestic expenditure was a significant factor that helped to stimulate the economy at an opportune time when weakened international had impeded the nation's export market to a certain extent.

Specifically, during the fourth quarter of the year, the effects of the world economic crisis have been increasingly felt by our nation's economy in terms of reduced growth where activities of three out of the five economic sectors registered a decline, especially in the manufacturing sector (Services Sector: 5.7%; Agriculture Sector: 0.5%; Manufacturing Sector: -8.8%; Construction Sector: -1.6%; Mining and Quarrying Sector: -5.7%).

**Table 1 Growth of Gross Domestic Product (GDP) Malaysia from 2004 to 2008 at Constant Price 2000 (%)**

| Sector                             | 2004 | 2005 | 2006 | 2007 | 2008 |      |      |      |                    |
|------------------------------------|------|------|------|------|------|------|------|------|--------------------|
|                                    |      |      |      |      | Q1   | Q2   | Q3   | Q4   | Average Growth (%) |
| Agriculture, Forestry, and Fishery | 4.7  | 2.6  | 5.2  | 1.4  | 6.5  | 6.3  | 3.3  | 0.5  | 4.0                |
| Mining and Quarrying               | 4.1  | -0.4 | -1.0 | 2.0  | 3.6  | -0.5 | -0.3 | -5.7 | -0.8               |
| Manufacturing                      | 9.6  | 5.2  | 6.7  | 3.1  | 7.0  | 5.6  | 1.8  | -8.8 | 1.3                |
| Services                           | 6.4  | 7.2  | 7.4  | 9.6  | 8.4  | 7.9  | 7.1  | 5.7  | 7.2                |
| Construction                       | -0.9 | -1.5 | -0.3 | 4.7  | 5.3  | 3.9  | 1.2  | -1.6 | 2.1                |
| GDP                                | 6.8  | 5.3  | 5.8  | 6.3  | 7.4  | 6.6  | 4.8  | 0.1  | 4.6                |

Source : Series of Central Bank of Malaysia Report  
Monthly Statistical Bulletin July 2009, Central Bank of Malaysia

**Table 2 Growth of Gross Domestic Product (GDP) Malaysia from 2004 to 2008 at Constant Price 2000 (RM Million)**

| Sector                 | 2004    | 2005    | 2006    | 2007    | 2008    |         |         |         |         |
|------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|                        |         |         |         |         | Q1      | Q2      | Q3      | Q4      | Total   |
| Agriculture            | 34,929  | 35,835  | 37,702  | 38,225  | 9,358   | 9,786   | 10,760  | 9,866   | 39,769  |
| Mining and Quarrying   | 42,627  | 42,472  | 42,030  | 42,881  | 11,069  | 10,456  | 10,446  | 10,579  | 42,550  |
| Manufacturing          | 131,127 | 137,940 | 147,154 | 151,789 | 38,857  | 39,564  | 40,145  | 35,177  | 153,744 |
| Services               | 214,528 | 230,043 | 247,100 | 270,902 | 69,828  | 71,665  | 73,818  | 75,227  | 290,538 |
| Construction           | 14,903  | 14,685  | 14,639  | 15,332  | 3,724   | 4,092   | 3,973   | 3,869   | 15,657  |
| GDP                    | 426,508 | 449,250 | 488,625 | 519,129 | 132,836 | 135,563 | 139,142 | 134,718 | 542,258 |
| GDP (at current price) | 474,048 | 522,445 | 586,881 | 652,660 | 178,815 | 191,684 | 200,809 | 179,882 | 751,190 |

Source : Series of Central Bank of Malaysia Report  
Monthly Statistical Bulletin July 2009, Central Bank of Malaysia

### 2.2.1 Agriculture Sector

The agriculture sector [agriculture, forestry and fishery] rose meagerly at 4.0%, supported mainly by impressive production of crude palm oil. The production of crude palm oil that generated 17.7 million metric tonnes [an increase of 12.1%] was due to the availability of favorable weather, extensive use of fertilisers and the rise in price of crude palm oil to an average price of RM 2,875 per metric tonne [a rise of 16.3%]. On the other hand, the production of natural rubber that shrunk by as much as 10.1% was the result of the inconsistency of rubber prices throughout 2008 [(Q1: -2.1%; Q2: -7.8%; Q3: -4.2%; Q4: -28.4)].

The performance of food crops sub-sectors continued encouraging in 2008 [fisheries: 5.2%; livestock; 4.3%], whereas, the forestry and cocoa sub-sectors deteriorated by as much as 16.3% and 20.5% respectively.

### 2.2.2 Mining and Quarrying Sector

The growth of the mining and quarrying sector was registered at 0.8%, the result of the negative growth experienced during the third quarter of 2008 [(Q1: 3.6%; Q2: -0.5%; Q3: -0.3%; Q4: -5.7%). This was caused by the production of natural gas that was lower in comparison, and production of crude oil that showed only a marginal increase.

The production of natural gas dropped by 4.9% in response to a corresponding decline in overseas demand. As such, the production of crude oil only rose by 2%. Most of this production was accommodated by the one-off crude oil production in Sabah to 150,792 barrels per day [(2007 : 74,800)].

### **2.2.1 Manufacturing Sector**

Manufacturing sector progressed at a relatively slower pace of 1.3% [2007 : 3.1%]. It started with a strong growth pattern during the first half of 2008 [6.3%], and started to show a drop during the second half of 2008 (Q3: 1.8%; Q4: -8.8%).

This export-oriented industry contracted by 1.2% (2007 : 1.0%) when world demand dropped slowly during the second half of 2008. This scenario seems to match the weakening world trade marketing environment. The electrical and electronic sub-sectors showed that they were the worst hit sectors.

Domestic-oriented industries have supported the growth of this sector. These industries recorded a growth of 8.0% (2007 : 7.6%). The exports involving consumer –related products, such as food, beverages, tobacco and transport equipment witnessed strong growth.

### **2.2.5 Services Sector**

The services sector remained as a major contributor to overall GDP in 2008 with a registered growth of 7.2%. Although the growth was lower compared to 2007 [9.7%], sub-sectors like the wholesale and retail trade (2008 : 9.8% ; 2007 : 12.5%), finance and insurance (2008 : 7.7% ; 2007 : 11.1%), communication, transportation and storage (2008 : 6.1% ; 2.7 : 10.0%) and other services (2008 : 4.9% ; 2007 : 5.0%) lent significant support to strengthen the overall growth in the Services Sector.

During the first half of 2008, this sector posted a strong performance as a result of available demand evident in a stable environment supported by the increase in tourism-related activities. The sector's growth during the second half of 2008, was slightly slow due to the reliance by the services sub-sector on global international trade and marketing activities.

### **2.2.6 Construction Sector**

In the same period, construction sector registered a lower growth at 2.1% (2007: 4.6%). The rise in oil and diesel prices have dramatically influenced in the rise of raw materials during the second quarter of 2008, have in turn generated a negative impact on the growth of the Construction Sector which registered a decline during the fourth quarter of the year (Q4: -1.6%).

The civil engineering sub-sector registered higher growth during the first half of 2008. This was due to the implementation of projects under the Ninth Malaysia Plan where the Federal Government expenditure was increased at 23.5% to facilitate the funding of new construction projects and improvements of infrastructure. The growth of civil engineering sub-sector was adversely affected by the sudden rise in building materials, especially steel and cement.

The growth of the non-residential sub-sector was widespread, supported by increased activities of the office space segment. The higher demand for office space, especially in the Klang Valley during the earlier part of the year due to a growing trend in business activities. On the other hand, the Residential sub-sector showed strong growth during the first half of 2008, but the demand started to diminish during the second half of the year. This was caused by consumers' sentiment that remained wary of the inflationary pressures and the progressively deteriorating global economic situation.

### 2.2.6 Demographic Indicator

The labour market expanded significantly up till the first half of 2008. It started to weaken in response to the cautious stance taken by the business sector following the steady rise in cost pressures and dwindling overseas demand as a result of the global economic and finance crisis. A rise in unemployment rate followed suit at 3.7 % (2007 : 3.2%).

**Table 3 Labour Market Indicator**

|   | 2004         | 2005         | 2006         | 2007         | 2008         |
|---|--------------|--------------|--------------|--------------|--------------|
| Population (people)                     | 26.0 million | 26.1 million | 26.6 million | 27.2 million | 27.7 million |
| Population Growth Rate                  | 2.8%         | 0.4%         | 1.9%         | 2.3%         | 1.8%         |
| Labour Force (people)                   | 10.5 million | 10.9 million | 11.2 million | 11.4 million | 11.5 million |
| Labour Force Growth Rate                | 4.1%         | 4.1%         | 2.4%         | 2.1%         | 1.1%         |
| Unemployment Rate (% from Labour Force) | 3.5%         | 3.5%         | 3.3%         | 3.2%         | 3.7%         |

Source : Series of Central Bank of Malaysia Yearly Report

### 2.2.7 Financial Indicator

The financial market remained resilient in 2008 resulted from strong macroeconomic fundamentals support. Short-term and long-term interest rates of merchant banks' fixed deposits showed a marginal reduction of 3.13% (2007 : 3.15%) and 3.68% (2006 : 3.70%) respectively. The Consumer Price Index rose by 5.4 points compared to 2.0 points in 2007.

The major contributor to inflation in 2008 stemmed from the food, non-alcoholic drinks and transportation categories. Value of the Ringgit depreciated resulted from the dismal development of the global economy in 2008 where the Ringgit recorded an exchange rate of RM3.46 to the Dollar by the end of 2008 (2007 : 3.31%).

**Table 4 Financial Indicator**

|  | 2004             | 2005             | 2006             | 2007             | 2008             |
|--|------------------|------------------|------------------|------------------|------------------|
| Inter Bank Interest Rate<br>(1 month)  | 2.86             | 2.84             | 3.54             | 3.54             | 3.53             |
| Short Term Interest Rate<br>(commercial bank fixed<br>deposit for 3 months)      | 3.00%            | 3.02%            | 3.19%            | 3.15%            | 3.13%            |
| Long Term Interest Rate<br>(fixed deposit for commercial<br>banks for 12 months) | 3.70%            | 3.70%            | 3.73%            | 3.70%            | 3.68%            |
| Change in Consumer Price<br>Index  | 1.4 <sup>1</sup> | 3.0 <sup>1</sup> | 3.6 <sup>2</sup> | 2.0 <sup>2</sup> | 5.4 <sup>2</sup> |
| Change Against USD<br>(as of December, 31)                                       | 3.80             | 3.78             | 3.53             | 3.31             | 3.46             |

Source : Central Bank of Malaysia Yearly Report 2007

Note : <sup>1</sup> base year 2000  
<sup>2</sup> base year 2005

### 3.0 EXTERNAL TRADE

Malaysia's external position remained resilient in 2008, despite a weak external environment in the second half of the year. The current accounts registered larger surplus of RM129.4 billion compared to the year before (2007 : RM100.4 billion).

#### 3.1 Annual Import and Export

Malaysia's gross exports increased by 9.6% in 2008 (2007 : 2.7%), encouraged by the expansion in resource-based manufacturing exports and commodities. Whereas, gross imports increased by 3.3 % (2007 : 5.0%) caused mainly by the import input which was higher for manufactured export and consumption goods.

##### 3.1.1 Major Trading Countries

In 2008, Malaysia's trade with its major trading partners ie. US, EU and Japan reached a lower level than expected. Malaysia's trading total clocked in at 34.8% (2007 : 36.7%). However, trade with South East Asian countries [excluding Japan], West Asia, India, Australia and New Zealand increased significantly (2008 : 20.0% ; 2007 : 19.9%). Trade with other ASEAN countries remain aggressive with a increase of 6.6% and exports to West Asia registered a solid growth at 38%.

**Table 5 External Trading Patterns 2008**

|  | Export       |                     | Import       |                   | Trade Balance |
|--|--------------|---------------------|--------------|-------------------|---------------|
|  | RM billion   | Annual Variance (%) | RM billion   | Annual Change (%) | RM billion    |
| <b>Total</b>                                 | <b>663.5</b> | <b>9.6</b>          | <b>521.6</b> | <b>3.3</b>        | <b>141.9</b>  |
| <b>United States</b>                         | <b>82.5</b>  | <b>-12.7</b>        | <b>56.5</b>  | <b>3.2</b>        | <b>26.1</b>   |
| <b>European Union (EU)</b>                   | <b>74.9</b>  | <b>-3.8</b>         | <b>61.7</b>  | <b>2.9</b>        | <b>13.2</b>   |
| <b>ASEAN Countries [selected] *</b>          | <b>169.6</b> | <b>9.9</b>          | <b>125.8</b> | <b>2.5</b>        | <b>43.8</b>   |
| <b>South East Asian countries [selected]</b> | <b>133.6</b> | <b>10.9</b>         | <b>129.9</b> | <b>-2.5</b>       | <b>3.8</b>    |
| People's Republic of China                   | 63.2         | 19.2                | 66.9         | 3.0               | -3.7          |
| Hong Kong SAR                                | 28.3         | 1.2                 | 13.7         | -6.9              | 14.7          |
| China Taipei                                 | 16.2         | -1.4                | 25.1         | -12.6             | -8.9          |
| Korea  | 25.9         | 12.4                | 24.2         | -2.8              | 1.7           |
| <b>West Asia</b>                             | <b>26.1</b>  | <b>38.0</b>         | <b>25.1</b>  | <b>44.4</b>       | <b>1.0</b>    |
| <b>Japan</b>                                 | <b>71.8</b>  | <b>30.0</b>         | <b>65.1</b>  | <b>-0.6</b>       | <b>6.7</b>    |
| <b>India</b>                                 | <b>24.7</b>  | <b>22.4</b>         | <b>10.3</b>  | <b>45.8</b>       | <b>14.4</b>   |

Source : Central Bank of Malaysia Yearly Report 2008

Note : \* Singapore, Thailand, Indonesia, Philippines, Brunei Darussalam and Vietnam

### 3.1.2 Major Import and Export Product

The major exports for Malaysia came from the manufacturing sector in the form of electrical and electronic products that achieved 38.3% at a value of RM253.81 billion, whereas the export value of palm oil was amounting to RM49.69 billion (7.5%). Electrical and electronic products continued to be the main imported products totaling RM189.4 billion (36.3%), followed by chemical and chemical materials that totaled RM43.57 billion (8.4%).

**Table 6 Five Major Export Products**

| No | 5 Major Export Products            | 2008       |            |
|----|------------------------------------|------------|------------|
|    |                                    | RM Billion | Percentage |
| 1  | Electrical and electronic products | 253.81     | 38.3%      |
| 2  | Palm oil                           | 49.69      | 7.5%       |
| 3  | Crude petroleum                    | 44.09      | 6.6%       |
| 4  | Liquefied natural gas              | 40.73      | 6.1%       |
| 5  | Chemicals and chemical products    | 40.55      | 6.1%       |

Source: Malaysian External Trade Development Corporation (MATRADE)

**Table 7 Five Major Import Products**

| No | 5 Major Import Products            | 2008       |            |
|----|------------------------------------|------------|------------|
|    |                                    | RM Billion | Percentage |
| 1  | Electrical and electronic products | 189.4      | 36.3%      |
| 2  | Chemicals and chemical products    | 43.57      | 8.4%       |
| 3  | Machinery, appliances & parts      | 43.29      | 8.3%       |
| 4  | Iron & steel products              | 28.71      | 5.5%       |
| 5  | Manufacturers of metal             | 27.43      | 5.3%       |

Source: Malaysian External Trade Development Corporation (MATRADE)

## **4.0 OVERVIEW OF CONSTRUCTION INDUSTRY**

### **4.1 Value of Contract / Expenditure**

It is mandatory for all contractors whether local or foreign to register with CIDB before they undertake to execute and complete any construction works in Malaysia. Any person who undertakes to carry out and complete any construction works without being registered as a registered contractor with CIDB shall be guilty of an offence under Construction Industry Development Board Malaysia Act 1994 (Act 520). This process, in addition lead to the acquisition of other type information on projects awarded.

In 2008, total value of projects awarded valued exceeding RM500,000.00 registered lower at RM78.55 billion, a decrease of 17.1 % compared to 2007 (RM 91.48 billion). A large part of this contract value (58.0%) was contributed by the Government projects amounting to RM44.78 billion. On the number of projects awarded, Government sector remained the major contributor that represented 57.7% (3,437 projects) out of total number 5,961 projects in 2007.

Social amenity projects were the major development category undertaken by the Government (34.5%, RM 15.4 billion), followed by infrastructure development projects (20.1%, RM 9.0 billion). While on the private sector, development of the non-residential and residential projects was the main focus with 84.2% contribution from the total value of private sector projects. Among the large projects implemented in 2008 were the Second Penang Bridge – Package 1 (RM 2.2 billion), KL – Kuala Selangor Expressway (RM958 million) and Johor Bahru – Nusajaya Offshore Highway (RM946 million).



**Table 8 Construction Contract / Expenditure (RM billion)**

| Type of Projects                | 2004  | 2005  | 2006  | 2007  | 2008  | 2009<br>(June) |
|---------------------------------|-------|-------|-------|-------|-------|----------------|
| Public Projects                 |       |       |       |       |       |                |
| Residential                     | 14.69 | 15.46 | 14.53 | 14.81 | 13.69 | 2.29           |
| Non-Residential                 | 11.25 | 14.96 | 16.02 | 19.60 | 21.83 | 5.04           |
| Infrastructure                  | 12.62 | 7.02  | 7.92  | 9.26  | 9.26  | 0.73           |
| Total                           | 38.56 | 37.44 | 38.47 | 43.67 | 44.78 | 8.06           |
| Mechanical and Electrical Works | 6.47  | 2.41  | 2.31  | 3.33  | 3.82  | 0.32           |
| Repair and Maintenance          | 0.42  | 0.67  | 0.60  | 0.64  | 0.59  | 0.09           |
| Private Projects                |       |       |       |       |       |                |
| Residential                     | 0.57  | 1.18  | 2.02  | 1.96  | 1.84  | 0.64           |
| Non Residential                 | 3.79  | 6.45  | 6.73  | 17.54 | 20.72 | 6.58           |
| Infrastructure                  | 9.77  | 9.20  | 13.71 | 28.33 | 11.21 | 3.71           |
| Total                           | 14.13 | 16.83 | 22.46 | 47.81 | 33.77 | 10.93          |
| Mechanical and Electrical Works | 0.27  | 0.22  | 1.20  | 0.86  | 1.12  | 0.13           |
| Repair and Maintenance          | 0.96  | 1.62  | 1.59  | 1.75  | 1.70  | 0.56           |

Source : CIDB Malaysia  
 Figures as at June 2009

## 4.2 Construction Companies

### 4.2.1 Number of Contractors by Type

Based on contractor registration records at CIDB Malaysia, a total number of 63,977 contractors including 164 foreign contractors have registered as at December 2008. Out of this figures, 65% were small contractors registered under G1 and G2 grades which qualified to participate in tendered projects valued at RM 500,000.00 and below [Table 9]. Besides more, 22,401 contractors registered under registration grades G3 and G7. From the total registered contractors, a total number of 3,804 contractors including 31 foreign contractors have succeeded in securing contract works as main contractors in 2008.

**Table 9 Contractors Registered with CIDB**

| Grade   | Bidding Limit               | 2003   | 2004   | 2005   | 2006   | 2007   | 2008   |
|---------|-----------------------------|--------|--------|--------|--------|--------|--------|
| G1      | Not exceeding RM 200,000    | 32,189 | 36,335 | 37,067 | 36,141 | 34,581 | 34,060 |
| G2      | Not exceeding RM 500,000    | 6,146  | 6,901  | 7,076  | 6,937  | 7,300  | 7,516  |
| G3      | Not exceeding RM 1,000,000  | 8,785  | 9,426  | 9,760  | 10,043 | 10,572 | 10,963 |
| G4      | Not exceeding RM 3,000,000  | 1,816  | 1,975  | 2,017  | 2,140  | 2,340  | 2,420  |
| G5      | Not exceeding RM 5,000,000  | 2,642  | 2,829  | 2,762  | 2,816  | 3,078  | 3,363  |
| G6      | Not exceeding RM 10,000,000 | 977    | 1,077  | 1,033  | 1,003  | 1,065  | 1,206  |
| G7      | Unlimited                   | 3,637  | 3,637  | 3,472  | 3,736  | 4,191  | 4,285  |
| Foreign | Unlimited                   | 135    | 157    | 156    | 163    | 163    | 164    |
| Total   |                             | 56,327 | 62,337 | 63,343 | 62,979 | 63,290 | 63,977 |

Source : CIDB Malaysia

Note : Figures as at June 2009

#### 4.2.2 Number of Consultants by Type

Up till August 2009, as many as 59,304 engineers have registered with the Board of Engineers Malaysia. This total comprises 81.7% graduate engineers, 16.3% professional engineers, while the rest of 2% were temporary engineers, accredited checkers and engineering consultancy in sole proprietorship, body corporate and partnership.

**Table 10 Engineers Registered as at August 2009**

| Registered Engineers  | Number |
|-----------------------|--------|
| Professional Engineer | 9,674  |
| Graduate Engineer     | 48,453 |
| Temporary Engineer    | 12     |
| Sole Proprietorship   | 645    |
| Body Corporate        | 320    |
| Partnership           | 170    |
| Accredited Checkers   | 30     |
| Total                 | 59,304 |

Source : Board of Engineers Malaysia

Meanwhile, for the same period, as many as 4,972 architects have registered. They comprise architect as many as 52.6%, graduate architects at 41.5%, and building draughtsman at 5.9%.

**Table 11 Architects Registered as at August 2009**

| Registered Architects | Number |
|-----------------------|--------|
| Graduate Architects   | 1,350  |
| Architects            | 1,711  |
| Building Draughtsmen  | 191    |
| Total                 | 3,252  |

Source : Board of Architects Malaysia

Up until August 2009, there were 2,081 quantity surveyors registered with 44.1% out of this total represented by the community of graduate quantity surveyors. This based is followed by registered quantity surveyors at 42.0% and quantity surveyors practices registered as many at 13.9 %.

**Table 12 Quantity Surveyors Registered as at August 2009**

| Registered Architect          | Number |
|-------------------------------|--------|
| Registered Quantity Surveyors | 875    |
| Graduate Quantity Surveyors   | 917    |
| Quantity Surveyors Practices  | 289    |
| Total                         | 2,081  |

Source : Board of Quantity Surveyors Malaysia

#### **4.2.3 Number of Contractors by Employment Size**

Based on Report on Survey of Construction Industries by the Malaysian Statistics Department that was published July 2009, a total of 34.6% (206,080 employees) from the total employees fall under the employment size group of 100-499. This was followed by the group of employment for 1,000 and above accounting for 26.8% [182,302 employees].

Most of those establishments, ie. as many as 76.8% [4,355 establishments] have employees of below 100 persons but only contributed 22.9% [RM 13.9 billion]of overall gross output compared to 1,188 establishments in the group size of more than 100 persons who contributed 77.1 % [RM 46.8 billion] of gross output and 77.6% (461,980 employees) of total employment.

**Table 13 Number of Establishments, and Employment by Size Group, 2007**

| Employment Size Group | Establishments | Total Employment |
|-----------------------|----------------|------------------|
| < 100                 | 4,355          | 133,159          |
| 100 - 499             | 976            | 206,080          |
| 500 - 999             | 140            | 96,457           |
| ≥ 1,000               | 72             | 159,443          |
| Total                 | 5,543          | 595,139          |

Source : Report on Survey of Construction Industries  
Department of Statistics Malaysia, July 2009

### 4.3 Employees and Construction Labour

One of the CIDB's functions is to register the nation's construction personnel. The information could serve as a reference for strategic planning, policy making and planning for human resources developing programmes in the Construction Sector.

#### 4.3.1 Number of Construction Workers

In 2008, the cumulative number of construction personnel registered with CIDB rose by 13.0% to 934,590 under various categories. Out of this total, 709,724 personnel [75.9%] were local construction personnel, whereas the rest were foreign construction personnel (Table 14).

**Table 14 Construction Personnel Registered with CIDB**

| Category                     | 2004    | 2005    | 2006    | 2007    | 2008    |
|------------------------------|---------|---------|---------|---------|---------|
| Construction Worker          | 249,389 | 298,647 | 356,385 | 419,951 | 487,956 |
| Semi-skilled Worker          | 29,878  | 34,165  | 38,161  | 42,293  | 43,989  |
| Skilled Worker               | 94,274  | 101,242 | 111,087 | 123,460 | 129,234 |
| Construction Site Supervisor | 54,806  | 58,374  | 62,868  | 73,017  | 77,234  |
| Construction Manager         | 37,705  | 40,067  | 43,593  | 48,503  | 51,755  |
| Administration Personnel     | 51,271  | 65,776  | 89,587  | 119,616 | 144,422 |
| Total                        | 517,323 | 598,271 | 701,681 | 826,840 | 934,590 |

Source : CIDB Malaysia

## 4.4 Productivity

### 4.4.1 Value Added Per Employee

In 2008, the construction sector contributed 2.9% to the national GDP. Table 15 shows the value of Malaysia's gross domestic product and number of employees in the Construction Sector according to year. In 2008, the value of the GDP was RM 15.60 billion compared with the number of employees used in the Construction Sector which was represented by as many as 758,400 persons.

This scenario has subsequently contributed to the Malaysia's gross domestic product per employees in 2008 by as much as RM 20,575. This number represents a rise of nearly 2.0% compared to output per employee for year 2007 [RM 20,176 per employee].

**Table 15 Construction Sector Value-added and Employment**

|  | 2004   | 2005   | 2006   | 2007   | 2008   |
|--|--------|--------|--------|--------|--------|
| Construction Sector value-added (RM million) | 14,903 | 14,685 | 14,604 | 15,279 | 15,604 |
| Construction Sector Employees ('000 orang)   | 767.3  | 759.6  | 755.2  | 757.3  | 758.4  |
| Value-added per Employee (RM)                | 19,423 | 19,332 | 19,338 | 20,176 | 20,575 |
| Variance                                     | -      | -0.5%  | 0.03%  | 4.3%   | 2.0%   |

Source : Series of Central Bank of Malaysia Report

#### 4.5 Construction Cost

Observations on construction material prices by CDB showed that most of the construction material prices have rise between 20% - 40% in July 2008. The rise in the construction materials started since end 2006, and was evident after which Malaysia experienced a price hike in middle of 2008 when the fuel prices in the country was raised on 5 June 2008. Based on average price trends registered by major construction materials in July 2008, when compared to average prices in January 2007, the cost of round steel bar have risen around 115.0%, bitumen 6.2%, ready-mixed concrete 45.6%, clay bricks 44.0% and cement 30.4%. However, the price of construction materials stabilize during mid 2009.

**Table 16 Average Price of Construction Building Materials in Peninsular Malaysia (RM / tonne)**

| Construction Material     | 2006     | 2007     | 2008     |
|---------------------------|----------|----------|----------|
| Mild Steel Round Bar      | 1,565.20 | 2,060.54 | 3,086.10 |
| High Tensile Deformed Bar | 1,604.00 | 2,082.42 | 3,109.50 |
| Cement                    | 10.14    | 11.00    | 13.05    |
| Concrete                  | 144.79   | 153.86   | 188.50   |
| Sand                      | 13.51    | 14.14    | 29.25    |
| Agregate                  | 18.23    | 18.85    | 25.45    |
| Clay Brick (RM / unit)    | 0.25     | 0.26     | 0.32     |
| Cement Brick (RM / unit)  | 0.15     | 0.16     | 0.23     |
| Bitumen                   | 1,176.67 | 1,247.50 | 1,616.65 |

Source : CIDB Malaysia

#### 4.5.2 Construction Industry Salaries and Wages

Based on the research conducted by CIDB Malaysia, the average wage for a construction machine operator in January 2009 was around RM71.00 to RM109.00 per day for local skilled operator and RM58.00 to RM83.00 per day for a local semi-skilled operator. On the contrary, this rate differs for a foreign skilled worker which is around RM46.00 to RM83.00 per day and foreign semi-skilled workers are paid between RM41.00 to RM 70.00 per day.

**Table 17 Construction Machine Operator Wage Rates in Peninsular Malaysia at January 2009 (RM daily)**

| Category of Machine Operators |                             | Skilled Workers |               | Semi-skilled Workers |               |
|-------------------------------|-----------------------------|-----------------|---------------|----------------------|---------------|
|                               |                             | Local           | Foreign       | Local                | Foreign       |
| 1                             | Excavator Operator          | 80.00 - 99.00   | 64.00 - 69.00 | -                    | -             |
| 2                             | Pile Rigger                 | 67.00 - 89.00   | 65.00 - 73.00 | 58.00 - 72.00        | 52.00 - 61.00 |
| 3                             | Off Road Truck Operator     | 71.00 - 78.00   | 56.00 - 64.00 | 57.00 - 62.00        | 48.00 - 54.00 |
| 4                             | Backhoe Loader Operator     | 73.00 - 88.00   | 58.00 - 67.00 | -                    | -             |
| 5                             | Roller Operator             | 72.00 - 80.00   | 55.00 - 62.00 | 59.00 - 64.00        | 46.00 - 52.00 |
| 6                             | Roller / Compactor Operator | 72.00 - 83.00   | 53.00 - 66.00 | 58.00 - 71.00        | 45.00 - 52.00 |
| 7                             | Scapper Operator            | 74.00 - 92.00   | 63.00 - 72.00 | 62.00 - 69.00        | 53.00 - 61.00 |
| 8                             | Motor Grader Operator       | 77.00 - 86.00   | 62.00 - 70.00 | -                    | -             |
| 9                             | Wheel Loader Operator       | 74.00 - 84.00   | 59.00 - 67.00 | 60.00 - 67.00        | 46.00 - 59.00 |
| 10                            | Paver Operator              | 80.00 - 87.00   | 46.00 - 67.00 | 65.00 - 69.00        | 50.00 - 59.00 |
| 11                            | Mobile Crane Operator       | 95.00 - 103.00  | 71.00 - 83.00 | 66.00 - 80.00        | 52.00 - 68.00 |
| 12                            | Crawler Crane Operator      | 96.00 - 102.00  | 72.00 - 83.00 | 77.00 - 82.00        | 52.00 - 69.00 |
| 13                            | Tower Crane Operator        | 96.00 - 109.00  | 69.00 - 80.00 | 80.00 - 83.00        | 53.00 - 70.00 |
| 14                            | Forklift Operator           | 74.00 - 81.00   | 48.00 - 61.00 | 58.00 - 66.00        | 41.00 - 51.33 |
| 15                            | Slinger/Dogger              | 74.00 - 78.00   | 61.00 - 67.00 | 59.00 - 64.00        | 49.00 - 56.00 |

Source : CIDB Malaysia

In terms of construction workers wage rates, on the whole local skilled workers were paid between RM52.00 to RM108.00 per day and foreign skilled workers were paid between RM 42.00 to RM 80.00. Meanwhile, wage rate for local skilled electrical wireman is about RM1,750.00 to RM3,239.00 per month. This rate was differs for a foreign skilled electrical wireman with a rate of around RM1,480.00 to RM2,231.00 per month. Local semi-skilled workers were paid around RM55.00 to RM73.00 per day whereas wage rate for foreign semi-skilled workers was around RM46.00 to RM59.00.

**Table 18 Construction Workers Wage Rates in Peninsular Malaysia at January 2009 (RM daily)**

| Category of workers |                                      | Skilled Workers     |                     | Semi-skilled Workers |               |
|---------------------|--------------------------------------|---------------------|---------------------|----------------------|---------------|
|                     |                                      | Local               | Foreign             | Local                | Foreign       |
| 1                   | General construction worker-Building | 52.00 - 58.00       | 42.00 - 46.00       | -                    | -             |
| 2                   | Concretor                            | 67.00 - 90.00       | 60.00 - 66.00       | 56.00 - 63.00        | 48.00 - 50.00 |
| 3                   | Barbender                            | 67.00 - 79.00       | 60.00 - 67.00       | 55.00 - 66.00        | 48.00 - 50.00 |
| 4                   | Carpenter-Formwork                   | 71.00 - 100.00      | 62.00 - 69.00       | 60.00 - 68.00        | 49.00 - 53.00 |
| 5                   | Bricklayer                           | 72.00 - 92.00       | 60.00 - 69.00       | 59.00 - 65.00        | 49.00 - 51.00 |
| 6                   | Roofer                               | 68.00 - 83.00       | 60.00 - 68.00       | 58.00 - 66.00        | 50.00 - 55.00 |
| 7                   | Carpenter-Joinery                    | 77.00 - 107.00      | 67.00 - 73.00       | 64.00 - 73.00        | 52.00 - 57.00 |
| 8                   | Steel Structure Fabricator           | 77.00 - 108.00      | 66.00 - 80.00       | 64.00 - 72.00        | 55.00 - 57.00 |
| 9                   | General Welder                       | 76.00 - 108.00      | 66.00 - 80.00       | 62.00 - 73.00        | 53.00 - 57.00 |
| 10                  | Plumber-Building & Sanitary          | 67.00 - 87.00       | 58.00 - 67.00       | 56.00 - 67.00        | 48.00 - 52.00 |
| 11                  | Plumber-Reticulation                 | 78.00 - 91.00       | 67.00 - 70.00       | 63.00 - 72.00        | 50.00 - 59.00 |
| 12                  | Building Wiring Installer            | 70.00 - 80.00       | 52.00 - 61.00       | -                    | -             |
| 13                  | Electrical Wireman PW2 (RM monthly)  | 1,750.00 - 2,480.00 | 1,480.00 - 2,000.00 | -                    | -             |
| 14                  | Electrical Wireman PW4 (RM monthly)  | 2,119.00 - 3,239.00 | 1,839.00 - 2,231.00 | -                    | -             |
| 15                  | Scaffolder - prefabricated           | 68.00 - 98.00       | 58.00 - 70.00       | 56.00 - 70.00        | 49.00 - 55.00 |
| 16                  | Scaffolder - tubular                 | 69.00 - 97.00       | 58.00 - 70.00       | 56.00 - 67.00        | 49.00 - 56.00 |
| 17                  | Plasterer                            | 72.00 - 97.00       | 62.00 - 78.00       | 60.00 - 68.00        | 51.00 - 56.00 |
| 18                  | Tiler                                | 79.00 - 109.00      | 68.00 - 81.00       | 66.00 - 72.00        | 54.00 - 57.00 |
| 19                  | Painter-Building                     | 66.00 - 87.00       | 55.00 - 67.00       | 55.00 - 65.00        | 46.00 - 53.00 |
| 20                  | General construction worker-civil    | 54.00 - 63.00       | 45.00 - 49.00       | -                    | -             |

Source : CIDB Malaysia



#### 4.6 Import and Export of Construction Services

In 2008, foreign contractors involved in construction works with values at RM4.45 billion. From the value standpoint, it was a decrease of 24% compared to the previous year (2007: RM5.86 billion). This values contribute around 6% of the total projects value in the country (2007 : 6% dan 2006 : 9%). The total value of projects awarded contributed by Chinese contractors amounted to RM2.48 billion, Japanese at RM1.34 billion, Germans at RM0.68 billion, Korean at RM0.16 billion and France at RM0.10 billion. Among the big projects implemented by foreign contractors in Malaysia in 2008 were foundation and sub-structure works for the Second Penang Bridge worth RM2.2 billion, construction of Global Footprint Line at Selangor Science Park worth RM0.67 billion and construction of residential units worth RM0.46 billion.

Involvement of Malaysian contractors in global market in 2008 witnessed their success in securing of 40 projects under various categories worth RM8.48 billion. In terms of value however, this acquisition was a decline at 51.2 % compared to 2007 at RM 17.38 billion. The United Arab Emirates market represents the biggest market with a procurement value of RM2.88 billion. It was followed by the Saudi Arabia market (RM1.82 billion), Vietnam (RM1.31 billion), Algeria (RM0.85 billion) and the Kingdom of Bahrain (RM0.49 billion).

Utility facility projects were the mainstay of projects undertaken by Malaysian contractors besides building projects that included residences. Among the biggest projects undertaken in 2008 were the construction of the New Tusdeer Container Terminal (TCT) at Jeddah Port, Saudi Arabia worth RM1.80 billion, construction of Yen So Park Project in Thanh Tri District South Hanoi, Vietnam worth RM1.3 billion and construction of a Main Building of Rihan Heights in Arzanah Mix Development (Phase 1), Abu Dhabi worth RM1.1 billion.

**Table 19 Import and Export of Construction Services**

| Type of Contractors                    | 2006   |                    | 2007   |                    | 2008   |                    |
|--|--------|--------------------|--------|--------------------|--------|--------------------|
|  | Number | Value (RM billion) | Number | Value (RM billion) | Number | Value (RM billion) |
| Local Contractors in Domestic Market   | 4,052  | 56.97              | 7,128  | 85.62              | 5,896  | 73.99              |
| Foreign Contractors in Domestic Market | 61     | 3.96               | 92     | 5.86               | 65     | 4.56               |
| Local Contractors in Global Market     | 59     | 28.64              | 56     | 17.38              | 40     | 8.48               |
| Total                                  | 4,172  | 89.57              | 7,276  | 108.86             | 6,001  | 87.03              |

Source : CIDB Malaysia  
Figures as at June 2009

## 5.0 FORECASTS OF CONTRACT WORK 2009-2010

Malaysia, being a relatively small developing country, is dependent on global trade and Foreign Direct Investment (FDI) flows which are important catalysts for driving economic growth. With the financial crisis and accelerating economic downturn that adversely affected FDI flows, Malaysia was not spared from experiencing its negative impact. Most of Malaysia's trading partners have also been affected by the downturn which hampered the demand for its exports during the first half of 2009. Furthermore, almost all sectors started to show signs of decline in their production levels during the first quarter of 2009, that resulted in a negative growth of 6.3% in the Malaysian economy. This scenario lingered into the second quarter of 2009, with the further contraction of the Malaysian economy by as much as 3.9%, therefore a negative growth of 5.1% was registered during the first half of 2009. With the weakening of the economy over two quarters, it was apparent that Malaysia's economy was experiencing a technical recession. Despite the challenges, the Malaysian Construction Sector continued to sustain itself with a positive growth, contributed by the implementation of a sizable number of projects during the three-year period of the 9th Malaysia Plan and the economic stimulus packages of 2009.

Up until end of July 2009, the value projects that were awarded amounted to RM27.98 billion, a decreased of 36.2% compared with those projects awarded during the same period in 2008. Residential projects, considered a mainstay of investments by the private sector shrunk by as much as 33.2% in terms of projects value. Commercial and industrial projects forecasted to be slower, in response to the current momentum that is driving the economy. At the global level, majority of the developed countries had to contend with facing the unpredictable risks that surfaced in their domestic economy. In the IMF report, it was anticipated that all developed nations, some of whom are the main trading partners of Malaysia will also be experiencing the economic downturn in their respective countries in 2009. On the home front, it was forecasted that the Malaysian economy would decline around 4.0% - 5.0% this year. Consumers' sentiments and business confidence remain weak in an environment marred by an unpredictable economy that caused consumers and businesses to be more caution in their spending and investments.

The flow of FDI into Malaysia in the year 2009 is expected to decline by 50% compared to the year 2008. Economic indicators for the first half of 2009 indicated that the situation was not likely to improve soon. Recommended investment in the manufacturing sector dipped from 37.0% to 44.1% during the same period and capital formation dropped by as much as 10.3%. The property market was expected to drop, fuelled by a weaker demand. Sales performance of new residential projects slid to 44.5% from 45.1% during the same period in 2007. On the whole, the number of approved building plans were also saw a decline compared with those awarded during the same period. In particular, approval of building plans for housing dropped by 23.8%, business complexes dropped by 14.6% and office building projects that were initiated decreased by 68.9% compared to those that commenced during fourth quarter of 2008. The rate of hotel accommodation take-up reached 58.5%, while the average rate of occupancy by complex and office building retailers stood at around 81.9% and 85.3% respectively. This was in contrast to the noteworthy rise of 1.6% in public

sector expenditure contributed by the implementation of two stimulus packages worth RM 67.0 billion, a rational effort on the Government's part to stimulate demand during the economic downturn in mitigating impact of the crisis. Based on yearly trends of projects awarded, CIDB forecasts that construction project value for 2009 will hover between RM 60.0 and RM 64.0 Billion. This projection draws its reference from the project value of RM28.0 billion that was achieved during the first half of 2009, which in itself, was lower compared to previous years. This indicator shows a resilient Construction Sector for the Malaysian construction sector in 2009.

The half year assessment of the global economic in mid 2010 revealed an acute absence of much desired progress. Until now, economic indicators showed no signs of quick recovery in the global economy. The crisis faced by the banking sector and workers retrenchment in the US have yet to be managed effectively. The issues faced by the financial sector in EU need to be addressed urgently to prevent the occurrence of a similar crisis in US. Amidst this challenging scene, majority of economists forecast the global economy witnessing a turnaround either in 2010 or early 2011. In response to this projection, private sector investment is expected to increase significantly by mid 2010 and will register higher compared to 2009. This increase will stem from the undertaking of many high-value residential and commercial development proposals from renowned players in 2009. 'Syarikat Perumahan Negara', on the other hand, will continue to construct more affordable homes. The accommodative financial policy and low borrowing costs will support in expediting domestic economic activities. Business confidence and consumer sentiments are expected to recover in response to forecasted improvements from 2009 onwards. On the global front, the IMF has indicated positive growth in the majority of Malaysia's trading partners in 2010, the result of efforts expended in 2009 to stimulate the economy. In tandem with this projection, Malaysian economy forecasted with a positive growth of between 3.5% - 4.0%.

The public sector expenditure on social amenities and infrastructure will remain high in order to fulfill Governments commitment on the welfare of citizens and strengthen the national economy. The implementation of the 9th Malaysia Plan will see its conclusion in the year 2010 and usually, the implementation of Government projects is slowed down. However, in the unpredictability of the global economy scenario, the Government is expected working towards increasing project implementation activities to stimulate the domestic economy. It is expected that a number of privatisation projects that have been shelved are going to be revived. Government projects value for 2010 is expected to amount around RM33.0 – RM35.0 billion, a significant contribution of 45% - 50% in terms of project value in 2010. This translates to a potential of an annual project value of around RM70.0 – RM73.0 billion for the year 2010, which in turn, would reflect bright and promising construction prospects for the Malaysian construction sector.

## Issues And Challenges

Majority of countries which have been experiencing the negative impact of the global economic downturn have undertaken their own stimulus packages by increasing the construction activities. Concerted efforts in the implementation of projects are expected to raise construction material prices, worker wages and other types of input. This phenomenon will increase the building cost that may affect the implementation of current construction projects and those that have been planned in the pipeline. This situation will eventually translate into an obstacle that may slow down the demand catalyst effect.

The strategy to manage economic demand through construction will be more effective when projects are implemented quickly. Delays in project undertaking will indirectly affect the economy. The speed of project implementation is often hampered by budget availability and funding as well as site readiness. In many cases, the efficient site preparation has been challenged by issues related to those involving squatters and various authorities. On the other hand, small projects and maintenance work is not capable in creating the demand due to narrow supply chain. Even the effect, will take a long time to acquire such results.

Malaysia has long been dependent on external / export demands to enhance economic growth. In their efforts to stimulate domestic economy, many nations have started to impose trade protectionism measures. These measures have inevitably affected the flow of global trade that would benefit from stimulation initiatives. As such, nations which are dependent on exports are bound to experience the negative impact, thus prolonging the global economic downturn. Even now, the global economic downturn has adversely affected the growth and stability of many countries, including the developed countries. The prolonged downturn will eventually reduce national income. This reduction will limit the implementation of another stimulus packages to mitigating the impact of the downturn. If the stimulus packages are launched, the budget deficit will increase. The implementation of the Malaysia's first economic stimulus package of RM7.0 billion caused a budget deficit from 3.6% to 4.8% and the implementation of the second package at RM60.0 Billion had increased the budget deficit to 9.0 %. A high budget deficit will portray an inefficient macro management and may well hamper the growth of the domestic economy. This is a scenario that the Government is always trying to avoid.

In Malaysia, it is estimated 2.11 million foreign workers are employed in various sectors, represent 18.3% of the total work force. In construction sector, there are about 312,573 foreign workers. This number makes up 41.2% out of the total number of work force in Construction. Malaysian construction sector is still dependent on the services of unskilled foreign workers. Due to the availability of employment opportunities, foreign workers have been transferring an estimated RM5.0 – RM6.0 billion out of the country on an annual basis. This outflow has reduced the multiplier effect to drive growth in the domestic economy. This total of outflow can possibly raise the GDP almost 1.0% if the spending is constrained within the country. The expedited implementation of construction projects will inevitably increase the dependency on foreign workers.

In general, local citizens are not interested in involving themselves in the construction sector due to an unattractive payment structure and service terms that do not guarantee job security. On an annual basis, CIDB has been training an average of 20,000 local construction workers and youths as an effort to reduce the need on foreign workers. However, its efforts have been impeded by the availability of more job opportunities in other sectors. In addressing this issue, it is imperative that the construction sector embark on establishing a wage system and service terms that guarantee job security. However, this consideration may impose a negative impact on competitiveness and generate risk management concerns over high cost overheads. Hence, the eventual reduction of dependency on foreign construction workers is expected to be a long-term endeavor.

Currently, the Malaysian Construction Sector is focusing on transforming construction processes from conventional building methods to the Industrialised Building System [IBS] to reduce the dependency on unskilled foreign workers. This transformation is slow in its progress due to the availability of a large base of foreign workers who are willing to be paid lower than market rate wages. Hence, the original intention to revolutionise the industry with this transformation initiative has been hampered by the need to develop more IBS components and develop the competencies of contractors. Efforts directed at this issue have long been implemented but have yet to see its fruition and effectiveness because the adoption of the conventional system of construction is still being considered as the most cost-effective approach and efforts on transforming related practices remain an option to be reckoned with. As a nation that promotes free market, there is no special policy to make it mandatory for contractors to get up to speed with the adoption of the IBS concept. When viewed against the need for a basis for consideration by businesses and industry players alike, the time taken for the alignment of mindsets towards implementing the IBS concept is expected to be longer than intended.

PART 2 : THEME PAPER  
INTEGRATION OF VALUE CHAIN IN THE CONSTRUCTION INDUSTRY

**INTEGRATION OF THE CONSTRUCTION INDUSTRY THROUGH PARTNERING –  
THE MALAYSIAN INITIATIVE**

**1.0 Executive Summary**

The construction industry has been typified as fragmented resulting from inefficient and ineffective traditional procurement methods and practices, contracting approaches and construction methods. The Malaysian Construction Industry Master Plan (CIMP) has identified and recommended partnering as an approach to integrate the construction industry supply chain, improve client-customer relationship and enhance levels of productivity and quality of construction project implementation. This paper will attempt to present Malaysia's initiatives to address the fragmentation by adopting the partnering approach. It will define partnering, identify the benefits of partnering, its critical success factors, major difficulties in implementing partnering, types of projects suitable for partnering, partnering model and tools that can be used in Malaysia, incentives for adopting partnering and to conclude, what will be the way forward.

**2.0 Introduction**

The Malaysian construction industry has contributed significantly to the Malaysian economy as an enabler of growth to other industries. The industry is an essential growth enabler because of its extensive linkages with the rest of the economy e.g. the manufacturing industry and financial services. Malaysia will need to develop a construction industry that is internationally competitive to achieve developed nation status by 2020 where the industry will be seamless and all stakeholders will work in collaboration with each other.

The general perception on the Malaysian construction industry as a whole is under achieving. It has low profitability and does not invest enough capital in training, research and development. Many of the industry's clients are dissatisfied with its overall performance.

The key problem areas experienced in the Malaysian construction industry are such as limited trust, little cooperation, poor communication and an adversarial relationship that have resulted in construction delays, cost overruns, difficulty in resolving claims and litigation. The traditional competitive approaches to procurement which relied on independent firms brought together by competitive bids had caused adversarial attitudes and fragmentation of the construction industry. With the increasing call for more price competition profit margins for consultants and contracting organizations are declining sharply. In addition, demands for project performance in terms of time and quality have greatly increased. The situation is one where there is uneven risk allocation between the contractual parties resulting in a "heads I win, tails you lose climate".

The Malaysian construction industry has traditionally a lot in common with the construction industry in the United Kingdom, Australia and Hong Kong in that its industry structure, systems, practices and procedures, remain as those which were introduced by Great Britain. The project procurement and administrative arrangements in use have also been inherited from the United Kingdom. These arrangements determine the documentation, procedures and practices in the industry as well as the roles of the participants and the relationship among them. In general the present arrangements stress formality and rigid channels of communications.

Our vision for the Malaysian construction industry is no different to that of other countries which is for the Malaysian construction industry to realize maximum value for all clients, end users and stakeholders and exceed their expectations through the consistent delivery of world class products and services. In order to achieve this vision the industry must:

1. Add value to its customers, whether occasional or experienced, large or small
2. Exploit the economic and social value of good design to improve both the functionality and enjoyment of its end users of the environment it creates
3. Become more profitable and earn the resources it needs to invest in its future
4. Enhance the built environment in a sustainable way and improve the quality of life

To achieve the above vision, Malaysia has launched the Construction Industry Master Plan covering the period of 2006 – 2015. The Plan which was crafted for the industry by the industry has outlined the Vision, Mission, seven Strategic Thrusts (ST) and twenty one specific recommendations. ST1 is to integrate the construction industry supply chain to enhance productivity and efficiency. One of the strategies to integrate the construction industry supply chain is through the partnering approach to procurement.

Although the culture and the business philosophy in Malaysia lend itself to the concept of Partnering, there is very limited experience with regard to a formal partnering arrangement. Informal partnering arrangements have been practiced by a few organizations and the public sector has embarked on post contract partnering arrangement in some limited contracts.

As partnering experience in the UK, Australia and Hong Kong had demonstrated good project outcomes in terms of time, cost and quality and owing to the lack of formal knowledge and information in Malaysia, the Construction Industry Development Board (CIDB) Malaysia had identified the partnering practices from the UK, Australia and Hong Kong for benchmarking and formulating a better conclusion.

Premised on this, CIDB Malaysia has initiated a comprehensive study on Partnering with the objectives of reviewing the past and current scenario of partnering in both public and private sectors locally and abroad. These inputs will assist in identifying the best model for Malaysia, suitable Key Performance Indicators and incentives to successfully implement the partnering programme in

Malaysia. The study will also include the practices of Partnering in UK, Australia and Hong Kong with the intention of sharing best practises. The contents of this paper have extracted findings from literature reviews and the study visits conducted to United Kingdom. From these findings, we are able to learn and leverage on them to develop our initiative for Malaysia.

## **2.0 Partnering Defined**

Partnering was introduced in the 1980s in the USA as an innovative construction procurement route. Project partnering is the term given to the relationship of two or more members of the principal team coming together on a single project. This arrangement goes beyond Design and Build contracts by getting more members of the project team together, including client, contractor, sub-contractors and consultants, to work as a team at design stage.

Strategic partnering alliances take project partnering further by involving the same partnering team on a number or series of projects, or for a specified period of time for repeat works. Framework agreements are basic agreements which govern the project members for the projects which they will be involving for the next few years. With the framework agreements, integrated teams from the client, contractors and consultants are established to deliver the individual projects at the earliest stages of a scheme. More detailed agreements for each project are established at the later stage.

Pain/gain sharing mechanisms are commonplace within partnering arrangements though the precise details, usually linked to a target cost, vary from project to project. Value is a personal matter, not an objective fact. What we value stems from what values we hold and from what we choose to value. It can be usefully defined as the balance between what you get and what you give. Positive value exists for any player when they get more in their own terms than they must give up. Positive value exists when benefits exceed sacrifices. In reverse, negative value exists when the sacrifices exceed benefits.

## **3.0 Benefits of Partnering**

Major benefits identified from case studies are as follows;

- Predictability of both time and cost improved as late design changes became less as a result of early involvement of carefully selected supply chains.
- An approach of early involvement and forward planning increased potential for cost reductions and savings.
- A long-term relationship arrangement provides a continuity of works that allows contractors to understand the client's needs.
- A pain/ gain share formula encourages supply chains to be innovative and improve performance.
- Problems identified at the early stage and resolved in a collaborative manner.
- Close communication and partnering working within the projects reduces defects and accident rate.



- Lessons learned shared across the industry creates a culture of continuous improvement.
- Benchmarking and performance measurement of completed schemes enables clients to measure and monitor project progress.

#### **4.0 Critical Success Factors of Partnering**

Major critical success factors for adopting partnering identified from case studies are as follows;

1. Support from senior management – Senior management are committed to partnering arrangements and in driving forward an agenda of improvement and operational changes throughout the whole of the organisation.
2. Commitment from all participants – All parties are required to be committed and play their role in driving forward the initiative. Partnering is about building teams, promoting trust and long term relationships between individuals involved and creating the right environment in which they can work best to deliver the project most efficiently and effectively.
3. Accredited Project Directors or Project Sponsors – They act on behalf of the clients for all aspects of a construction project throughout its lifecycle. They are fully responsible in delivery of a scheme. They are required to undertake extensive training programmes, an accreditation process and formal courses. They generally have technical backgrounds and competencies.
4. Openness and Trust – Real trust between partners is essential for the success of partnering. Partnering requires a cultural shift that requires recognition of interdependence between clients and contractors.

#### **5.0 Major Difficulties In Implementing Partnering**

Major difficulties in implementing partnering are as follows;

1. There is an inherent distrust within the construction industry. It is not an easy task to establish real trust between the client and main contractor relationship and it takes time.
2. There are behavioural problems. Some individuals in an organization may resist partnering because of their past experience and understanding of traditional approaches.
3. Contractors and sub-contractors do not understand partnering. All stakeholders need to be educated on what partnering is all about and the benefits it is likely to bring.
4. A lowest tender price mentality on part of clients is difficult to change. The mindsets that cheapest tenders produce cheapest construction cost have been undermined for a long time.
5. Changing the culture is one of the biggest hurdles in adopting partnering. Moving away from traditional procurement approaches requires entire supply chains to change their existing policies and procedures.
6. Clients may have approached partnering with insufficient thought and not given serious attempts to make it work.

7. Lack of capable and competent partnering champions who are truly empowered to ensure that partnering could be implemented efficiently.
8. Lack of well structured courses and training programmes for supervisors and managers.
9. Pain/ gain sharing mechanisms are not always equitable and risk allocation remains a contentious issue.

## 6.0 Types Of Projects Suitable For Partnering

Partnering works for both one-off projects and a series of different types of projects. The underlining requirement is that the project is of a significant size and value in order to make the investment worthwhile. Certain clients may pay a substantial premium through partnering arrangements, it is important to ensure that the initial costs of establishing partnering are outweighed by the benefits. The degree of success is greatly depended on the nature of the work. Based on case studies, it is clear that successes can be achieved on large, complex, new build and repeat type projects. In some cases, a series of small or different projects can be blended and bulked under a single scheme. For example, 10 schools in a same location controlled by a local council.

## 7.0 Partnering Models And Tools

The model of The Seven Pillars of Partnering (Bennett and Jays, 1998) can be used to set up a strategic partnering framework. The model is as follows:

- **Strategy:** is the point in the process where long-term objectives of the initiative are set.
- **Membership:** selection of the right partners is fundamental. It is important that all key members of the partnership are brought together as early as possible.
- **Equity:** for cooperation, rather than opportunism and conflict to prevail, the agreement must be fair to its members from the outset. The fairness extends to such matters as sharing of works, profit and loss, risk and reward strategies, problem solving and the management of differences.
- **Integration:** although it must be remembered that the partner organizations are separate entities, attempts at integration should be made wherever these enhance the efficiency or effectiveness of the initiative.
- **Benchmarks:** performance measurement and comparison are fundamental in maintaining the health of the initiative and for improving it.
- **Project Processes:** the development of standard, integrated processes.
- **Feedback:** it is essential to communicate all of the above to all member organizations at all levels of their operation.

An 'eighth pillar' that can be considered as well is the :

- **Maintenance and Improvement:** Incorporating the learning acquired from experience as the strategic partnering increases in maturity.

Various collaborative tools which are integral to partnering are as follows;

- **Project bank account:** eliminates the problem of main contractor holding the payments of subcontractors. It provides a fair payment regime throughout the supply chain.
- **Project insurance:** reduces financial waste and avoids blame culture. It covers the financial loss for the whole team.
- **Partnering facilitators:** advice the clients on the selection process, on the success factors, on how to select the team, strengths of partners, obstacles to success, on how to overcome obstacles, soliciting ideas to make partnering work, development of the Partnering Charter and the action plan, setting up of the problem resolution process and nomination of partnering champions. The facilitators do not get involved in the design process to maintain their independence.

## 8.0 Partnering Incentives

For most of the partnering projects, the benefits delivered provide scope for the formulation of incentives. In agreeing how incentives to be dealt with, the goal should be aligned with the interests of all project stakeholders with fully meeting the client's objectives. This means the payments to each firm of the supply chain should be arranged in such a way that their profits increase directly with the success of the project. Therefore, providing a fair return for the supply chain should be an important aim.

It is not easy to establish effective incentives for a group of firms with little or no partnering experience as many of the building industry's normal practices cause people to concentrate on financial issues and so make it difficult for them to work effectively. For these reasons it is often best to begin the move to partnering using a simple agreement to share any savings identified by teams on some pre-determined basis.

## 9.0 The Implementation Of Partnering Initiative In Malaysia

CIDB Malaysia is aggressively moving forward in implementing the Partnering programme in Malaysia to fulfill the recommendations set forth by ST 1 of the CIMP. The comprehensive study on Partnering is almost completed with overviews on Partnering in Hong Kong and Australia yet to be done.

At this initial stage, we have identified suitable projects that can employ Partnering. These projects are complex in nature and are procured through the PPP concept. It can certainly utilize Partnering to ensure the full benefits can be reaped especially with the inclusion of the Whole Life Cycle Costing approach in acquiring the necessary fundings to enhance the value of the assets. This is more so now that the PPP will be the way forward to many Government projects for the 10<sup>th</sup> Malaysia Plan period (2011 – 2015)

Rather than come up with its own partnering formula, the more expedient approach for Malaysia is to borrow viable partnering concepts and models from the United Kingdom, Australia and Hong Kong, adapt them to suit the unique characteristics of the Malaysian construction industry while at the same time avoiding its pitfalls and drawbacks. The key features, benefits and risks of the partnering concepts and models can be used as a guide by enlightened clients to carefully craft appropriate procurement arrangements and contract conditions depending on the nature and requirements of different projects.

Currently, CIDB Malaysia has developed an initial roadmap for the implementation of partnering in Malaysia. It will be continuously reviewed and refined taking into account all segments of the construction industry – the consultants, material suppliers and other service providers e.g. the banks, legal fraternity, etc. It has to be acknowledged that partnering cannot be applied across the entire spectrum of the Malaysian construction industry. Only competent service providers throughout the supply chain should be engaged in partnering. Training and accreditation schemes must be developed across the construction spectrum and consider it to be the requisite to successful partnering.

Aggressive and continuous awareness campaigns to drive home the message would be initiated to the various Ministries in attempting to sway their decision to adopt the Partnering concept. It may even be necessary to forward the proposal to the Cabinet level for a top down directive which could ease the implementation of Partnering. However, other considerations like equity in the share of Governments' projects must be given to ensure fair distribution among the players.

## **10.0 Conclusion**

In line with the recommendations and findings from case studies and literatures, partnering can be effective to its full extent by identifying critical success factors and mitigating potential problems for partnering failures. The level of partnering success is greatly depended on the top management support. If the top management is seen to only provide lip service to the partnering approach, the partnering relationship is bound to fail (Hellard 1996).

Changing the mind-set of everyone in the construction industry will be the greatest challenge in implementing partnering in Malaysia. The success of partnering is much dependent on whether the people can accept the new idea. There must be partnering champions at all levels to overcome inertia, from the government level right down to the individual organizations of key players of the construction industry. These champions must have a strong commitment to drive the partnering agenda and remove cultural and economic barriers. There are several unique characteristics in Malaysia which might favour the implementation of partnering. Unlike in the United Kingdom, the major public sector clients are the federal ministries, not the local authorities. Getting the few major public procurers to adopt partnering would be easier than trying to convince the many minor public spenders. CIDB Malaysia can take on this role of being the partnering champion at the policy level.