MALAYSIA PERFORMANCE OF THE MANUFACTURING AND SERVICES SECTORS 2008

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1 Introduction

1 Introduction

The Malaysian economy registered a growth of 6.3 per cent for the first nine months of 2008[1] despite the challenging global economic environment. The growth was supported by domestic demand, following continued expansion in private and public consumption.

The services sector was the fastest growing sector recording value-added expansion of 7.9 per cent during the January-September 2008 period. This was followed by the manufacturing sector which grew by 4.8 per cent.

MANUFACTURING

During the first nine months of 2008, the manufacturing sector registered a growth in value-added of 4.8 per cent despite the impact of the global economic slowdown particularly in export-oriented industries. The sector accounted for 29.9 per cent of GDP during this period. Exports of manufactured products expanded by 3.7 per cent to RM432.5 billion in 2008 (January-November) compared with RM416.9 billion in 2007 (January-November). Exports of the manufacturing sector accounted for 70.1 per cent of Malaysia's total exports for the period January-November 2008.

The continued expansion of the manufacturing sector was also reflected in the increase of the sector's industrial output (as measured by the Industrial Production Index), sales value and productivity. The production index of the sector expanded by 2.1 per cent for the first 11 months of 2008. Though the production of the E&E sector declined by 2.0 per cent, overall production index for manufacturing rose 2.1 per cent due mainly to increases in petroleum and plastic products (38.6%), transport equipment (24.9%), machinery and equipment (15.6%), palm oil products (11.5%), processed food and beverages (9.9%) and non-metallic mineral products (7.9%).

During the first 11 months of 2008, the sales value of the manufacturing sector recorded a growth of 12 per cent to RM533.4 billion compared with RM476.2 billion for the corresponding period in 2007. Productivity in the sector, as measured by

[1] *Department of Statistics.*

sales value per employee, recorded a growth of 15.2 per cent in 2008[2]. Employment in the manufacturing sector was estimated at 3.4 million persons or 29 per cent of total employment in 2008[3].

SERVICES

The services sector encompasses broad and diverse activities such as transport, telecommunications, financial services (banking, insurance and capital markets), real estate, business and professional services, utilities, distributive trade, hotels and tourism, education and health services.

The services sector accounts for the largest share of Malaysia's GDP. For the first nine months of 2008, it accounted for 54.2 per cent of GDP. The services sector recorded a growth of 7.9 per cent in value-added for the period January-September 2008. Employment in the services sector was estimated at 6.0 million persons or 52.1 per cent of total employment in 2008[3].

In 2008 (January-September), the finance, insurance, real estate and business services maintained its position as the leading sub-sector, contributing to 16.1 per cent of GDP (RM64.0 billion). This was followed by wholesale and retail trade sub-sector (14.8% or RM58.9 billion) and the transport, storage and communication sub-sector (7.6% or RM30.3 billion).

The services sector is expected to register a productivity growth of 4.3 per cent in 2008[2]. The growth will be driven by transport, finance, trade and utilities sectors.

[2] *Estimates.*

[3] *Economic Report 2008/2009, Ministry of Finance Malaysia.*

2

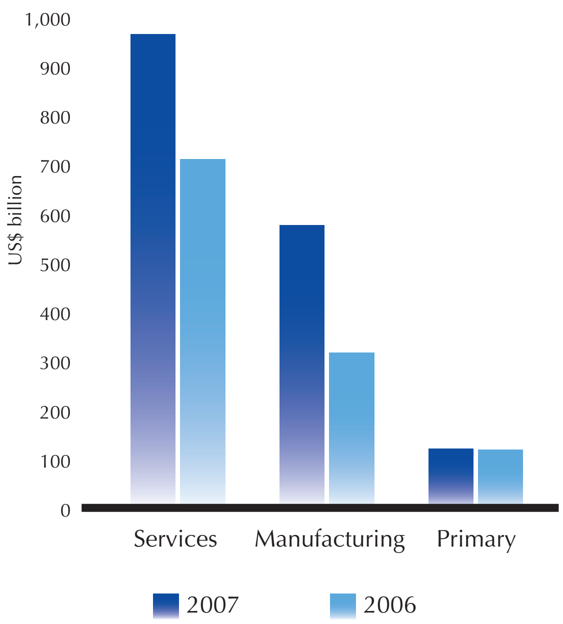
Global Investment Scenario

2 Global Investment Scenario

FDI Inflows

World foreign direct investment (FDI)[4] inflows rose to a record level of US$1.83 trillion in 2007, a growth of 30 per cent compared with the US$1.41 trillion recorded in 2006, according to the World Investment Report by the United Nations Conference of Trade and Development (UNCTAD). This marked four consecutive years of growth surpassing the previous all time record high set in 2000 of US$1.39 trillion.

Graph 1
Cross Border M&As by Sector, 2007 and 2006



Source: World Investment Report, 2008

The United States maintained its position as the largest recipient of FDI inflows (US$232.8 billion) in 2007, followed by the United Kingdom (US$223.9 billion) and France (US$157.9 billion). The increase in global FDI inflows in 2007, was attributed to the continued increase in cross-border mergers & acquisitions (M&As).

M&As continued to account for the bulk of FDI flows with an increase of 46 per cent to reach US$1.6 trillion in 2007 compared with US$1.1 trillion in 2006.

Significant cross border M&As were recorded in consumer goods and service industries (including financial services) and in energy supply and basic materials. In 2007, cross border M&As were largely driven by favourable financing conditions worldwide.

Overall, the participation of transnational corporations in the infrastructure sector of developing countries has increased significantly.

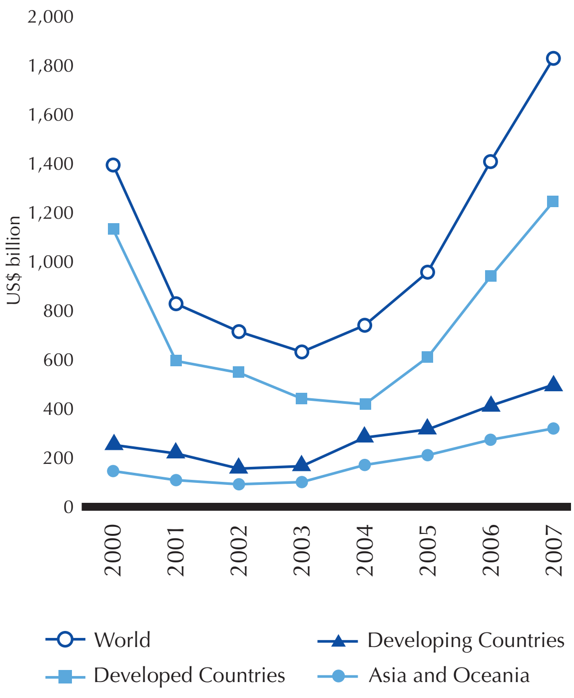
Also, a new feature of global FDI is the emergence of sovereign wealth funds (SWFs) as direct investors, particularly in the South, East and South-East Asian region contributing

[4] *FDI is defined by UNCTAD as an international investment made with the objective of a lasting interest by a resident entity in one economy in an entity resident in another economy. It comprises equity capital, reinvested earnings and inter-company debt transactions and is largely based on national balance of payment statistics.*

to the region's rapidly growing outward FDI stock which increased from US$1.1 trillion in 2006 to US$1.6 trillion in 2007.

In terms of sectoral distribution, the services sector still accounts for the largest share of global FDI stocks and flows. This shift of FDI towards the services sector not only re-confirms the increasing importance of services in FDI over the years but also the re-emergence of the primary sector, in the developing and transition economies, especially in the extractive industries such as mining, quarrying and petroleum.

Graph 2
FDI Inflows by Region, 2000 - 2007

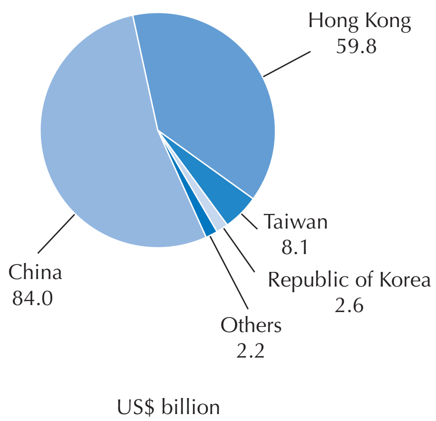


Source: World Investment Report, 2008

FDI inflows increased for both developed and developing countries. FDI inflows to developed countries increased by 33 per cent to US$1.25 trillion in 2007, due mainly to the rise in cross border M&As. Meanwhile, FDI inflows to developing countries increased by 21 per cent from US$413 billion in 2006 to US$499.7 billion in 2007.

East Asia (US$156.7 billion) remained the most important regional destination for FDI among developing countries. The largest recipients of FDI in Asia were the People's Republic of China (US$84 billion), Hong Kong (US$59.8 billion), Singapore (US$24.1 billion) and India (US$22.9 billion). FDI inflows to South East Asia increased 18 per cent from US$51.2 billion in 2006 to reach their highest level of US$60.5 billion in 2007.

Graph 3
FDI Inflows to East Asia, 2007

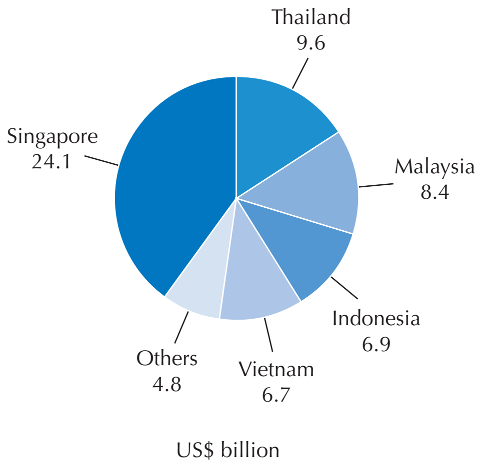


Source: World Investment Report, 2008

FDI inflows to Malaysia increased by 40 per cent from US$6 billion in 2006 to US$8.4 billion in 2007, the highest level since the Asian financial crisis. Malaysia was the third largest recipient among ASEAN countries in 2007, after Singapore (US$24.1 billion) and Thailand (US$9.6 billion). Malaysia's FDI inflows in 2007 were mainly in the manufacturing (37.4%) and services (23.3%)

sectors. Since 2005, FDI inflows to Malaysia have been increasing, registering US$4.0 billion in 2005; US$6.0 billion in 2006; and US$8.4 billion in 2007.

Graph 4
FDI Inflows to ASEAN Countries, 2007



Source: World Investment Report, 2008

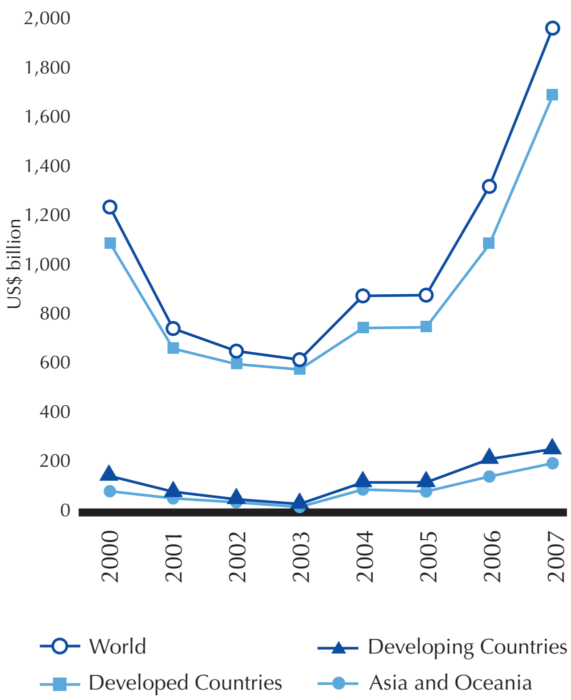
FDI Outflows

Reflecting the trend for inflows, global FDI outflows reached a new peak of US$2.0 trillion in 2007. Developed countries remained the main sources of global FDI outflows in 2007, accounting for US$1.69 trillion or 84.8 per cent of total outflows.

Developing countries also continued to gain in importance as sources of FDI, with outflows peaking at US$253 billion, mainly as a result of the outward expansion of Asian TNCs.

The main sources of FDI outflows in Asia in 2007 were Hong Kong (US$53.1 billion), the People's Republic of China (US$22.5 billion), the Republic of Korea (US$15.3 billion), Kuwait (US$14.2 billion) and India (US$13.6 billion). FDI outflows from Malaysia amounted to US$10.9 billion in 2007.

Graph 5
FDI Outflows by Region, 2000 - 2007



Source: World Investment Report, 2008

According to the World Investment Report 2008, developing and transition economies in Asia are becoming important sources for outward FDI.

Malaysia's share of total stock of outward FDI among developing and transition economies increased from 0.27 per cent (15th rank) in 1980 to 1.74 per cent (10th rank) in 2006 and 2.3 per cent (9th rank) in 2007, indicating Malaysia's growing importance as a source of outward FDI.

Table 1
Top 10 Developing and Transition Economies in Terms of Stocks of Outward FDI, 2007

Rank	Economy	(US$ million)
1	Hong Kong	1,026,587
2	Russian Federation	255,211
3	Taiwan	158,361
4	British Virgin Islands	154,862
5	Singapore	149,526
6	Brazil	129,840
7	People's Republic of China	95,799
8	Republic of Korea	66,220
9	Malaysia	58,175
10	South Africa	54,562
TOTAL		**2,149,143**

Source: World Investment Report, 2008

Future Prospects

There are strong indications that FDI is affected by the continued slower growth and difficult market conditions in developed countries. This clearly was seen as FDI inflows dropped markedly in the fourth quarter of 2007.

Global FDI flows are also projected to decline in 2008. The effects of the sub-prime mortgage crisis that began in the United States have not been fully reflected in 2007. Given the current financial and economic situation, global FDI inflows are expected to decrease by at least 10 per cent in 2008. The growth in developing countries which are less affected by the crisis is a balancing factor.

For the first half of 2008, cross-border mergers and acquisitions were considerably lower (29% lower) than their peak in the second half of 2007.

According to UNCTAD's World Investment Prospects Survey 2008, only 39 per cent of transnational corporations (TNCs) anticipated an increase in FDI inflows into developed countries compared with more than 50 per cent of TNCs in the 2007 survey.

UNCTAD estimates that overall, FDI flows in 2008 will be about US$1.6 trillion, representing a 10 per cent decline from 2007.

3

Investment Performance of the Manufacturing Sector

3 Investment Performance of the Manufacturing Sector

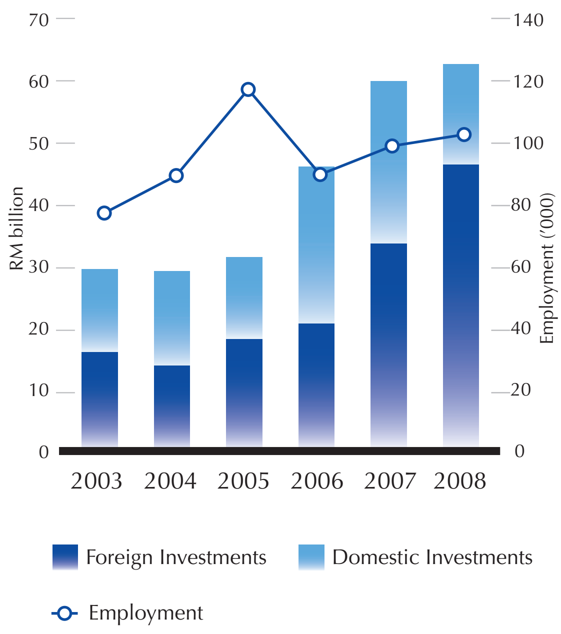
A. PROJECTS APPROVED

OVERVIEW

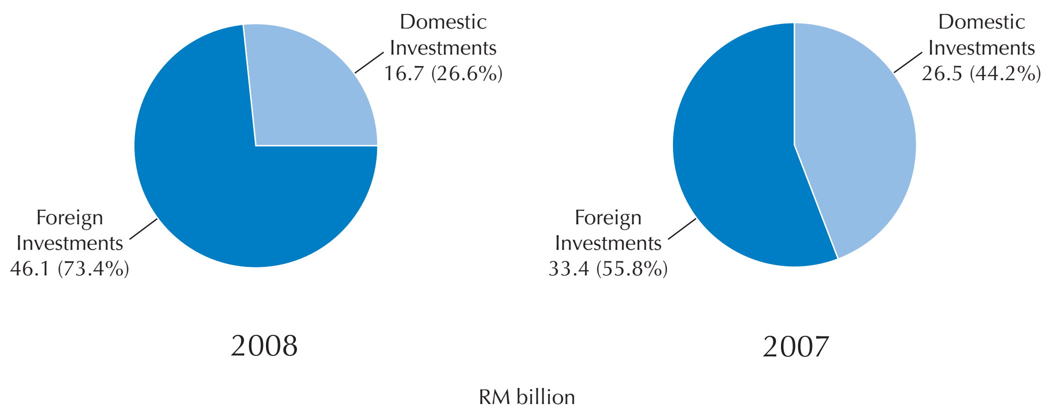
Investments in the manufacturing sector reached a new record level in 2008. Investments approved in 2008 amounted to RM62.8 billion (919 projects) exceeding the RM59.9 billion (949 projects) recorded in 2007.

Approved investments in 2008 exceeded the average annual investment target of RM27.5 billion set under the Third Industrial Master Plan (IMP3). It is significant to note that investments approved in 2008 reflected the continued interest in capital-intensive and high value-added projects among both domestic and foreign investors.

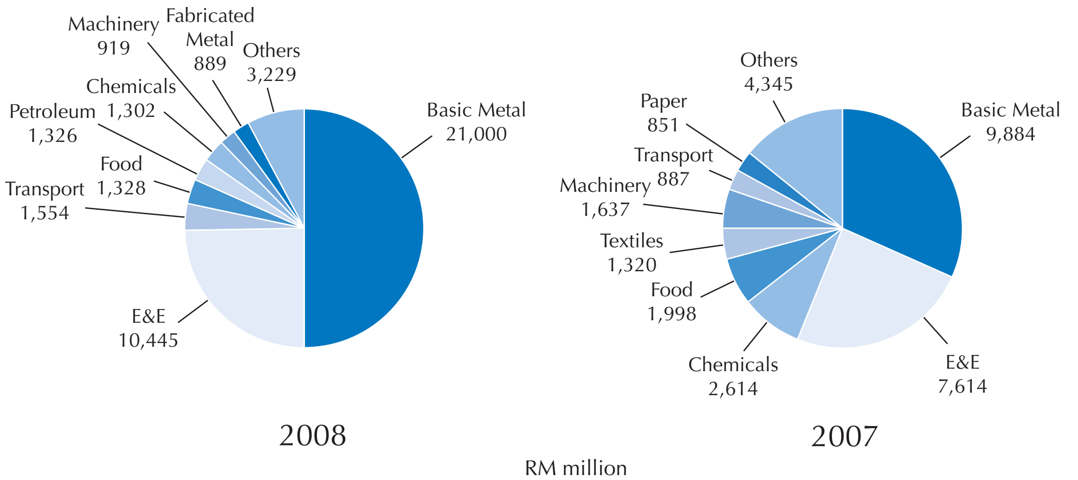
Graph 6
Investments and Employment in Projects Approved, 2003 - 2008



Graph 7
Sources of Investments in Projects Approved, 2008 and 2007



Graph 8
Investments in New Projects by Industry, 2008 and 2007

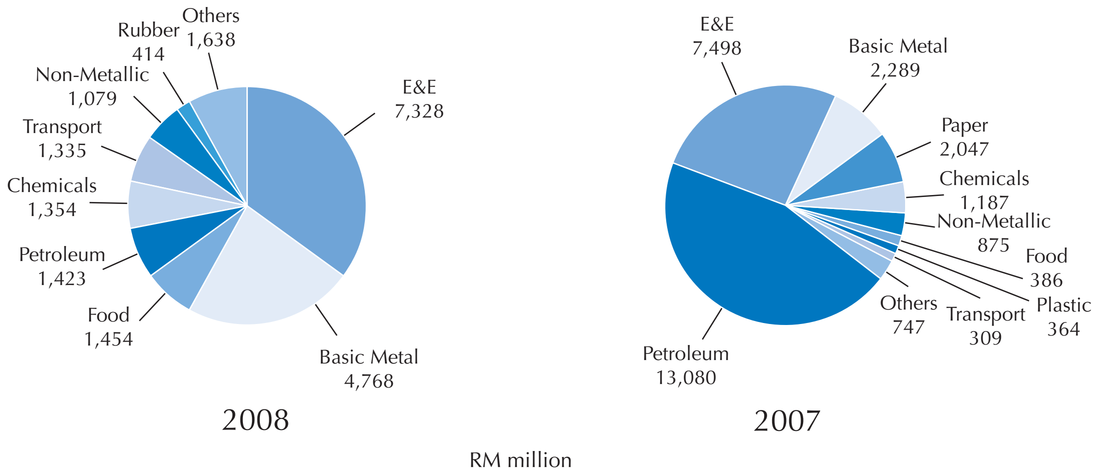


Of the total investments approved in 2008, foreign investments amounted to RM46.1 billion or 73.4 per cent, while domestic investments totalled RM16.7 billion (26.6%).

The majority of the projects approved in 2008 were new projects (548 projects) involving investments of RM42.0 billion, constituting 66.9 per cent of total investments. In comparison, a total of 625 new projects were approved in 2007 with investments amounting to RM31.1 billion.

Existing manufacturing companies continued to expand and diversify their operations. In 2008, a total of 371 projects (40.4%) were for expansion/ diversification involving investments of RM20.8 billion, accounting for 33.1 per cent of total investments. In 2007, a total of 324 projects (34.1%) were for expansion/ diversification involving investments of RM28.8 billion or 48.1 per cent of total investments.

Graph 9
Investments in Expansion/Diversification Projects by Industry, 2008 and 2007

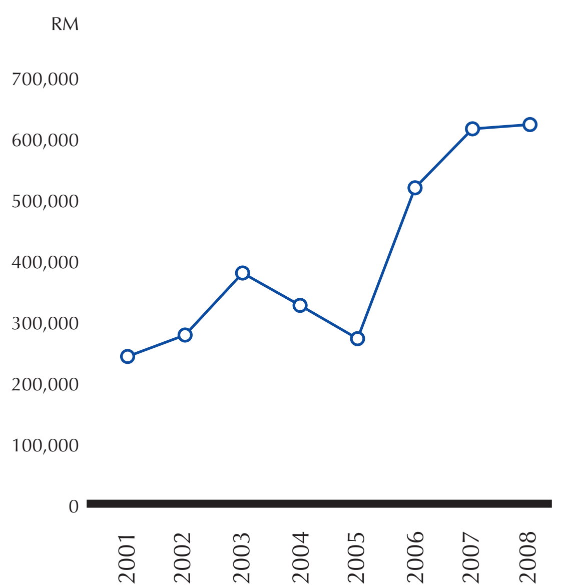


Capital-Intensive Projects

The capital intensity, as measured by the capital investment per employee ratio (CIPE) of projects approved in 2008 was RM620,571 compared with RM613,600 in 2007. The higher CIPE ratio was mainly attributable to capital-intensive projects in the basic metal products industry. The CIPE ratio of manufacturing projects has shown an upward trend since 1990, reflecting the shift towards more capital-intensive, higher value-added and technology-intensive projects.

A total of 61 projects with investments of RM100 million or more each were approved in 2008, of which 12 projects had investments exceeding RM1 billion. Investments in these 61 projects amounted to RM51.6 billion or 82.2 per cent of the total investments approved.

Graph 10
CIPE Ratio of Projects Approved, 2001 – 2008



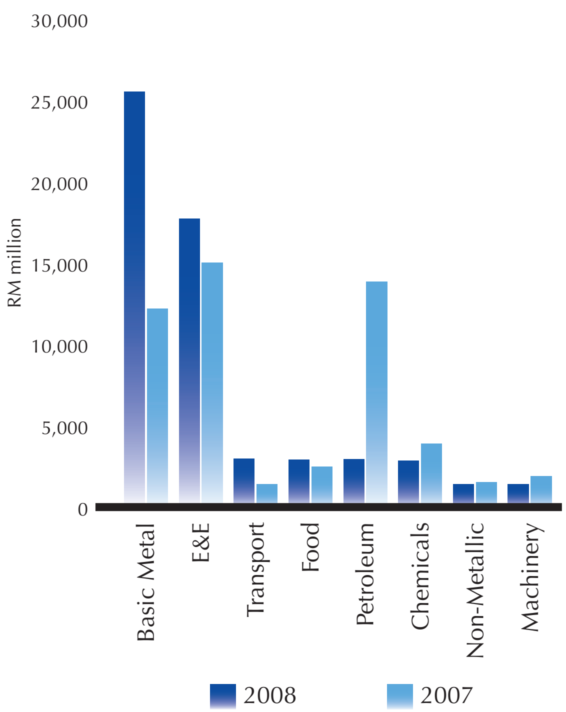
These 61 capital-intensive projects were mainly in basic metal products (RM24.9 billion), E&E (RM16.5 billion), petroleum products (RM2.6 billion), transport equipment (RM1.9 billion) and chemicals and chemical products (RM1.7 billion).

These projects would also continue to create substantial multiplier effects on the economy in terms of the development of supporting industries, introduction and transfer of new technology, research and development, skills development and foreign exchange earnings.

Projects Approved by Industry

The basic metal products industry (RM25.8 billion) recorded the highest level of

Graph 11
Investments in Projects Approved by Major Industry, 2008 and 2007



investments approved in 2008. This was largely due to the approval of two new projects for the production of unwrought aluminium (RM12.5 billion) and the production of stainless steel slabs, stainless steel black coils and hot rolled stainless steel sheets (RM6.9 billion).

The E&E industry which remained the leading industry in terms of number of projects approved (132 projects) in 2008, accounted for the second highest amount of investments (RM17.8 billion). Investments in the transport equipment industry was the third highest totalling RM2.9 billion. Other industries which attracted significant levels of investments included food manufacturing (RM2.8 billion), petroleum products including petrochemicals (RM2.75 billion), chemicals and chemical products (RM2.65 billion), non-metallic mineral products (RM1.27 billion) and machinery manufacturing (RM1.26 billion) industries.

Export-Oriented Projects

Of the 919 projects approved in 2008, a total of 343 projects (37.3%) involved exports of at least 80 per cent of their output. Total investments in these export-oriented projects totalled RM21.9 billion, of which RM4.2 billion (19.2%) was domestic investments, while RM17.7 billion (80.8%) was foreign investments.

These export-oriented projects were mainly in the following industries:

- E&E (76 projects/RM13.8 billion);
- Fabricated metal products (30 projects/ RM432.1 million);
- Machinery manufacturing (30 projects/ RM393.9 million);
- Food manufacturing (29 projects/RM1.2 billion); and
- Furniture & fixtures (28 projects/ RM148 million).

Malaysia's competitive investment environment continues to attract export-oriented projects using the country as a manufacturing base to cater for the regional and global markets.

Employment Opportunities

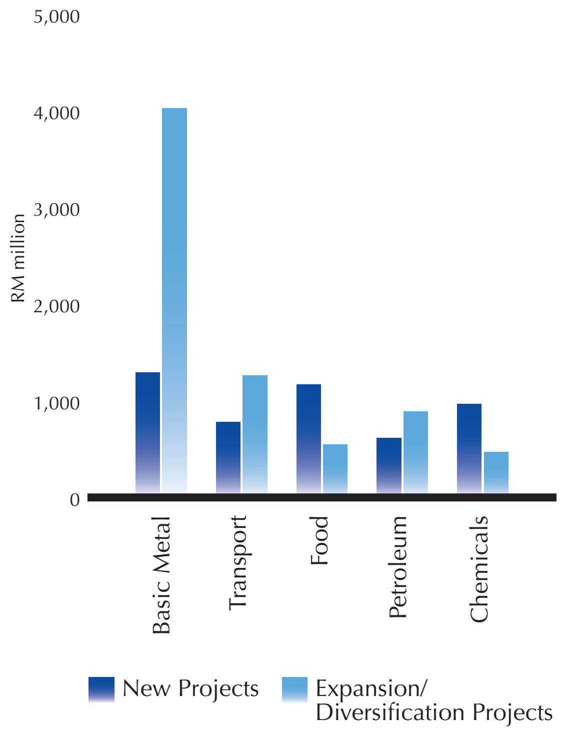
Projects approved in 2008 would generate a total of 101,173 employment opportunities, of which 72,056 or 71.2 per cent will be in the managerial, technical, supervisory and skilled manpower categories. The high percentage of jobs in these categories reflects the changing needs of industry, in focusing on higher value-added, higher technology and knowledge-intensive industries.

The industries which accounted for the largest number of employment opportunities were E&E (34,196), basic metal products (8,289), transport equipment (7,732), food manufacturing (6,029), rubber products (5,790), plastic products (5,687), fabricated metal products (5,397) and machinery manufacturing (5,377).

Expatriate Posts

To facilitate technology transfer and to supplement the local pool of managerial and technical skills, the Government continued to grant approvals for expatriate posts, particularly managerial and technical posts to Malaysian as well as foreign-owned companies. A total of 2,188 expatriate posts were approved, of which 574 were key posts which could be permanently filled by foreigners. The remaining 1,614 were term posts generally granted for 3-5 years where Malaysian are trained to eventually take over the post.

Graph 12
Domestic Investments in Projects Approved by Major Industry, 2008



APPROVED PROJECTS BY OWNERSHIP

DOMESTIC INVESTMENTS

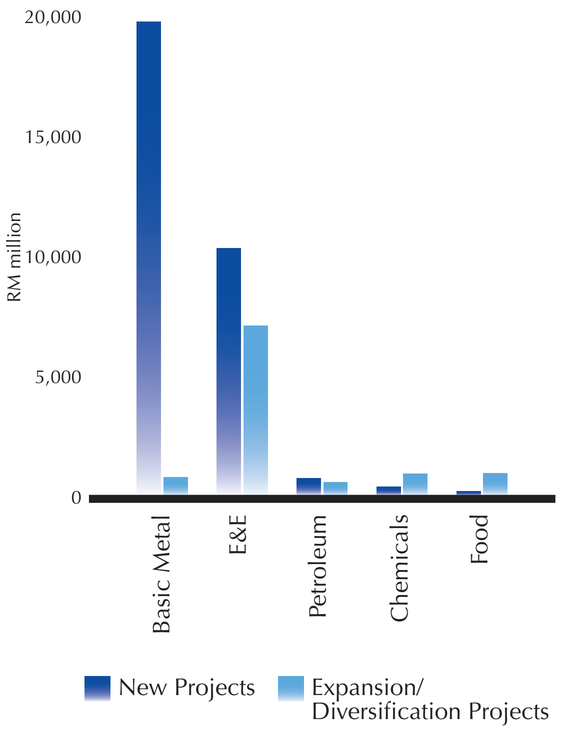
In the previous five years (2002-2006), domestic investments in the manufacturing sector averaged about RM14.9 billion per annum. In 2007, a record level of domestic investments amounting to RM26.5 billion was achieved largely due to the approval of several capital-intensive projects particularly in the petroleum products and basic metal products industries. In 2008, approved domestic investments amounted to RM16.7 billion, returning to the average levels recorded in the previous years.

Domestic investments in the basic metal products industry amounted to RM5.3 billion or 31.7 per cent of the total domestic investments approved in 2008. Other industries with high levels of domestic investments were transport equipment (RM2 billion), food manufacturing (RM1.7 billion) and petroleum products including petrochemicals (RM1.5 billion).

FOREIGN INVESTMENTS

In 2008, foreign investments increased further and achieved a new record level reflecting continued confidence among foreign investors in the investment environment in Malaysia. A total of 480 projects involving foreign participation were approved in 2008 with total foreign investments of RM46.1 billion or 73.4 per cent of total investments approved. Foreign investments rose by 38 per cent compared with RM33.4 billion in 2007.

Graph 13
Foreign Investments in Projects Approved by Major Industry, 2008



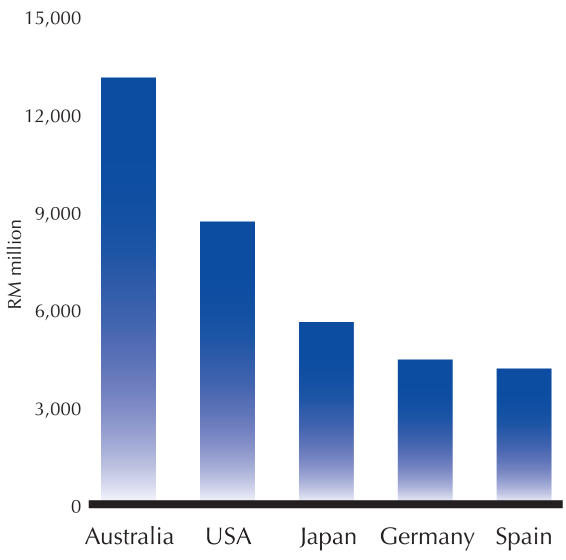
Foreign investments in the basic metal products industry amounted to RM20.4 billion or 44.2 per cent of the total foreign investments approved in 2008. Other industries with high levels of foreign investments were E&E (RM17.3 billion), petroleum products including petrochemicals (RM1.25 billion) chemicals and chemical products (RM1.22 billion), and food manufacturing (RM1.1 billion).

Foreign investments in new projects amounted to RM34.2 billion in 2008, compared with RM17.3 billion in 2007. Existing foreign investors continued to reinvest, consolidate, expand and diversify into higher value-added products and activities to increase competitiveness of their operations in the country. Foreign investments in expansion/diversification projects totalled RM11.9 billion or 25.8 per cent of total foreign investments in 2008.

Major Sources of Foreign Investments

The major sources of foreign investments in 2008 were Australia (RM13.1 billion), the USA (RM8.7 billion), Japan (RM5.6 billion), Germany (RM4.4 billion) and Spain (RM4.2 billion). These five countries together accounted for 78.1 per cent of total foreign investments in approved projects.

Graph 14
Major Sources of Foreign Investments in Projects Approved, 2008



Australia

In 2008, investments from Australia increased to RM13.1 billion, representing the highest investments recorded over the last five years. Australia emerged as the largest source of foreign investments in 2008, primarily due to a major new project with investments amounting to RM12.5 billion. The project involved the production of unwrought aluminium.

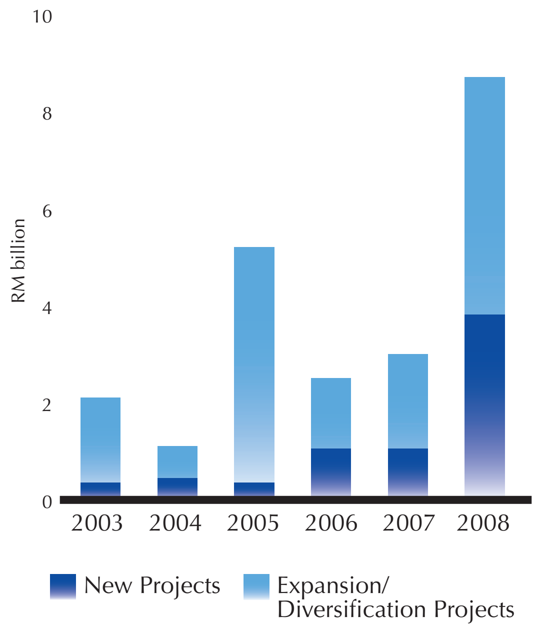
In 2008, a total of 20 projects involving Australian equity participation were approved with investments of RM13.1 billion compared with 17 projects with investments of RM1.7 billion in 2007. Of the 20 projects approved, 12 were new projects with investments of RM13.1 billion, while eight were expansion/ diversification projects involving investments of RM3.4 million.

Australian investments were concentrated in the basic metal products (2 projects/ RM12.7 billion) and transport equipment (3 projects/RM278.6 million) industries.

USA

The USA was the second largest source of foreign investments in 2008 with 22 projects approved involving investments of RM8.7 billion. In comparison, 33 projects with investments of RM3.0 billion were approved in 2007. Of the RM8.7 billion, a total of RM3.8 billion or 43.7 per cent was in 10 new projects, while RM4.9 billion or 56.3 per cent was in 12 expansion/diversification projects.

Graph 15
US Investments in Approved Projects, 2003 – 2008

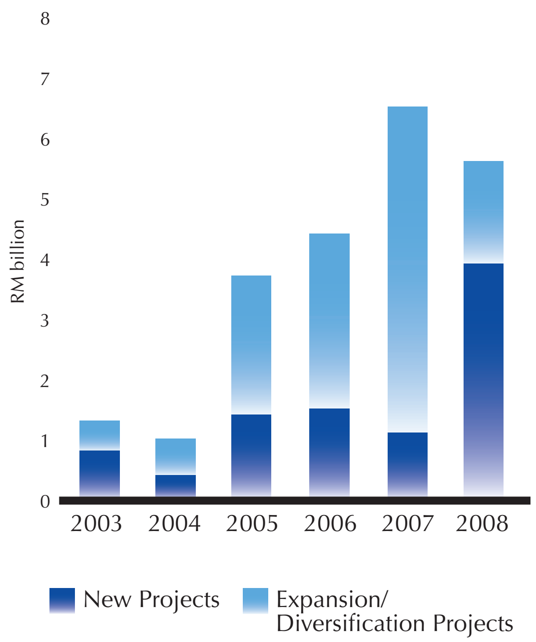


Investments from the USA were primarily in the E&E industry (RM8.1 billion). The high level of investments from the USA in the E&E industry was mainly due to a RM3.2 billion new project for the design, development, and manufacture of silicon photovoltaic wafer/cells/modules/panels and an expansion project with investments amounting to RM2.3 billion to produce hard disk drives and components.

Japan

Japan was the third largest source of foreign investments in 2008, with investments of RM5.6 billion in 63 projects compared with RM6.5 billion in 60 projects in 2007. Of the investments approved in 2008, a total of RM3.9 billion or 69.6 per cent was in 22 new projects, while RM1.7 billion or 30.4 per cent was in 41 expansion/ diversification projects.

Graph 16
Japanese Investments in Approved Projects, 2003 – 2008



Japanese investments were mainly in the basic metal products (RM3.0 billion) and E&E (RM1.6 billion) industries. A major new joint-venture project (RM2.3 billion) was approved for the manufacture of stainless steel slabs, stainless steel black coil, hot rolled stainless steel sheets, plates and coils, cold rolled stainless steels and coils. Another major new project (RM1.3 billion) was for the production of printed circuit boards. One large expansion/diversification project involving investments of RM665.6 million was for the production of copper foil.

Germany

Germany continued to be a major source of investments in 2008 with RM4.4 billion in 19 projects approved, more than the investments approved in 2007 (RM3.7 billion). Investments from Germany in new projects amounted to RM2.8 billion (11 projects), while investments in expansion/diversification projects amounted to RM1.6 billion (8 projects). Investments were mainly in the E&E industry (RM3.7 billion). Major projects approved included a RM2.6 billion new project for the design, development and manufacture of silicon photovoltaic ingots/wafers/cells/ modules and thin film solar modules/panels for the solar industry. A major expansion/ diversification project approved was for the manufacture of fabricated wafers for light emitting diodes, with an investment of RM1.1 billion.

Spain

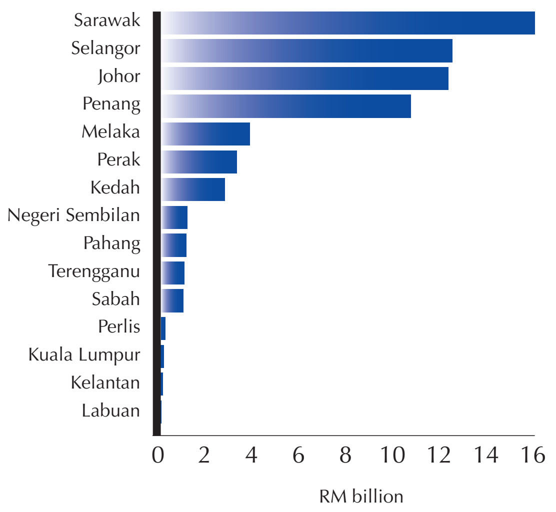
Spain was the fifth largest source of foreign investments in 2008 with investments totalling RM4.2 billion in one project. This was a joint-venture project involving the production of stainless steel slabs, stainless black coils, hot rolled stainless steel sheets and coils.

APPROVED PROJECTS BY LOCATION

A large number of projects were approved to be located in Selangor (302), Johor (173) and Penang (151). These three states continued to attract the majority of projects approved. A total of 626 projects or about 68.1 per cent of the total number of projects approved were proposed to be located in these three states. In terms of investment, the state of Sarawak (RM15.2 billion) registered the highest level followed by Selangor (RM11.9 billion), Johor

(RM11.7 billion), Penang (RM10.2 billion) and Melaka (RM3.6 billion).

Graph 17
Investments in Approved Projects by Location, 2008



The Government continues to promote balanced industrial development in the country by encouraging the dispersal and development of industries. As in the past years, attractive incentives are offered to companies locating their projects in the promoted areas namely the states of Kelantan, Terengganu, Pahang, Perlis, Sabah, Sarawak and the district of Mersing in Johor.

In 2008, a total 116 projects (RM18.5 billion) were approved to be located in these promoted areas. Of these, 79 projects or about two thirds were proposed to be located in East Malaysia, namely the states of Sabah (40 projects) and Sarawak (39 projects). The concentration of the projects in these states was due to the availability of natural resources which favoured the establishment of resource-based industries.

B. PERFORMANCE OF THE MANUFACTURING SECTOR BY INDUSTRY

ELECTRICAL AND ELECTRONIC PRODUCTS

The electrical and electronics (E&E) industry continues to be the leading industry in the manufacturing sector. For the period January-November 2008, it contributed 55.2 per cent of the country's total exports of manufactured products. The output and employment of this industry for the period January-November 2008 accounted for 32.6 per cent and 33.1 per cent of the total manufactured output and employment respectively.

For the period January-November 2008, exports of E&E products amounted to RM238.8 billion. The decline in export figures by 4.3 per cent as compared with the corresponding period in the previous year, indicated that the slowdown in the global market has affected the E&E industry especially the exports of electronic products such as automatic data processing machines, semiconductor devices and telecommunication equipment.

Currently, Malaysia has more than 1,800 companies producing E&E related products. The majority of the investments were by the multinational corporations (MNCs), mainly the industry leaders. In particular, Malaysia has been successful in recent years in attracting significant

Table 2
Structure of the E&E Industry

Sectors	Sub-sectors	Examples of Products
Electronics	Components	Semiconductors, passive components, printed circuit boards, metal stamped parts and precision plastic parts
	Consumer	Audio visual products such as television receivers, portable multimedia players (PMP), speakers, cameras and electronic games
	Industrial	Multimedia and information technology products such as computers and computer peripherals, telecommunications equipment and office equipment
Electrical	Electrical	Boards, panels and consoles, switching apparatus, lamps, air conditioners, vacuum cleaners, ovens, transformers, cables & wires, primary cells & batteries, solar cells and modules

investments in the integrated production of solar cells and panels by global solar photovoltaic companies.

The E&E industry in Malaysia can be classified into four sub-sectors namely, industrial electronics, consumer electronics, electronic components and electrical products.

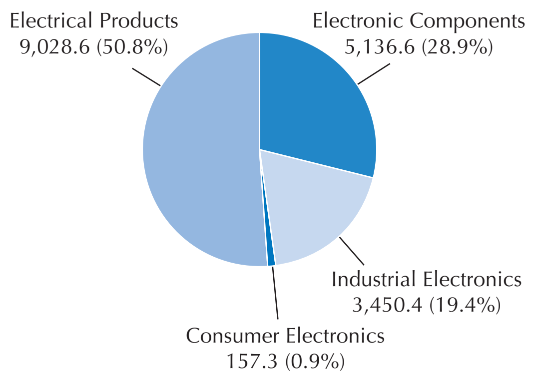
Projects Approved in 2008

A total of 132 E&E projects with total investments of RM17.8 billion were approved in 2008. The total investment showed an increase of 17.6 per cent compared with the previous year. Of the total investments approved, RM17.3 billion (97.5%) was foreign investments while RM440.8 million (2.5%) was domestic investments.

Of the 132 projects approved, 47 were new projects with total investments of RM10.5 billion while another 85 projects were expansion/diversification projects with investments of RM7.3 billion. The high investments in new projects approved showed that foreign investors are still confident about Malaysia's investment climate, as reflected by the fact that 98.4 per cent of the approved investments in the new projects were from foreign sources. The projects were mainly for the solar and semiconductor industry.

The investment trend in the E&E industry has moved towards more capital-intensive operations as reflected in the increase of the CIPE ratio from RM351,686 in 2004 to RM519,738 in 2008. Over the last five years, the approved investments were mainly in the electronic components sub-sector, particularly to manufacture semiconductor devices. However, in 2008 investments in the electrical products sub-sector surpassed investments in the electronics sector for the very first time. This was attributed to the three solar projects in which investments amounted to more than RM7 billion. The projects approved were to develop and manufacture thin film solar modules and silicon photovoltaic ingots, wafers, cells, modules and panels.

Graph 18
Investments in Projects Approved in the E&E Industry by Sub-sector, 2008



Electronic Components

The electronic components sub-sector mainly comprises semiconductor devices and passive components. Malaysia is a base for many leading semiconductor companies from the USA (Intel, AMD, and Spansion), Asia (Toshiba, NEC and ASE) and Europe (Infineon, Qimonda and STMicroelectronics). For the period January-November 2008, exports of semiconductor devices amounted to RM84.3 billion accounting for 38.6 per cent of the total electronics exports for the period.

Semiconductor companies continue to expand and diversify their products in the country. Beginning with the simple packages such as CERDIP, PDIP and later moving on to more advanced packages (flip chip, ball grid array, chip scale packages, multilevel packages and system-on-chip), to meet the growing demand of the multifunctional products. The packaging technology has also moved from micron level to nanotechnology. Some of these companies are now using 45nm technology in the production process and undertaking R&D on 32nm technology.

Over the years, Malaysia has developed into the semiconductor hub for the region and has the relevant infrastructure and resources in place to spur investment in the industry. In order to maintain the industry's competitiveness, the Malaysian Government has identified the 'widening and deepening of semiconductor value chain' as one of the strategic thrusts under its Third Industrial Master Plan (IMP3). A total of 35 semiconductor projects with investments amounting to RM15.7 billion were approved during the first three years of the IMP3 period (2006-2008).

Projects Approved in 2008

In 2008, a total of 39 projects were approved in the electronic components sub-sector with investments amounting to RM5.1 billion. The projects approved were for the production of semiconductor devices, printed circuit boards, substrates, passive components and high brightness light emitting diodes (HBLED).

Of the total investments approved in the electronic components sub-sector, foreign investments amounted to RM5.0 billion (97.8%), while domestic investments totalled RM112.6 million (2.2%). A total of nine projects with investments of RM3.3 billion (65.2%) were new, while 30 projects with investments amounting to RM1.8 billion (34.8%) were for expansion/diversification.

Among the notable projects approved in this sub-sector were:

- A diversification project by a Japanese company, Ibiden Electronics Malaysia Sdn. Bhd, with investments amounting to RM1.3 billion to produce multilayer printed circuit boards for mobile applications. The project is expected to reduce the importation of electronic components (printed circuits) and strengthen the semiconductor and ICT industries as the company's output is a critical component for the development of miniaturised and multifunctional mobile products;

- A diversification project by an existing German company, Osram Opto Semiconductors (Malaysia) Sdn. Bhd. to produce fabricated wafers for light emitting diodes (LEDs). This is the first project of its kind in the country to undertake wafer fabrication for solid-state LEDs. The company's product is one of the critical components in the field of photonics for illumination, automotive, signal and signage/display systems, mobile applications and consumer electronic applications. The establishment of the project will further strengthen the local advanced displays and lighting clusters;

- An expansion project by a Japanese company, Rohm-Wako Electronics (Malaysia) Sdn. Bhd. to produce semiconductor devices with investments of RM50 million. The company is now undertaking an integrated project which includes electronic die sorting and chip size packaging process for wireless diodes for telecommunication applications.

- An expansion project by Knowles Electronics (Malaysia) Sdn. Bhd., to produce advanced transducers equipped with RFI capability for the mid to high end hearing health market with investments amounting to RM55 million. The company has also established a global microphone engineering development centre (GMEDC) to enhance and expand technical capabilities to facilitate the R&D activities and engineering services on new product development. Among the R&D activities to be undertaken at GMEDC is next generation microphones development;

- A new project by an Austrian company, ETIM Sdn. Bhd. to produce hermatic packages and metallised ceramic substrates (MCS) with investments amounting to RM35.2 million. MCS is a base material for electronic components which need high insulation voltage, power dissipation and improved reliability. The company also plans to undertake R&D in the development of prototypes for new applications, new material combinations for glass-seal and design, development of special surface plating configurations for new leading edge technologies;

- A majority Malaysian joint-venture project, Dominant Semiconductor Sdn. Bhd. to undertake an expansion programme to produce surface mount light emitting diodes (LEDs) with investments amounting to RM30 million. This is an integrated project where the company will also fabricate its own specialised machinery for the production of high brightness LEDs. The company had filed a few patents in Malaysia, the USA and Europe for the machinery and production process; and

- A diversification project by a majority Malaysian-owned company, ISO Technology Sdn. Bhd. to produce high brightness light emitting diode lighting systems with investments amounting to RM23 million. The company plans to undertake R&D activities in producing high brightness light emitting diodes (HBLED), which is expected to replace the traditional fluorescent and incandescent bulbs.

Consumer Electronics

This sub-sector is represented by many well-known Japanese and Korean companies such as Sony, Panasonic, Sharp and Samsung, which together contributed significantly to the rapid growth of the sector over the years. Many of the consumer electronics players have undertaken restructuring and rationalisation whereby the labour intensive operations have been relocated to new and emerging countries while the higher end activities are maintained in Malaysia. Among the leading companies which undertake R&D activities in the country are Sony, Panasonic, Kenwood, Sharp, Samsung, JVC and Onkyo.

Domestic companies have also over the years acquired sufficient technological knowledge and some of these companies are OEMs and ODMs to renowned audio visual products manufacturers producing advanced display products such as flat panel television receivers, digital signage, bluetooth and wireless products.

Over the years, the industry has switched from analogue to digital products offering multiple functions. The revolution brought about by digital technology has enabled the consumer electronics sector to benefit from the growing convergence of digital applications such as portable multimedia players, DVD players/recorders, digital cameras, computer monitors and LCD/plasma televisions.

Projects Approved in 2008

A total of seven projects were approved in the consumer electronics sub-sector with investments of RM157.3 million in 2008. Of these, two were new projects with investments of RM141.8 million (90.1%) and five were expansion/diversification projects with investments of RM15.5 million (9.9%).

Foreign investments amounted to RM135.6 million (86.2%) while domestic investments totalled RM21.7 million (13.8%). The high foreign investments was attributed to a single project to produce audio products for the automotive industry.

Industrial Electronics

The industrial electronics sub-sector includes office equipment, telecommunication equipment, wireless devices, computers and computing products as well as multimedia and information technology products, navigational apparatus and photonics devices.

Industrial electronics continue to be a fast growing sub-sector driven by rapid development in digital and wireless technologies. The market growth for ICT has been driven by the trend towards mobile technology for communication and data transfers and convergence products which incorporate new and innovative functionality.

The Government's multi billion Ringgit effort to boost the development of the nation's broadband infrastructure especially in the major cities and populated areas is expected to spur greater growth for the ICT industry in the country.

Currently, much effort is being placed in accelerating the nation's broadband internet penetration level through heavy capital expenditure in building the high-speed wired and wireless communication lines and network infrastructure. This in turn will allow e-businesses and various digital multimedia applications to thrive.

Efforts are also being taken in enhancing ICT human capital and R&D activities. The Government, while itself a major consumer and user of ICT, is strongly encouraging the use of ICT by businesses, industry and also home users. All these measures are expected to help drive the growth of the ICT industry and the industrial electronics sub-sector.

This sub-sector is a major contributor to the export value of the E&E products which totalled RM238.8 billion in 2008 (January – November). Malaysia's exports of industrial electronics products were valued at RM106.3 billion or 44.5 per cent for this period.

Apart from generating export earnings, this sub-sector is also recognised for the research, design and development activities undertaken by MNCs and local small and medium enterprises (SMEs) especially in the ICT industry.

Projects Approved in 2008

In 2008, a total of 40 projects were approved in the industrial electronics sub-sector with total investments of RM3.4 billion, an increase of more than three fold compared with RM765 million in the previous year.

Of the projects approved, 13 were new projects with investments amounting to RM246.2 million (7.1%), while 27 projects were for expansion/diversification with investments amounting to RM3.2 billion (92.9%). Foreign investments amounted to RM3.3 billion (96.4%) while domestic investments totalled RM124.1 million (3.6%).

Among the significant projects approved were:

- A diversification project by Balda Solutions Malaysia Sdn. Bhd. with an additional investment of RM462.5 million to undertake design, development and production of broadband devices, hearing protection devices and mobile phones;

- A new project by Kontron Design Manufacturing Services Sdn. Bhd. with investments of RM24.0 million to manufacture internet security appliances, server management appliances, wireless telecommunication products, computers and computer peripherals;

- An expansion project by GES Manufacturing Services (M) Sdn. Bhd. to undertake design, development and manufacture of advanced electronics microprocessors and system integration application activities with an additional investment of RM20.3 million;

- A new project by CEEDTec Technology Sdn. Bhd. to manufacture bench top power supplies, wireless modems and Wi-Fi routers. This wholly Malaysian-owned company is recognized for its R&D capabilities and has already locally developed the High Speed Downlink Packet Access (HSDPA) Universal Serial Bus (USB) modems and routers that provides mobile wireless broadband access and in addition is currently working with MIMOS Bhd. to finalise the development of its Wimax broadband modems and routers; and

- An expansion project by a wholly foreign-owned company, Pintarmas Sdn. Bhd. with investments amounting to RM80 million to produce medical and scientific equipment; test and measurement instrumentation; and advanced electronics communication equipment (POS). The company plans to transfer its R&D activities such as PCB design for scientific and professional equipment; digital design in high speed digital and signal integrity; computer bus interconnect; and wireless interconnect communication.

Electrical Products

The electrical products sub-sector can be categorised into three segments namely electrical components, industrial electrical and consumer electrical. The major products covered under these segments are household appliances (white goods), wires and cables, industrial equipment and other electrical products and parts.

New and emerging technologies are providing new investment opportunities in the areas of next generation products such as intelligent household appliances, ultra bright solid state lighting and energy saving devices.

With greater global environmental concerns, clean renewable energy is fast growing in demand as an alternative source of energy now mainly derived from the burning of fossil fuels. Solar energy is now increasingly being exploited as a viable source of clean renewable energy due to the advancement of technology especially in solar photovoltaics. Malaysia has been successful in attracting three of the world's top global players in photovoltaic manufacturing.

The conducive investment environment is expected to attract other projects in the solar value chain and Malaysia is well positioned to be a global solar photovoltaic manufacturing hub in the region.

In 2008 (January-November), Malaysia's exports of electrical products were valued at RM20.4 billion while imports were valued at RM22.5 billion. The major exports of electrical products were industrial electrical products totalling RM10.4 billion, electrical components amounting to RM5.1 billion and consumer electrical products totalling RM4.9 billion.

Projects Approved in 2008

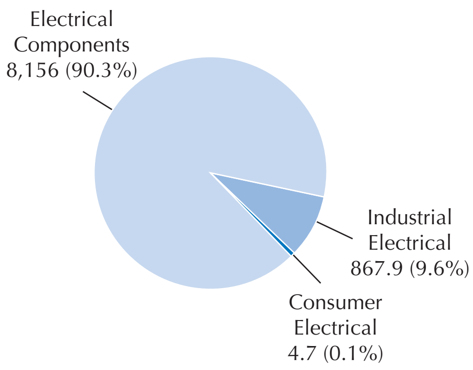
Investments in the electrical products sub-sector increased to RM9 billion in 2008 from RM1.7 billion in 2007. The increase was mainly attributed to the solar photovoltaic industry which is one of the potential growth industries in this sub-sector.

Of the total investments in the electrical products sector, RM8.8 billion or 97.8 per cent was foreign investments while the balance of RM0.2 billion or 2.2 per cent was domestic investments.

Of the total investments approved in the electrical sector, RM6.7 billion or 74.4 per cent was for new projects while another RM2.3 billion or 25.6 per cent was in expansion/diversification projects.

Of the 46 projects approved, 27 projects (RM8.2 billion) were in electrical components, 16 projects (RM867.9 million) in industrial electrical products, and three projects (RM4.7 million) in consumer electrical products.

Graph 19
Investments in Projects Approved in the Electrical Products Sector, 2008



Electrical Components

This segment covers products such as cables, wires, conductors, industrial components and parts and solar cells and modules. The electrical components segment accounted for RM8.2 billion or 90.3 per cent of the total investments in the electrical products sub-sector in 2008. Of the total, RM8.04 billion or 98 per cent was foreign investments while RM115 million or two per cent was domestic investments.

Of the total investments approved in this segment, RM5.9 billion or 72 per cent was in new projects while another RM2.3 billion or 28 per cent was in expansion/diversification projects.

In 2008, a major portion of investments approved in the electrical components segment was attributed to the solar photovoltaic industry. Of the total investments approved in the electrical components segment, RM7.8 billion or 95.1 per cent was in the solar photovoltaic industry. Globally, there is growing interest in the renewable energy sector, as it is one of the new areas identified for promotion in Malaysia, particularly the manufacture of solar cells and modules.

Malaysia has successfully attracted the top three global solar photovoltaic manufacturers to set up global scale solar photovoltaic manufacturing plants. Currently, First Solar Malaysia Sdn. Bhd. has already begun exporting its thin film solar modules and is further expanding its plants in Malaysia, while Q-Cells Malaysia Sdn. Bhd. and SunPower Malaysia Manufacturing Sdn. Bhd. are in the process of constructing their manufacturing plants for the silicon photovoltaic wafers/cells/modules/panels.

Among the significant projects approved were:

- An expansion project by First Solar Malaysia Sdn. Bhd. to produce thin film solar cells and modules with an additional investment of RM1.9 billion;
- A new solar photovoltaic project by Q-Cells Malaysia Sdn. Bhd., one of the leading solar photovoltaic manufacturers in the world, with investments amounting to RM2.6 billion to undertake the activities of design, development and manufacture of silicon photovoltaic ingots/wafers/cells/modules and thin film solar modules/panels; and

- A new solar photovoltaic project by a major solar industry player, SunPower Malaysia Manufacturing Sdn. Bhd. to undertake the design, development and manufacture of silicon photovoltaic wafer/cells/modules/panels activities in Malaysia. The new manufacturing facility is expected to be constructed in two phases, with the first phase comprising 14 solar cell production lines with a capacity of 40 megawatts (MW) each.

Industrial Electrical

In this segment, most of the companies are Malaysian-owned and key products manufactured include conventional and intelligent electrical equipment for switching, signaling, monitoring, power distribution and circuit protection. Other products in this segment include illumination and lighting products, uninterruptible power supplies and energy saving devices for domestic and industrial use.

The industrial electrical segment accounted for RM867.9 million or 9.6 per cent of the total investments in the electrical products sub-sector in 2008. Of the total, RM802.1 or 92.4 per cent was foreign investments while RM65.8 million or 7.6 per cent was domestic investments.

Of the total investments approved in this segment, RM804.2 million or 92.7 per cent was in new projects while RM63.7 million or 7.3 per cent was in expansion/ diversification projects.

Companies in this segment have developed local competencies not only in production but also engineering, design and development. Products including energy saving and energy efficient products are also being developed in-house.

Among the significant projects approved were:

- A new project by a majority Malaysian - owned company, Supreme LED Sdn. Bhd. with an investment of RM47.0 million to manufacture LED lighting products; and

- A new project by Gutor Electronic Asia Pacific Sdn. Bhd. with an investment of RM43.8 million to manufacture uninterruptible power supplies (UPS).

Consumer Electrical

This segment covers household appliances such as washing machines, air-conditioners, vacuum cleaners and microwave ovens.

In 2008, the consumer electrical products segment accounted for RM4.7 million or 0.1 per cent of the total investments in the electrical products sub-sector. Of this, RM3.0 million or 63.8 per cent was foreign investments, while RM1.7 million or 36.2 per cent was domestic investments. The investments were by existing companies undertaking expansion or diversification projects.

The future development of the E&E industry is focused towards transforming it into competitive electronics and ICT clusters, servicing the global markets. Among the areas identified are design and development (D&D) and R&D; manufacturing of semiconductors devices, data storage, solar cells, advanced display products, and telecommunication and networking equipment. Numerous business opportunities are available for foreign and domestic companies in a diverse range of products and services in the electronics and ICT industries. The Malaysian Government will undertake the necessary efforts to ensure the sustained inflows of investments into high end electronics products and value-added activities.

TRANSPORT EQUIPMENT

The transport equipment industry covers the following sub-sectors:

- Automotive;
- Aerospace; and
- Shipbuilding and ship repairing

For the period January-November 2008, exports of transport equipment totalled RM8.7 billion, compared with RM8.3 billion for the whole of 2007. Exports of road vehicles (comprising passenger vehicles, commercial vehicles, motorcycles/scooters, trailers/semi-trailers, bicycles/other cycles and parts and components) amounted to RM5.2 billion. Exports of aircraft and associated equipment and parts totalled RM2.5 billion while exports of ships, boats and floating structures amounted to RM1.0 billion.

Automotive

The automotive sub-sector is the largest sub-sector within this industry and comprises the manufacture/assembly of motor vehicles, including motorised two-wheelers, reconditioning/reassembling/rebuilding/conversion of motor vehicles and the manufacture of parts and components, including coach and vehicle bodies. There are currently four National Projects and nine assemblers in the motor vehicle sector, with an annual installed capacity of 963,300 units. In addition, there are 11 manufacturers/assemblers of motorcycles and scooters with an installed capacity of 1,069,700 units per year. There are also three composite body sports car manufacturers.

Major models manufactured/assembled in Malaysia include PROTON's Saga, Pesona, Neo, Savvy, Gen-2, Waja, Satria and Perdana; PERODUA's Viva, Myvi, Kancil, Kelisa, Kenari and Kembara; INOKOM's Atos, Matrix, Land Rover and BMW; NAZA's Naza Ria, Peugeot, Citra, Spectra and Sorento; Honda's CR-V, City, Civic and Accord; and various models of Toyota, Volvo, Mercedes Benz, Hyundai and Cherry. Motorcycle and scooter models manufactured/assembled include Kriss, Jaguh, Karisma, MZ, Yamaha, Suzuki, Honda, Kawasaki, Demak, Nitro and Comel.

According to the Malaysian Automotive Association (MAA), production of motor vehicles for the period January-November 2008 totalled 498,419 units (comprising 454,710 units of passenger vehicles and 43,709 units of commercial vehicles), an increase of 89,306 units or 21.8 per cent, compared with 409,113 units for the corresponding period in 2007. Sales of motor vehicles also increased by 14.2 per cent from 444,932 units in 2007 (January-November) to 508,290 units in 2008 (January-November). Sales comprised 462,065 units of passenger vehicles and 46,225 units of commercial vehicles during the period.

According to the Motorcycle and Scooter Assemblers and Distributors Association of Malaysia, production of motorcycles and scooters increased by 20 per cent to 536,560 units in 2008 compared with 446,430 units in 2007. In terms of sales, there was an increase of 81,870 units from 449,820 units in 2007 to 531,690 units in 2008.

The increase in the sales of motor vehicles was mainly in the first half of the year, with the introduction of many new models and compact cars especially by Proton and Perodua. Moreover, credit facilities and interest rates were still attractive then, compared with the second half of the year. However, there was a 18.2 per cent increase in the sales of motorcycles and scooters in 2008, which was mainly attributed to the many new smaller sized engine models introduced with competitive prices and the increase in fuel prices.

Exports of motor vehicles and parts and components in 2008 (January-November) amounted to RM5.2 billion, compared with RM4.5 billion for the whole of 2007. The bulk of the exports comprised motor vehicle parts.

Imports of motor vehicles and parts and components in 2008 (January-November) totalled RM12.8 billion, compared with RM10.8 billion for the whole of 2007. The bulk of the imports comprised passenger vehicles (including CKD parts) and automotive components/parts.

The automotive sub-sector employed 56,419 workers as at November 2008. PROTON and PERODUA together employed 13,157 workers or 23.3 per cent of the total employment in the sub-sector. The local content achieved by motor vehicle manufacturers is about 60 to 90 per cent while local content for assemblers ranges from 40 to 60 per cent.

As at December 2008, there were more than 690 automotive component manufacturers and about 110 motorcycle/scooter component manufacturers. The automotive component industry produces over 5,000 components. Of the 690 component manufacturers, 226 are PROTON vendors (32 tier one vendors) and 160 PERODUA vendors (some vendors are supplying to both PROTON and PERODUA).

More than 75 per cent of the automotive component companies are Malaysian-owned.

The majority of these companies have technical collaboration with global automotive component companies. More than 60 per cent of the component manufacturers have acquired international standards such as ISO 9000, TS16949 and ISO 14000. The global automotive component manufacturers operating in Malaysia include Bosch, GKN, Denso, Delphi, Nippon Wiper Blade, Siemens VDO Instruments, TRW, Toyota Auto Body and ZF Steering.

About 75 of the automotive component manufacturers are presently exporting their components, mainly for the replacement market. Major components exported include steering wheels, rims, bumpers, brakes, batteries, radiators, shock absorbers, clutches, exhausts and accessories. The total sales value of automotive components and accessories in 2008 (January-November) amounted to RM5.9 billion, compared with RM5.5 billion for the whole of 2007. Total export value of motor vehicle components and parts for the period January-November 2008 was RM1.9 billion, compared with RM1.9 billion for the whole of 2007.

The automotive component industry today has achieved the capabilities and competency to design and develop components both for the original equipment and replacement markets. Currently there are about 45 vendors with the ability to design and develop, source components/parts and manufacture the whole module/component for the motor vehicle manufacturers.

Malaysia continues to be one of the main producers and exporters of vehicle parts, components and accessories in the region. These products have been accepted globally including in Japan, Germany and the UK due to their quality, compliance with international standards and competitive prices.

With the policy measures introduced under the National Automotive Policy, many local auto makers have begun to source local parts for their models, which in turn has increased the demand for the local components/parts. Currently, about 80-90 per cent of all national car components are either supplied or manufactured by local vendors. Moreover, the timely localisation of parts and components has enabled the local car makers to minimise the effects of fluctuating foreign exchange rates especially the Japanese Yen and US Dollar.

The Malaysian Government's budget for 2009 has introduced several incentives for further development of the domestic automotive industry, in line with the global trend towards the use of fuel efficient and environmental friendly vehicles. One of these is the exemption of 100 per cent import duty and 50 per cent excise duty on imported new hybrid cars with engine capacity below 2,000 c.c. Another incentive is the reduction of the road tax structure for diesel-powered vehicles for private use, making it similar with that of petrol-fuelled vehicles. These measures indicate the commitment by the Government to adjust its policies in order to face the challenges and take advantage of opportunities in the global and regional markets.

The Automotive Industry in ASEAN

Sales of passenger cars in the ASEAN main four countries (namely Indonesia, Thailand, Philippines and Malaysia) totalled 1,097,584 units for the period January-November 2008.

Malaysia remains the largest market for passenger cars in the ASEAN main four countries, accounting for almost 42 per cent (462,065 units) of the market in the period (January-November) 2008. However, for the commercial vehicle segment, Thailand remains the largest market in the ASEAN main four, accounting for 55.6 per cent (353,288 units).

Projects Approved in 2008

In 2008, a total of 49 projects were approved in the automotive industry with investments of RM1.5 billion, compared with 36 projects approved in 2007 with investments of RM342.6 million. Domestic investments amounted to RM1.4 billion (93.3%), while foreign investments totalled RM112.5 million (6.7%).

Of the 48 projects approved, 38 projects were Malaysian-owned projects with investments of RM1.3 billion. They were mainly involved in the manufacture/ assembly of motor vehicles/two wheelers and manufacture of automotive parts and components such as motorcycles engines of 201cc-500cc, automotive air conditioning system and parts, front and rear corner modules, constant velocity joints and automotive gear transmissions.

Of the projects approved, 24 were new projects while 25 projects were expansion/

Table 3
Motor Vehicles Sales in the ASEAN Main Four Countries

(units)

Countries	2007			2008 (Jan-Nov)		
	PC	CV	TIV	PC	CV	TIV
Indonesia	314,769	118,572	433,341	394,964	169,204	564,168
Thailand	170,118	461,133	631,251	202,980	353,288	556,268
Philippines	41,214	76,689	117,903	37,575	67,138	104,713
Malaysia	442,885	44,291	487,176	462,065	46,225	508,290
ASEAN 4	968,986	700,685	1,669,671	1,097,584	635,855	1,733,439

Note: PC-Passenger Car CV-Commercial Vehicle TIV-Total Industry Volume

Source: Association of Indonesian Automotive Industries (GAIKINDO)
Malaysian Automotive Association (MAA)
Chamber of Automotive Manufacturers of the Philippines, Inc. (CAMPI)
Thai Automotive Industry Association (TAIA)

diversification projects. The new projects accounted for RM164.8 million or 11.1 per cent of the total investments while expansion/diversification projects accounted for RM1.3 billion (88.9%).

Major projects approved included:

- An expansion project with investments of RM1.1 billion to manufacture and assemble automobiles;
- An expansion project with an investment of RM39.3 million to manufacture electronics control units for electric power steering;
- A new project with an investment of RM24.2 million to manufacture automobile air conditioning system and parts there of;
- An expansion project with an investment of RM20.4 million to manufacture body pressed parts for automobile; and
- An expansion project with an investment of RM18.2 million to manufacture rear & front bumper.

The automotive industry in general is witnessing tremendous and unprecedented changes. The focus of the industry is gradually shifting towards Asian countries, mainly because of saturation of the automotive industry in the western world. Currently, the principal driving markets for the Asian automotive industry are the People's Republic of China, India and ASEAN nations.

The main four ASEAN nations involved in the automotive industry are Thailand, Philippines, Indonesia and Malaysia. However, Malaysia is still the largest market for passenger vehicles in ASEAN. The future of the automotive industry in these countries is bright and promising because of the ASEAN free trade area (AFTA) under which tariffs have been reduced.

Most of the major automotive players are shifting their production base to these emerging markets with the main purpose of gaining better access and reduction in their production costs. Various factors such as liberalised policies, price discounts, rising income levels, reducing fuel prices and infrastructure development will assist in the growth and development of the automotive sector in these nations.

Malaysia with its well developed infrastructure and expertise, especially in the automotive engineering support services, component manufacturing and electronic gadgets, would continue to be attractive for investors in this industry.

Aerospace

The aerospace industry comprises the aviation and space sub-sectors. In Malaysia, the aviation sub-sector encompasses parts and component manufacturing; maintenance, repair and overhaul (MRO) activities; design and development; assembly and operation of light aircraft and support services. Currently, there are more than 10 companies involved in the manufacturing of aircraft parts and components including ground support equipment, while more than 30 companies are involved in MRO activities.

Parts and components manufacturing has been identified in the Aerospace Blueprint as one of the growth areas in the aerospace industry in Malaysia. According to the Malaysia Industry-Government for High Technology (MIGHT), several strategies were recommended for Malaysian companies to be involved in:

- Capturing more contract manufacturing work packages;
- Venturing into manufacturing of aerospace products other than aero structures;
- Collaboration with foreign partners; and
- Participation in new aircraft development programmes.

These strategies have enabled this sector to expand. Several Malaysian companies have secured more than RM545 million worth of contract manufacturing work packages from Airbus and Boeing. Composites Technology Research Malaysia Sdn. Bhd. (CTRM) is taking the lead in strengthening Malaysia's position in the global supply chain for composite aero structures while SME Aerospace concentrates on metal parts. Local companies are also involved in assembly of simulators, avionics equipment, as well as structural design and stress analysis services.

According to MIGHT, the MRO sub-sector is expected to grow by 12-15 per cent annually. In general, Malaysia has a full range of MRO capabilities which include modification and remanufacturing of engines and engine components, repair and overhaul of aircraft parts, components and airframe, repair and testing of aircraft instruments and components and provision of line and heavy maintenance to both military and civil aircraft. Major MRO companies in Malaysia include MAS Engineering, GE Engine, AIROD, Hamilton Sundstrand, Honeywell, Parker Haniffin and Eurocopter.

Projects Approved in 2008

In 2008, seven projects were approved with total investments of RM991.6 million, compared with five projects with investments of RM299.7 million in 2007. Foreign investments in these projects amounted to RM714.6 million or 72.1 per cent of total investments while domestic investments totalled RM277 million (27.9%).

The projects approved included:

- Honeywell Aerospace Avionics Malaysia Sdn. Bhd., a new project for the manufacture of avionics components. The decision by Honeywell Aerospace to establish a manufacturing facility in Prai Industrial Estate will enable Malaysia to further enhance the development of the aerospace industry in Malaysia. Honeywell's investment is also expected to create opportunities for more than

450 highly skilled jobs and generate economic spin-offs especially for the local small and medium industries;

- Spirit Aero Systems Malaysia Sdn Bhd, for the manufacture and assembly of composite aero structures. The company has recently completed the construction of its assembly plant in Subang, which is expected to be fully operational in the first quarter of 2009. The company is expected not only to transfer existing work packages from the USA and Europe, but also future aero structure work packages for new aircraft development programmes; and

- A new project to manufacture light aircrafts with an investment of RM527.5 million.

The aerospace industry is one of the sophisticated industry sectors in the world. Currently, the global players are experiencing severe challenges in capacity and escalating costs, which are forcing them to relocate and expand their operations to other low cost locations. As such, there is a huge potential for inward investments to Malaysia as an aerospace hub of preference. There is also scope for collaboration with more matured aerospace industry players in Europe and the USA. Malaysia should take advantage of this window of opportunity to attract more aircraft parts suppliers including Tier One suppliers to Boeing and Airbus.

Shipbuilding and Ship Repairing

The shipbuilding and ship repairing industry in Malaysia includes the manufacture of a wide range of ships including barges, passenger boats/ferries, patrol vessels, tug-boats, landing crafts, tankers, leisure crafts, yachts, hydrofoils, hovercrafts and ship repairing activities. The industry has developed specialised skills and technological capabilities in engineering design, naval architecture, metallurgy, corrosion control, machining, welding and fabrication.

There are more than 70 shipyards in Malaysia, most of which operate on a small scale basis and are building mostly wooden and aluminium hulled boats/crafts for the local market and for use in the shallow waters. Most of the yards are located in Sabah and Sarawak. Generally, shipyards in Malaysia are not only engaged in shipbuilding and ship repairing activities, but are also involved in the conversion of ships and heavy engineering.

The major shipyards are Malaysia Marine and Heavy Engineering, Boustead-Naval Dockyard, Sabah Shipyard, Ramunia Shipyard, Sasacom and Muhibbah Marine Engineering. The largest shipyard in Malaysia has the capability of building vessels up to 30,000 DWT (dead weight tonnes) and can accomodate the dry docking of vessels of up to 450,000 DWT.

The demand for larger and sophisticated naval vessels is still fulfilled by foreign shipyards which have the capacity and are technically more capable in the construction of such vessels.

Projects Approved in 2008

In 2008, a total of 17 projects were approved (all of which were new) with total investments of RM410.1 million compared with 10 projects with total investments of RM346.7 million in 2007. Foreign investments were valued at RM26 million while domestic investments amounted to RM384.1 million. Of the 17 projects approved, four projects were approved, each with an investments of more than RM50 million, to undertake shipbuilding and ship repairing and related engineering works.

MACHINERY AND EQUIPMENT

The machinery and equipment (M&E) industry in Malaysia is gradually moving up the value chain and increasing its focus on high technology, high value-added and specialised M&E. Involvement in the higher value added activities of the M&E value chain will enable Malaysia to sustain growth in this highly competitive industry and link up with the global supply chain.

Amidst this challenging environment, M&E manufacturers in the country are enhancing their design, development, technology and innovation capabilities to remain competitive.

Exports of M&E totalled RM20.2 billion in 2008 (January-November) compared with RM20.3 billion for the corresponding period in 2007. Imports on the other hand totalled RM39.9 billion in 2008 (January-November) compared with RM39.2 billion for the corresponding period in 2007.

The M&E industry is categorised into the following sub-sectors:

- Specialised M&E for specific industry;
- Power generating M&E;
- Metalworking machinery; and
- General industrial M&E, components and parts.

The specialised M&E sub-sector caters for the needs of specific industries such as agriculture, food and beverage, E&E, oil and gas, woodworking and plastic processing. These M&E are mainly custom-made machinery and fabricated according to users' specific requirements.

Most of the companies in this sub-sector were initially involved in general fabrication and machining works. Over the years these companies have continued to develop their capabilities and have moved up the value chain to undertake R&D, engineering design, innovation and system integration, while most parts and components are outsourced.

Vendor development programmes of the MNCs since the 1970s had provided the impetus for the development of the specialised M&E for the E&E industry. From providing simple jigs and fixtures and manual/semi-automated machines, these companies are now able to supply high value-added and sophisticated M&E for the back-end processing in the semiconductor value chain which include highly automated surface mounting machines, vision inspection systems, laser marking machines and other flexible manufacturing systems incorporating advanced handling systems and intelligent robots.

Leading companies in this field include Genetec, Vitrox, Kobay Technology, Pentamaster and Upeca. Over the years these companies have built their reputation and capabilities to be recognised internationally. Through their continuous effort to move up the value chain, Malaysia is now recognised as the leading manufacturer of automation equipment for the E&E industry in the South East Asian region.

Apart from improving and developing new automation processes for the back-end semiconductor and hard disk drive industry, these companies have also invested in the production of specialised M&E for front-end semiconductor processing and other industries such as the medical and automotive industries.

Growth in the specialised M&E for the oil and gas industry was driven by expansion in the upstream oil and gas sector. This development has led to a significant inflow of FDI into specialised M&E for the oil and gas industry.

Investments by multinational oil and gas equipment companies include the manufacturing of subsea extraction and production equipment capable of operating in water depths of 2,000 metres and above. Among the global manufacturers with a presence in Malaysia are FMC, Aker Kvaerner, Halliburton, Cameron International and Technip. Their presence has benefited this sub-sector, in terms of technological progress and skills development.

Local fabricators in this sector are enhancing their capabilities through continuous R&D, mergers and acquisitions to move up the value chain from producing lower-end processing equipment to design and fabrication of offshore oil drilling platform requirements such as jackets, production modules, platform decks and providing related offshore services such as oilfield maintenance, development and monitoring; inspection and testing. Leading Malaysian companies include Kencana HL Engineering Sdn. Bhd., KNM Process Systems Sdn. Bhd. and Scomi Group of Companies.

Malaysian companies have also developed technical expertise in the manufacture of specialised M&E for plantation, agricultural products and processing particularly the food & beverage and rubber & palm oil processing industries.

The development of this sub-sector is supported by the Government's continuous efforts during the Ninth Malaysia Plan to develop 'New Agriculture'. This will entail further expanding of large-scale commercial farming and venturing into high quality and value-added primary and processing activities. Productivity and efficiency will be increased through wider application of modern farming and mechanisation. Livestock processing and food & beverage M&E companies are also poised to benefit from Malaysia's role as a regional hub for *halal* food.

Initially, most of the local companies in the power generating M&E sub-sector provided services, maintenance and installation of boilers and were involved in general engineering contracting works. These companies continuously improved their technological capabilities to manufacture a wide range of power generating M&E from boilers, condensers, engines, turbines and industrial generator sets for use in refineries, oil & gas exploration platforms, petrochemical plants and other commercial operations.

Manufacturers have also moved up the value chain by upgrading their technology and production capabilities to be in accordance with internationally recognised standards which include American Society of Mechanical Engineers (ASME), European Standards (EN) and Japanese Standards (JIS).

Rising environmental concerns, together with a growing demand for efficient and cost effective energy, will further drive the industry to design and develop advanced power generating M&E and environmental-friendly solutions such as water and wind turbines; and photovoltaic panels.

Leading companies in the power generating M&E sub-sector include Tractors Malaysia Sdn. Bhd., UMW Industrial Power Sdn. Bhd., Mechmar Boilers Sdn. Bhd., Vickers Hoskins (M) Sdn. Bhd., Enco Systems Sdn. Bhd. and Transtherm Engineers Sdn. Bhd.

The metalworking machinery sub-sector comprises metal cutting machine tools and metal forming/shaping machine tools. M&E in this sub-sector include laser cutting machines, machining centres, electro-discharge machines (EDM), milling machines, drilling machines, lathes, shearing machines, bending rolls, stamping machines, press brakes, forging machines; and hydraulic and power presses.

Most of the metalworking machines produced locally are metal forming/shaping machine tools such as hydraulic and power presses, sheet metalworking machines and press brakes. Leading companies include AIDA Manufacturing Sdn. Bhd., Hydra-Link Engineering Sdn. Bhd., Li Chin (S.E.A.) Sdn. Bhd. and Sunfluid Engineering Sdn. Bhd.

The general industrial M&E sub-sector covers a wide range of products for the industrial sector which include industrial air conditioning plants and equipment, material handling equipment, pressure vessels, heat exchangers, valves, gaskets and fittings.

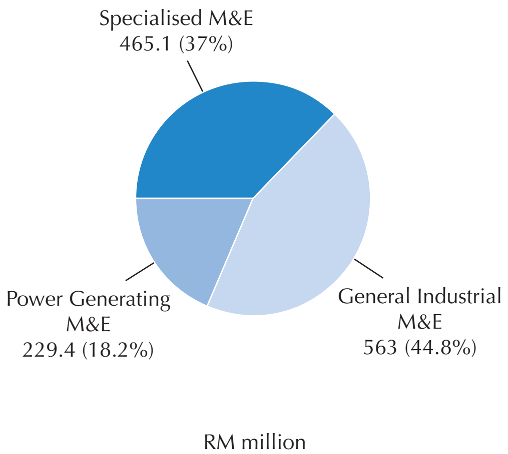
Malaysia's material handling technology has progressed to a point where we are able to produce a variety of material handling products ranging from unit material handling systems such as tower cranes, bulk material handling solutions, logistics, sortation and warehousing systems.

Malaysia is also the leading manufacturer in South East Asia for pressure vessels, process equipment and modules for chemical, petrochemical and oil & gas industries and has attained international recognition for these products.

Projects Approved in 2008

In 2008, a total of 93 projects with investments of RM1.3 billion were approved in the M&E manufacturing industry compared with 98 projects (RM1.8 billion) in 2007. Of the 93 projects approved, 68 projects (RM919.4 million) were new projects and 25 projects (RM338.1 million) were expansion/ diversification projects. Foreign investments amounted to RM519.3 million (41%) while domestic investments totalled RM738.2 million (59%). Projects approved in 2008 are expected to generate employment opportunities for 5,377 persons.

Graph 20
Investments in Projects Approved in the Machinery and Equipment Industry by Sub-Sector, 2008



Specialised M&E

In the specialised machinery sub-sector, a total of 34 projects with investments of RM465.1 million were approved in 2008. These comprised 26 new projects (RM358.2 million) and eight expansion/diversification projects (RM106.9 million). Foreign investments amounted to RM215.4 million (46.3%) while domestic investments totalled RM249.7 million (53.7%).

Significant projects approved included:

(i) Specialised M&E for the Electrical and Electronics Industry

- A new Malaysian-owned project by SRM Integration (M) Sdn. Bhd. (RM100.5 million) to manufacture machinery for the semiconductor industry i.e integrated test handlers & parts thereof;

- A foreign-owned expansion/ diversification project by Ultimate Manufacturing Solutions (M) Sdn. Bhd. (RM92.1 million) to manufacture modules for the semiconductor industry; and

- A joint venture expansion/diversification project by Genetec Technology Berhad (RM6.5 million) to manufacture automated & semi automated machines and equipment for the hard disk drive and automotive industries.

(ii) Specialised M&E for the Oil and Gas Industry

- A Malaysian-owned project by Solar Alert Sdn. Bhd. (RM20.9 million) to manufacture wellheads, christmas trees and parts thereof; and

- A new foreign-owned project by LHM Malaysia Sdn. Bhd. (RM18.3 million) to manufacture subsea modules and components for oil & gas production equipment.

(iii) Specialised M&E for the Agro-based Industry

- A new Malaysian-owned project by Dolphin Applications Sdn. Bhd. (RM5.6 million) to manufacture integrated process control systems for palm oil mills and for composites compression mouldings; and

- A new Malaysian-owned project by HL Advance Technologies (M) Sdn. Bhd. (RM5.4 million) to manufacture machinery for dipped latex products and parts thereof.

(iv) Specialised M&E for the Construction Industry

- A majority Malaysian-owned project by UMW Equipment Sdn. Bhd. (RM24 million) to manufacture vibratory compactors, tandem rollers, fire trucks and oil spill booms.

Power Generating M&E

In the power generating M&E sub-sector, a total of seven projects with investments of RM229.4 million were approved in 2008. Of the total approved, five were new projects (RM182.6 million) involving the manufacture of generator sets, pressure vessels, heat exchangers, fired heaters, process equipment and boilers, and the repair and overhaul of gas turbine engines. Two expansion/diversification project (RM46.8 million) were approved to manufacture gas generating equipment systems and boilers for palm oil refineries, chemicals, hotels and food industries. Domestic investments amounted to RM161.7 million (70%) while foreign investments totalled RM67.7 million (30%).

Significant projects approved included:

- A new Malaysian-owned project by Anzeco Genset Manufacturer Sdn. Bhd. (RM67.3 million) to manufacture generator sets; and

- A new joint venture project by Rolls Wood Otec Sdn. Bhd. (RM10 million) to undertake the repair and overhaul of gas turbine engines.

General Industrial M&E

In the general industrial machinery and equipment, components and parts sub-sector, 52 projects with investments of RM563 million were approved in 2008. A total of 37 projects with investments of RM378.6 million were new projects while 15 projects (RM184.4 million) were expansion/diversification projects. Domestic investments amounted to RM326.8 million (58%) while foreign investments totalled RM236.2 million (42%).

Significant project approved included a new Malaysian-owned expansion/diversification project by Grade One Marine Shipyard Sdn. Bhd. (RM100 million) to manufacture rubber-tyred gantry cranes and quay cranes.

In the last three years, total investments approved in the power generating M&E sub-sector have shown an increasing trend, i.e. RM33.4 million, RM39.4 million and RM229.4 million in 2006, 2007 and 2008 respectively.

However, overall investments for the M&E industry in 2008 have declined compared with 2007. In 2008, investments in the M&E industry were affected by the slowing growth and decreasing demand arising from the current economic downturn. Most companies had undertaken expansion/ diversification activities prior to 2008. Last year, these companies were focusing on upgrading and increasing their strengths in R&D, D&D, software development, system integration, assembly, testing and calibration based on investments already committed.

Approved domestic investments which comprised 59 per cent of total investments in the M&E industry in 2008, reflected a strong and stable level of interest among Malaysian investors in the M&E industry. The products proposed to be manufactured also indicate that Malaysian companies are moving towards producing high technology and high value-added M&E, modules, components and parts.

Specialised M&E will continue to be the major sub-sector in the M&E industry. The approved projects, proposed both by local and foreign companies, were mainly higher value-added M&E such as subsea equipment, modules and components for the oil & gas industry, factory automation equipment for the semiconductor, solar and optoelectronics industries.

With increasing competition from emerging countries, the industry is expected to continuously move up the value chain and strengthen its innovation capabilities in the production of high technology, high value-added and specialised M&E.

ENGINEERING SUPPORTING INDUSTRY

The industry mainly encompasses mould and die, metal casting, machining, metal stamping/shaping, surface engineering, and metal fabrication industries.

To date, Malaysia is recognised internationally for its capabilities and quality production in a diverse range of engineering activities. It has a good network of engineering supporting industries capable of meeting the needs of the OEMs in supplying parts and components and the provision of precision engineering services globally.

Over the past five years, outsourcing has matured as a trend, and Malaysia's engineering supporting industry is now witnessing the positive effects of this trend. Malaysia is a major outsourcing destination for MNCs in the E&E, automotive, machinery manufacturing, oil & gas, aerospace, medical, defence and photovoltaic industries.

Malaysia is presently encouraging companies to position themselves to become 'One Stop Centres' providing total solutions to customers. These 'One Stop Centres' would offer integrated services from product conception to serial production and manage the entire processes including procurement, logistics, packaging, testing and certification.

Alpha Master Sdn. Bhd., Atasmi Precision Machinist Sdn Bhd., UWC Holdings Sdn. Bhd, Lypometal Sdn. Bhd., Kobay Technology Sdn. Bhd. and Kein Hing International Bhd are leading Malaysian companies developing and producing modular components, machine structures, precision engineering parts, sheet metal fabrication & sub assemblies and surface finishing. These companies are capable of providing total solutions to the advanced requirements of high value-added and high technology industries such as the high end E&E, automotive, medical equipment and devices, machinery manufacturing, scientific & laboratory equipment and aerospace industries.

Projects Approved in 2008

A total of 58 projects were approved in the engineering supporting industry in 2008 involving investments of RM468 million compared with 82 projects (RM351.6 million) in 2007. Of these, 45 projects were new projects (RM412.3 million) and 13 were expansion/diversification projects (RM55.7 million). Domestic investments amounted to RM276.7 million (59%) and foreign investments totalled RM191.3 million (41%). Projects approved in 2008 are expected to generate employment opportunities for 2,610 persons.

In the moulds, tools and dies industry, 18 projects with investments of RM104.4 million were approved in 2008. These comprised 13 new projects (RM78.6 million) and five expansion/diversification projects (RM25.8 million). Domestic investments amounted to RM31.7 million (30%) while foreign investments totalled RM72.7 million (70%).

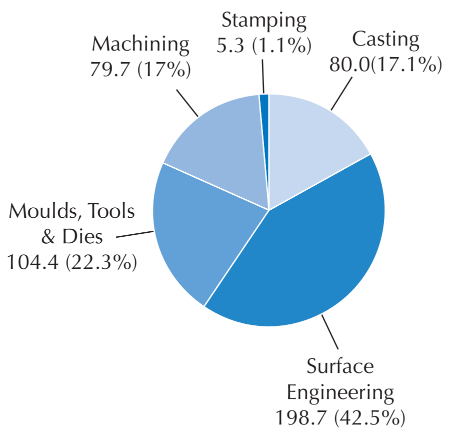
Significant projects approved included:

- A new foreign-owned project by Takahata Moulding Malaysia Sdn. Bhd. (RM23.1 million) to manufacture moulds and dies for the optical and E&E industries; and

- A new joint venture project by PST Precision Mould Sdn. Bhd. (RM15.8 million) to manufacture large moulds for bumpers, dashboards and air bag covers for the automotive industry.

In the machining industry, 19 projects with investments of RM79.6 million were approved in 2008. These comprised 17 new projects (RM58.2 million) and two expansion/diversification projects (RM21.4 million). Domestic investments totalled RM56.9 million (71%), while foreign investments amounted to RM22.7 million (29%).

Graph 21
Investments in Projects Approved in the Engineering Supporting Industry by Sub-Sector, 2008



RM million

Significant projects approved included:

- A Malaysian-owned expansion/ diversification project by Notion Venture Sdn. Bhd. (RM19.4 million) to manufacture machined parts for the E&E and automotive industries; and

- A new Malaysian-owned project by WM-R Industry Sdn. Bhd. (RM6.7 million) to manufacture jigs and fixtures and die parts.

In the metal stamping industry, four new projects were approved in 2008 involving investments of RM5.3 million, all of which were domestic investments.

Significant projects approved included a new Malaysian-owned project by Anod Tech Sdn. Bhd. (RM1.8 million) to undertake metal stamping activities for the E&E and telecommunication industries.

In the surface engineering industry, 13 projects with investments of RM198.7 million were approved in 2008. These comprised eight new projects (RM193.5 million) and five expansion/ diversification projects (RM5.2 million). Domestic investments amounted to RM111.9 million (56%) while foreign investments totalled RM86.8 million (44%).

Significant projects approved included:

- A new Malaysian-owned project by Kiara Harta Sdn. Bhd. (RM101 million) to undertake surface treatment activity for iron & steel pipes;

- A new foreign-owned project by Uekatsu Industry (Malaysia) Sdn. Bhd. (RM80.3 million) to manufacture aluminium substrates for the hard disk drive industry; and

- A new joint venture project by V-Coat (M) Sdn. Bhd. (RM2.6 million) to undertake surface treatment and finishing activities for metal components.

In the metal casting industry, four projects (RM79.9 million) were approved in 2008. These comprised three new projects (RM76.6 million) and one expansion/ diversification projects (RM3.3 million). Domestic investments amounted to RM70.9 million (89%) while foreign investments totalled RM9 million (11%).

Significant projects approved included a new joint venture project by STX Precision (JB) Sdn. Bhd. (RM76.6 million) to manufacture aluminium & zinc die cast parts for the E&E, telecommunication and furniture industries.

The engineering supporting industry is still an attractive sector for investments as reflected by the significant number of quality investments approved in 2008. Projects approved indicated that the industry is moving towards producing higher technology and higher value- added products. The approved projects proposed by local and foreign companies included the manufacture of advanced toolings to meet the needs of the PCB and E&E industries, and production of large moulds for the automotive industry. Apart from serving the E&E and automotive industries, the engineering supporting companies are now venturing into serving other industries such as the oil & gas, medical, aerospace, defence and photovoltaic industries.

Malaysia will intensify the development and promotion of total solution providers and global suppliers within the engineering supporting and support services industries. The industry will continue to strengthen its services, and further enhance its capabilities and quality of production to cater for the advanced requirements of high value-added and high technology industries such as the automotive, electronics, aerospace and medical equipment & devices. This will help achieve the country's vision to be a global outsourcing hub.

BASIC METAL PRODUCTS

The basic metal products industry covers primary processing and downstream manufacturing of ferrous (iron and steel) and non-ferrous (aluminium, tin, copper, zinc, lead, etc.) metal products. The industry is categorised into two main sub-sectors:

- Long products comprising billets, blooms, sections, bars and wire rods and downstream wire products such as wire mesh, hard drawn wire, bolts, nuts and nails; and

- Flat products comprising hot rolled coils, plates and sheets, cold rolled coils and sheets and downstream products such as pipes, galvanised coils, tin plate and fabricated products.

There are currently 407 companies in operation with investments of RM21.9 billion and employment of 40,200 workers. A wide range of ferrous and non-ferrous products are produced including:

- primary steel products [direct reduced iron (DRI) and hot briquetted iron (HBI), billets and blooms];
- rolling/finished products (bars, wire rods, sections, hot rolled coils, plates and sheets, cold-rolled coils);
- secondary long products (wire and wire products);
- secondary flat products (pipes and pipe fittings, tinplate);
- aluminium sheets/foils;
- aluminium finstock;
- aluminium ingots (recycled);
- aluminium rods and aluminium extruded profiles;
- copper rods/wires;
- copper strips;
- copper tubes/extrusions; and
- tin.

In 2008 (January-November), sales of iron and steel products amounted to RM30.5 billion while sales of non-ferrous metal products amounted to RM8.4 billion. For the whole of 2007, sales of iron and steel products were valued at RM26.3 billion while sales of non-ferrous metal products were valued at RM7.6 billion.

Imports of iron and steel products amounted to RM22.1 billion while imports of non-ferrous products amounted to RM16.4 billion in 2008 (January-November). In 2007, imports of iron and steel products and non-ferrous products amounted to RM20.6 billion and RM18.6 billion respectively.

Exports of iron and steel products amounted to RM9.8 billion while exports of non-ferrous products amounted RM9.5 billion in 2008 (January-November). In 2007, exports of iron and steel products and non-ferrous products amounted to RM10.4 billion and RM8.3 billion respectively.

In terms of production in 2007, long products like steel bars (1.9 million tonnes), wire rods (1.3 million tonnes) dominate the industry. The others are flat products like hot rolled coils (2.1 million tonnes) and cold rolled coils, coated steel coils and steel pipes (combined 2.1 million tonnes). The main raw materials for steel making are steel scrap and DRI/HBI. A total of 5.4 million tonnes of steel scrap was consumed locally in 2007 of which 3.4 million tonnes (63%) was imported. A total of 1.9 million tonnes of DRI/HBI was produced locally.

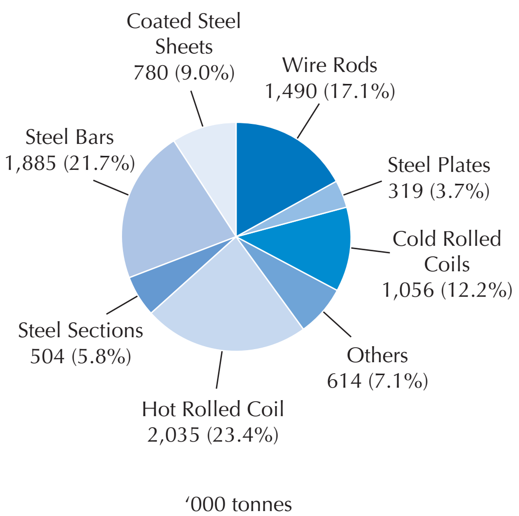
With the implementation of the Ninth Malaysia Plan projects, and the positive economic growth, Malaysia's steel consumption increased by 11.5 per cent to 8.7 million tonnes in 2007. The Malaysian steel industry has projected a further 7 per cent steel consumption growth to reach 9.3 million tonnes in 2008.

Flat products constituted 55.3 per cent (4.8 million tonnes) of steel consumption, while long products accounted for 44.7 per cent (3.9 million tonnes) in 2007. Steel bars and wire rods together constituted 38.8 per cent, followed by hot rolled coils (23.4%), cold rolled coils (12.2%), coated steel coils (9%), steel sections (5.8%), and steel plates (3.7%).

ASEAN's steel consumption was 45.8 million tonnes in 2007. Under AFTA, import duties of iron and steel products among ASEAN countries would be at 0 -5 per cent. By 2010 ASEAN's steel consumption is projected to reach 50 million tonnes.

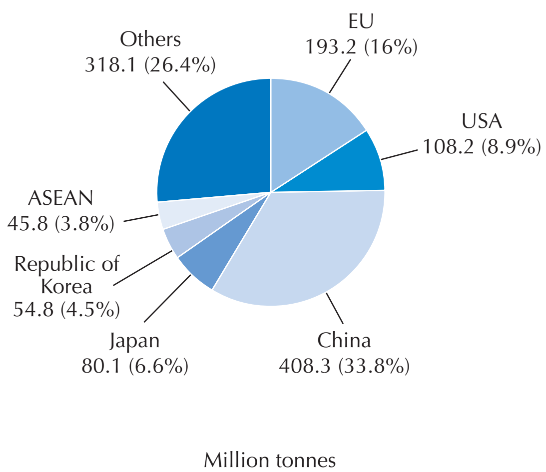
In comparison, ASEAN's steel consumption constituted only a small 3.8 per cent of the 2007 world steel consumption of 1.2 billion tonnes. The major consumer countries/ regions were the People's Republic of China (408.3 million tonnes, 33.8%), the European Union (193.2 million tonnes, 16%), the USA (108.2 million tonnes, 8.9%), Japan (80.1 million tonnes, 6.6%) and the Republic of Korea (54.8 million tonnes, 4.5%).

Graph 22
Profile of Iron and Steel Products in Malaysia (Consumption), 2007



Source: Malaysian Iron and Steel Industry Federation

Graph 23
World Steel Consumption by Major Country, 2007

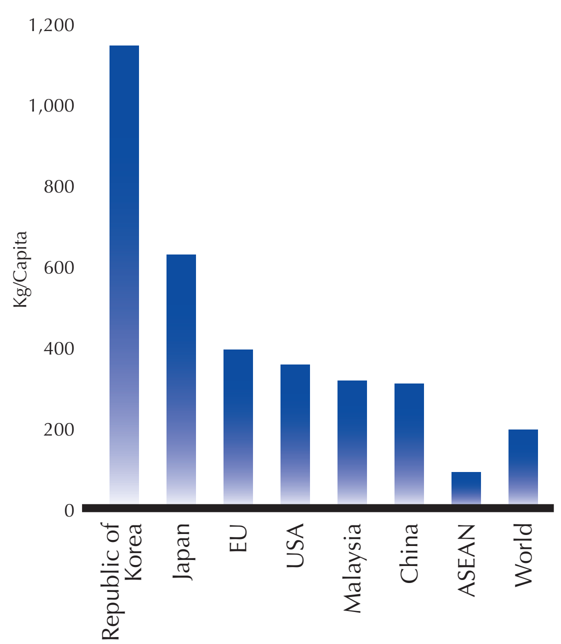


Source: World Steel Association

The Republic of Korea has the largest per capita steel consumption of 1,143 kg/capita, followed by Japan at 626 kg/capita, the European Union (EU) at 392 kg/capita, the USA at 354 kg/capita, Malaysia at 315 kg/capita and the People's Republic of China at 307 kg/capita. The World average per capita steel consumption is 194 kg/capita, and ASEAN's average is 79 kg/capita.

The Malaysian iron and steel industry is mainly steel scrap-based and dependent on imports for 65 per cent of its supply of steel scrap. As a result of this, it is unable to produce higher grade steel products especially for supply to the automotive and E&E industries. In 2007, a total of 739,000 tonnes of HRC and 1,056,000 tonnes of CRC were imported to meet local demand. However, 804,000 tonnes of the local lower grade HRC were exported in 2007 to overseas markets.

Graph 24
World Steel Consumption Per Capita, 2007



Source: World Steel Association

The high price of local steel, especially flat products such as hot rolled coils, cold rolled coils and coated steels had affected the competitiveness of downstream manufacturing industries such as steel pipes and tubes, steel furniture and other steel fabricated products especially for the export markets.

Projects Approved in 2008

In 2008, a total of 53 projects were approved in the basic metal products industry with investments of RM25.8 billion, compared with 52 projects with investments of RM12.2 billion in 2007. Of the 53 projects, 31 were new projects with investments of RM21.0 billion while 22 were expansion/diversification projects with investments of RM4.8 billion. Of the approved investments, RM20.5 billion or 79 per cent was foreign investments while RM5.3 billion was domestic investments.

Of the 53 projects approved:

- 36 were for the manufacture of basic iron and steel products with investments of RM11.9 billion;

- 17 were for the manufacture of non-ferrous metal products with investments of RM13.9 billion; and

- In terms of ownership, 41 projects were Malaysian-owned. Investments in these projects totalled RM4.8 billion. The remaining 12 projects were foreign-owned with investments of RM21 billion.

Major projects approved included:

- A new RM12.5 billion wholly foreign-owned project to manufacture unwrought aluminium;

- A new RM6.9 billion majority foreign-owned project to manufacture stainless steel slabs, stainless steel black coils, hot rolled/cold rolled stainless steel sheets/plates/coils;

- A RM3 billion wholly Malaysian-owned expansion project to manufacture hot rolled plates, hot rolled narrow strips, hot rolled pickled and oiled coils, galvanised steel coils;

- A RM665 million wholly foreign-owned expansion project to manufacture copper foil;

- A RM400 million wholly Malaysian-owned expansion project to manufacture pig iron;

- A new RM370 million majority Malaysian-owned expansion project to manufacture aluminium billets and aluminium extruded products; and

- A new RM250 million majority foreign-owned project to manufacture longitudinally submerged arc welded pipes.

The Malaysian Iron and Steel industry is closely linked to the construction industry whose downturn in recent years had resulted in the contraction in demand for steel products especially steel bars and wire rods. In addition, the industry faced challenges posed by excess installed capacities, competitive international steel prices, and fluctuating raw material and energy prices, which were also characteristics common to the steel industry worldwide.

The implementation of Ninth Malaysia Plan projects, and the overall positive economic growth from 2006 to 2007 have mitigated the situation. This is evident by the 11.5 per cent increase in Malaysia's steel consumption to 8.7 million tonnes in 2007 from 7.8 million tonnes in 2006. In line with this, the potential areas for investments include seamless steel pipes, steel tyre cords and stainless steel coils.

The need for technology up-grading would be a major challenge facing the global iron and steel industry. Areas such as state of the art steel making technology to improve operation and yield, and technology to reduce environmentally harmful effluents and CO^2 emission are the current areas of focus.

In tandem with this, the recent investment interests shown by the industry's major players in new multi-billion dollar integrated projects in Malaysia underline the industry's endeavour to produce better quality steel products to move up the value chain and cater to the higher end applications in the automotive and E&E industries. These new investment initiatives underscore the trend of the industry's concerted move towards fuller integration with a view to becoming substantial and more competitive players. Overall, the RM25.8 billion investments approved in the basic metal sector, in spite of the perceived gloomy global economic outlook, is a measure of the industry's confidence and positive outlook vis-à-vis the long term market potentials and sustainability of the ASEAN and Far Eastern regions.

FABRICATED METAL PRODUCTS

Metal fabrication activities can be classified into four categories, namely:

- Fabrication for the offshore/onshore oil and gas industry;
- Building and civil construction fabrication;
- Processing and manufacturing plant fabrication; and
- Industrial machinery & equipment structures and component fabrication.

The industry also covers other products such as the manufacture of tanks, drums, metal boxes, tin cans, metal furniture and fixtures, wire and wire products, non-ferrous metal products and household wares.

Projects Approved in 2008

In 2008, a total of 47 projects were approved for the manufacture of fabricated metal products with total investments of RM605.4 million compared with 19 projects (RM305.9 million) in 2007. Domestic investments amounted to RM242.1 million (40%), while foreign investments totalled RM363.3 million (60%). Of the 47 projects approved, 37 were new projects (RM476.7 million) and 10 (RM128.7 million) were expansion/diversification projects. Projects approved in 2008 are expected to generate employment opportunities for 2,787 persons.

Significant projects approved included:

- A new joint venture project by Yongnam Engineering Sdn. Bhd. (RM146.7 million) to manufacture steel structures for the construction industry; and

- A new foreign-owned project by Taylor-Wharton Malaysia Sdn. Bhd. (RM82.5 million) to manufacture cryogenic tanks & vessels and portable liquid cylinders.

The metal fabrication industry in Malaysia is an established industry. Local fabricators are internationally recognised for their capabilities and have grown with the increasing prospects in sourcing of jobs outside Malaysia especially in ASEAN, the Middle East and Africa.

Robust activities in the oil & gas and construction industries worldwide have also significantly created overwhelming demand for the fabrication industry. The local companies have taken advantage of the opportunities to export their technology and project management skills.

Some established companies have also acquired foreign companies to expand their market overseas and transfer sophisticated and latest technology in design and manufacturing to Malaysia.

TEXTILES AND TEXTILE PRODUCTS

The textiles and textile products industry in Malaysia comprises four sub-sectors i.e. primary textiles including activities such as polymerisation, spinning, weaving, knitting and wet processing; made-up garments; made-up textiles and textile products.

To date, there are 662 licensed companies in operation with investments of RM8.3 billion producing a wide range of textiles and textile products and activities from fibres, yarn and fabrics to made-up garments including dyeing, printing and finishing of yarn and fabrics. In addition, it is estimated that about 1,000 small textile companies which are exempted from manufacturing licence are in operation. The major producers of the textiles and textile products are Recron (Malaysia) Sdn. Bhd. (fully integrated textiles), Berjaya Soutex Sdn. Bhd. (yarns), Ramatex Textiles Industrial Sdn. Bhd. (knitted fabrics), Penfabric Sdn. Berhad (woven fabrics) and Perusahaan Chan Choo Sing Sdn. Bhd. (made-up garments).

Malaysian textile producers have sustained their competitiveness through quality improvement, reliability of supply, delivery time and compliance of international labour standards. Malaysian manufacturers have also implemented automation and computerised manufacturing to reduce production time and increase productivity.

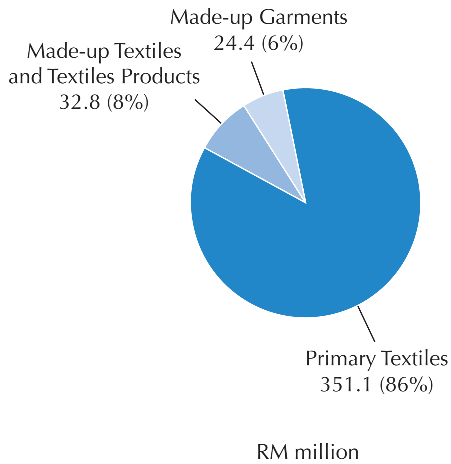
Exports of textiles and textile products for the period January – November 2008 totalled RM9.6 billion while imports amounted to RM5.0 billion thus making Malaysia a net exporter of textiles and textile products.

The main product exported was apparels. Malaysian apparel manufacturers continue to maintain an excellent reputation for quality and capability in the production of up-market brands such as Nike, Adidas, DKNY, Ann Taylor, Armani, Talbots and Tommy Hilfiger. The main products imported were yarn and woven fabrics which are used to produce apparels.

Projects Approved in 2008

In 2008, a total of 18 projects were approved in the textiles and textile products industry with investments of RM408.3 million. Domestic investments amounted to RM105.4 million while foreign investments totalled RM302.9 million. Of the projects approved, eight were new projects (RM171.0 million) and ten were expansion/diversification projects (RM237.3 million).

Graph 25
Investments in Projects Approved in the Textiles and Textile Products Industry by Sub-Sector, 2008



The continued inflow of investments to expand or build new facilities in Malaysia was attributed to a combination of various factors-conducive business environment, well developed infrastructure and the availability of skilled and experienced workforce to support the development of relevant technologies in the industry.

Approved investments were in the production of primary textiles with nine projects (RM351.1 million); made-up garments with three projects (RM24.4 million) and made-up textiles and textile products with six projects (RM32.8 million). The projects approved are expected to generate a total of 3,090 employment opportunities.

In the primary textiles sub-sector, of the nine projects approved, four were new projects (RM117.2 million) and five were expansion/diversification projects (RM233.9 million). Domestic investments amounted to RM87.6 million (25%) while foreign investments totalled RM263.5 million (75%).

The major projects approved included:

- An expansion project by a wholly foreign-owned company with an investment of RM232 million for the manufacture of yarn, fabrics, and to undertake activities of bleaching, dyeing, printing and finishing; and

- A new Malaysian-owned project with an investment of RM57 million. The company proposed to manufacture polyester yarn and webbing mainly to cater for the export market.

In the made-up garments sub-sector, three projects were approved with investments of RM24.4 million in 2008. Of these, one was a new project (RM22 million) and the other two were expansion/diversification projects (RM2.4 million). Domestic investments amounted to RM15.6 million (64%), while foreign investments totalled RM8.8 million (36%).

A new Malaysian-Japanese joint-venture project with an investment of RM22.0 million to manufacture undergarments was the major project approved in this sub-sector.

The entire production of the proposed project will be exported to Denmark, Canada and United Kingdom.

In the made-up textiles and textile products, six projects were approved with investments of RM32.8 million in 2008. Of these, three were new projects (RM31.8 million) and the other three were expansion/diversification projects (RM1.0 million). Domestic investments amounted to RM2 million (6%), while foreign investments totalled RM30.8 million (94%).

Major projects approved included a wholly foreign-owned company with an investment of RM20 million. The company's proposed products are elbow guard, ankle and knee guard, gloves and waist belts.

The Malaysian textiles industry is facing stiff competition from low cost producing countries. Efforts will be intensified to promote investment in the targeted growth areas which include industrial and home textiles, functional fabrics and high-end garments. Initiatives will also be taken to encourage Malaysian textile producers to strive for cost competitiveness, product differentiation and prompt response to the market requirements.

MEDICAL DEVICES INDUSTRY

The medical devices industry is an innovative and fast growing sector within the global life sciences industry, with an annual market growth rate of about 10 per cent. The medical equipment market worldwide was projected at US$206.5 billion in 2008. There are over 400,000 medical devices classified under 10,000 product categories. In the global market, the industry is driven by the rapid pace of innovation and advances in new technologies to produce medical devices as well as increasing demand arising from better healthcare facilities and services.

In Malaysia, the medical devices industry encompasses products used in healthcare for diagnosis, prevention, monitoring or treatment of disease, and injury or handicap. The products manufactured range from medical disposable products such as examination and surgical gloves, aids for disabled persons, implantable devices, heart valves, stents, anaesthetic and respiratory equipment, orthopaedic devices and dialysers to imaging equipment, in-vitro diagnostics, ophthalmic devices and other devices which can be used for medical, surgical, dental, optical and general health purposes.

The industry is characterised by many small and medium sized companies and some MNCs employing more than 36,500 people. Presently, there are more than 180 medical devices manufacturers in Malaysia. The majority of the Malaysian-owned companies are involved in the production of surgical and examination gloves. Among the major local examination and surgical gloves manufacturers are Top Glove, one of the largest gloves manufacturers that has set up manufacturing plants overseas in the

People's Republic of China, Thailand, the USA and Germany; Supermax, Kossan, and Hartalega.

The major foreign MNCs operating in Malaysia are involved in the production of higher valued products such as orthopaedic products, dialysers, surgical instruments, medical electrodes, catheters, safety intravenous cannulae and ophthalmic lenses. These MNCs include B. Braun, CR Bard., Ciba Vision and Symmetry Medical.

The industry has expanded with more manufacturers increasingly moving into more higher valued products as well as design and prototyping; and product and process R&D. The industry has also expanded into healthcare biotechnology with the introduction of products such as in-vitro molecular diagnostic kits for chronic diseases detection and gene based biochips.

There is increasing interest from electronic manufacturing companies to diversify their operations to manufacture medical device products and equipment such as medical monitoring appliances. These companies include Kontron, Plexus, Polar Twin Advance, and Precico Electronics.

The presence of a strong base of supporting industries has also contributed to the enhancement of the position of Malaysia as an outsourcing destination and global supplier of parts and components for major medical devices and equipment companies. The strategic location of Malaysia has made the country an ideal location to develop a medical devices hub to serve the Asian region.

For the period January-November 2008, exports of medical devices were valued at RM12.9 billion compared with RM7.2 billion in 2007. Medical gloves, catheters and sheath contraceptives remain the major exports of medical devices and products valued at RM5.6 billion and accounting for about 43 per cent of total exports. Malaysia continued to be the world's leading producer and exporter of medical gloves and catheters.

Other major exports of medical devices and products included ophthalmic lenses including contact lenses (RM407.1 million), medical and surgical x-ray apparatus (RM281.4 million), and dental and ophthalmic instruments and appliances (RM605.6 million). The USA, European countries and Japan were the major export destinations.

Projects Approved in 2008

A total of 30 projects with investments amounting to RM897.4 million were approved in 2008 compared with 25 projects with investments of RM526.9 million in 2007. Of these, 18 were new projects (RM543.3 million) and 12 were expansion/diversification projects (RM354.1 million). Foreign investments which amounted to RM463 million (51.6%) accounted for the major portion of the investments while domestic investments totalled RM434.4 million (48.4%).

Of the 30 projects approved, 16 were Malaysian-owned projects (RM401.5 million), another 11 were foreign-owned projects (RM428.5 million) and the remaining three were joint-venture projects (RM67.4 million). Among the products approved were medical devices for cardiac rhythm management such as pacemakers and defibrillators, medical monitoring devices and suction devices, orthopaedic implants, syringes, in-vitro diagnostic devices, dental chairs as well as surgical and examination gloves.

Among the significant projects approved were:

- A new project by St Jude Medical Operations (Malaysia) Sdn. Bhd., a US based company with initial investments of RM108 million (US$30 million) for the production of medical devices for cardiac rhythm management such as pacemakers, implantable cardioverter defibrillators and leads. This is St Jude Medical's first regional plant in the Asia Pacific Region for expanding its manufacturing operations overseas. The majority of the products will exported to Japan, the People's Republic of China, Australia, New Zealand, Europe and the USA;

- A new wholly Malaysian-owned project by Muzamal Industries Sdn. Bhd., to produce single use hypodermic syringes. The company plans to expand its market to the Far East, the Middle East, Africa and Europe;

- Kens FineMed Tech Sdn. Bhd., with investments of RM12.2 million, to produce orthopaedic implants and their instruments and orthodontic implants and their instruments. The company plans to export about 85 per cent of its finished products to Taiwan, the USA, Europe and Central Asia; and

- A new Malaysian-owned project by Orthomedic Medical Devices Sdn Bhd., to produce medical implants such as bone screws, bone plates and pins/wires. The company plans to export 40 per cent of its products to Europe, the Middle East and South East Asia.

The industry has continued to grow with increasing exports and a wider range of higher value-added products being introduced in the Malaysian market. There is vast potential for further expanding the range of medical devices and products to be produced in Malaysia. The industry is expected to attract more investments in higher value-added products such as electromedical and imaging equipment, cardiovascular devices, orthopaedic devices, in-vitro diagnostic devices, wound care products and orthodontic products.

AGRICULTURE AND FOOD PROCESSING

The agriculture sector (including forestry and fishing) contributed 7.5 per cent of the country's GDP in 2008. Oil palm remained the main commodity, contributing 30.7 per cent of the sector's value-added while forestry and logging accounted for 20.9 per cent. Fishing, other agriculture crops, livestock and rubber accounted for 48.2 per cent.

In the Ninth Malaysia Plan, the agriculture and food processing industry is expected to grow at 5.2 per cent per annum. For 2006 to 2007, the agriculture sector grew at 3.8 per cent per annum following the slow growth of 2.1 per cent per annum in output of industrial crops. The food crops sub-sector grew at 6.3 per cent per annum due to the increase in productivity from large scale commercial farms and better agronomic practices.

An allocation of RM11.8 billion has been provided for agriculture development in the Ninth Malaysia Plan. Due to the global food shortage and food crisis prevalent in early 2008, the Government has allocated RM5.6 billion (2008-2010), under the National Food Security Policy to ensure adequate food supply. Various initiatives and programmes have been undertaken to increase agricultural production and expand the food processing industry in the country. These initiatives include the development of new corridors in Malaysia. The establishment of these corridors are expected to boost agricultural production as well as revitalise the country's agriculture sector. These growth regions propose the expansion of large-scale commercial farming, wider application of modern technology, development of value-added activities, improving supply chain management and participation of the private sector as anchor companies.

Malaysia remained a net importer of food in 2008. For the period January-November 2008, total food imports amounted to RM25.5 billion, compared with RM21.4 billion for the corresponding period in 2007. Major food imports were cereals, and cereal preparations (RM6.6 billion), cocoa (RM3.8 billion), vegetables and fruits (RM2.5 billion), dairy products (RM2.4 billion) and animal feed (RM2.2 billion). Raw materials such as cereals and dairy products will continue to be imported for further processing for human consumption as well as for the production of animal feed.

Total food exports increased to RM16.5 billion in 2008 (January-November) compared with RM12.5 billion for the corresponding period in 2007. Malaysia exported food products to more than 200 countries and the main products exported were cocoa (RM2.8 billion), fisheries products (RM2.4 billion), margarine and shortening (RM2.3 billion) and animal feed (RM1.2 billion).

For the same period, exports of processed food increased to RM11.2 billion from RM7.8 billion in 2007 (January-November). The main exports were cocoa and cocoa preparations (RM3.0 billion), margarine and shortening (RM2.3 billion), prepared cereals and flour preparations (RM1.2 billion) and dairy products (RM999 million). Major export destinations were Singapore, the USA and Indonesia.

Agriculture

The agriculture sector comprises aquaculture and marine fisheries, cultivation of crops/fruits/vegetables, floriculture, ornamental fish, livestock farming and apiculture. Livestock, fisheries, fruits and vegetables are the major sub-sectors with significant linkages to the Malaysian food processing industry.

Poultry farming is the largest contributor in the livestock sub-sector, accounting for about 75 per cent of the total ex-farm value. Exports of poultry products increased to RM524 million in 2008 (January-November) compared with RM453 million for the corresponding period in 2007. Poultry farming has achieved considerable improvements with wider adoption of closed-house system, which is more environmental-friendly, and has contributed to higher productivity and low risk to diseases. To further encourage the existing farms to convert to closed-house system, the Government has provided attractive incentives for this activity.

Aquaculture remained the fastest growing segment in the fishing sub-sector, with an annual production of more than 200,000 metric tonnes. The main focus in aquaculture is in the production of prawns. Malaysia's total exports of fish and other seafood for the period January-November 2008 amounted to RM2.4 billion. Crustaceans and molluscs were the major exports valued at RM1.5 billion. In the Northern Corridor Economic Region (NCER), five integrated aqua feed centres would be developed to support the entire value chain in Kedah and Perak.

In the vegetables sub-sector, an increasing number of farms have adopted specialised farming methods such as fertigation, aeroponics and hydroponics. Although these systems are more capital-intensive, they require less labour and can be commercially viable on a small area/farm.

In the fruits sub-sector, besides common fruits such as mango, starfruit and papaya, cultivation of pittaya (dragon fruit) is gaining interest among farmers. Most of these fruits are for fresh consumption in the domestic market.

The Third National Agriculture Policy (NAP3) aims to revitalise agriculture as the third engine of growth in the economy. Recognising the need to be more self-sufficient in food products, various initiatives and programmes have been undertaken by the Government to increase the supply of locally available raw materials such as:

- Promotion of modern and large-scale farming through new land consolidation and rehabilitation, and productivity improvement. About one million hectares of land has been allocated for the development of Agriculture Concentrated Development Area (ACDA), where 5,000 hectares would be allocated for vegetables, while 35,000 hectares would be planted with fruits.

- The Government has initiated various measures to turn Sarawak into the country's second rice bowl state, after Kedah. An allocation of RM1 billion has been provided for this project to further assist paddy farmers.

Projects Approved in 2008

In 2008, a total of 84 agricultural projects were approved with incentives involving investments of RM457.9 million. Of these projects, 80 were new projects (RM453.6 million), while four were expansion/ diversification projects (RM4.3 million).

The approved projects included livestock rearing, aquaculture and cultivation of fruits and vegetables. The largest investment was in the rearing of freshwater fish, which amounted to RM34 million.

Among the approved projects were:

- Kenko Real Organic Sdn. Bhd. with investments of RM14.6 million for the cultivation of organic fruits (pittaya, guava and star fruits) and vegetables. The company practises organic farming and has obtained certification for organic farming from the Department of Agriculture. Currently, all the produce is for domestic consumption; and

- A project by a foreign-owned company to undertake pearl farming. The company will work together with University Malaysia Sabah (Marine Research Institute) on R&D and training of personnel.

Food Processing

Food processing comprises value addition activities to agricultural or horticultural produce. The industry provides vital linkages and synergies between manufacturing and agriculture. Food is a necessity, thus the demand is expected to continue increasing. It is estimated that the present global retail sales in food products are worth US$3.5 trillion and are expected to grow at an annual rate of 4.8 per cent to US$6.4 trillion in 2020.

The fisheries products sub-sector includes processed seafood products such as frozen and canned fish, crustaceans and molluscs, surimi and surimi products. This sub-sector remained the main contributor to exports of processed food. Hazard Analysis and Critical Control Points (HACCP) certification is still voluntary in Malaysia. For manufacturers who intend to export their seafood products to the EU and the USA, HACCP certification is a mandatory requirement.

Currently, Malaysia is the largest cocoa processing (cocoa grinder) country in Asia and ranked fourth in the world. However, most of the cocoa beans are imported. Although Malaysia is a net exporter of cocoa products, processed cocoa is also used by local manufacturers to produce chocolate products such as chocolate bars, chocolate chips and cooking chocolate.

Malaysia is also a major producer of spices, being the world's fifth largest exporter of pepper and pepper-related products (specialty peppers, processed pepper and pepper sauces). Other spices such as coriander, turmeric, lemongrass, cinnamon, clove and fennel are also produced.

In the fruit processing sub-sector, pittaya or dragon fruit is becoming a popular choice for the manufacture of value-added products such as juices and colouring. Among other fruits that have been well-received in the export market are pink guavas, passion fruits and pineapple for puree and juices. Bananas, guavas, passion fruits and jackfruits are mainly for further processing into dried fruits or canned into juices and flavouring. Fruits such as jackfruits, bananas and papayas are utilised for the production of snack food while noni and roselle are for the production of health products.

Lifestyle changes among consumers have led to an increase in the demand for convenience foods and health foods. In Malaysia, convenience foods are mainly in the form of chilled and frozen food, home meal replacements, ready-to-cook, ready-to-drink meals. Globally, growth is in ready-to-eat meals, particularly refrigerated complete meals, which require little preparation. Further improvements in the preparation of convenience food with focus on health have led to the rapid growth in the demand for products such as cereals, fruit bars and fresh ready-to-eat salads or fruits.

Increasing consumer awareness in nutrition value and food fortification for healthcare has created the demand for functional/healthy minimally processed fresh food, organic food and natural food flavours from plants and seafood. Functional/health food produced in Malaysia is mainly in the form of food products that are enriched. Food ingredients such as customised formulations required by food manufacturers, natural food additives and flavours have the potential for further growth.

The *halal* industry in Malaysia provides immense opportunities for Malaysian manufacturers. With a global Muslim population of about 2 billion, the market for *halal* food is estimated at US$547 billion a year. The concept of *halal* is associated with food products which are of high quality in terms of cleanliness, sanitation and compliance with religious requirements.

Projects approved in 2008

A total of 70 projects (food processing and beverages), with investments of RM1.5 billion were approved in 2008. The approved projects were for sugar and sugar confectionery, snack food, non-dairy creamer, aquaculture feed, seafood products, processed livestock products, cocoa and chocolate products and other food products.

Of the total investments of RM1.5 billion, domestic investments amounted to RM1.04 billion (68.1%) while foreign investments totalled RM488.1 million (31.9%). Existing food manufacturing companies continued to expand and diversify their operations in 2008. Of the 70 projects approved, 31 were for expansion/diversification projects (RM723.5 million) while 39 were new projects (RM808.5 million).

Among the major projects approved were:

- A Malaysian-owned company plans to manufacture meat-based products in a *halal* food park and provide central common services (raw materials supply, technical services, logistics, machinery & equipment and marketing) to SMEs which will manufacture meat-based products under the company's contract manufacturing agreement; and

- Nestle Manufacturing (Malaysia) Sdn. Bhd. continues to expand in Malaysia for the production of non-dairy creamer air-dried noodles, instant coffee and fortified food drinks. About 80 per cent of the products will be for domestic markets.

The approvals in the food processing industry in 2008 reflected the industry's trend towards the production of high value-added healthy food products and a higher participation from domestic investors.

The Government has undertaken various initiatives to promote the production of *halal* food and to enhance the presence of Malaysian processed food in the international market. Malaysia is well positioned to develop the production of *halal* products and services. As Malaysia is globally recognised for *halal* certification, this reputation can pave the way for Malaysia's manufacturers to make further inroads in the global *halal* industry.

OIL PALM PRODUCTS

The oil palm products sector comprises palm oil, palm kernel oil, oleochemicals, biodiesel, energy generation and products from palm biomass.

Palm, soyabean and rapeseed oils were the top three of the 17 major oils and fats produced in the world in 2007. In terms of volume, palm and soyabean oils were the two main oils produced and exported. The world's major consumers of oils and fats were the People's Republic of China, the EU, the USA and India.

Although Indonesia is the world's largest producer of palm oil, Malaysia remains the world's largest exporter, followed closely by Indonesia. Major importers of palm oil were the People's Republic of China, the EU, India and Pakistan.

The production of crude palm oil (CPO) increased to 17.7 million tonnes in 2008 from 15.8 million tonnes in 2007. The production of both crude palm kernel oil and palm kernel cake have also increased. Production of crude palm kernel oil increased to 2.1 million tonnes from 1.9 million tonnes in 2007 while palm kernel cake increased to 2.4 million tonnes from 2.2 million tonnes in the previous year.

The states of Sabah, Johor and Pahang were the main producers of crude palm oil while Selangor and Johor were the major producers of crude palm kernel oil. Due to the increase in production of oil palm (fresh fruit bunches), utilisation rates of processing plants increased significantly to 95 per cent for the palm oil mills, 88 per cent for palm oil refineries, 83 per cent for oleochemicals and 74 per cent for palm kernel crushers.

Exports of Malaysian oil palm products, constituting palm oil (crude palm oil and processed palm oil), palm kernel oil, palm kernel cake, oleochemicals and finished products, increased to 21.8 million tonnes in 2008 valued at RM65.2 billion, from 19.6 million tonnes valued at RM45.2 billion in 2007. This was due to the escalating price for crude palm oil (CPO) which averaged (local delivered) RM3,680.50 per tonne in March 2008 (highest monthly average price in 2008) compared with the highest monthly average in 2007, at RM2,629 per tonne in July 2007. The average price for December 2008 was RM1,553 per tonne. This decline in price is in tandem with the decrease in prices of crude petroleum and other vegetable oils.

Projects Approved in 2008

In 2008, a total 58 projects with investments of RM3.0 billion were approved for the production of oil palm products (63 projects with investments of RM3.2 billion in 2007). These projects include those producing palm oil and palm kernel oil products, energy generation from palm biomass, oleochemicals and products from palm biomass. Domestic investments amounted to RM1.9 billion, accounting for 61.4 per cent of the total investments. The palm oil and palm kernel oil sub-sector was the sub-sector with the highest investments of RM1.3 billion (44.3%), followed by energy generation from palm biomass with investments of RM1.1 billion (36.1%). Investments approved for the oleochemicals and biomass products sub-sectors amounted to RM529.1 million and RM62.8 million respectively.

Palm Oil and Palm Kernel Oil

Refining and crushing are the main activities in this sub-sector. Currently, there are 50 refineries in operation with a total capacity of 19.2 million tonnes per year and 39 crushing plants in operation with a total capacity of 5 million tonnes per year. In 2008, the refineries processed a total of 15.6 million tonnes of crude palm oil and 1.3 million tonnes of crude palm kernel oil while crushing plants processed 4.7 million tonnes of palm kernel. The main products produced are refined, bleached and deodorised (RBD) palm olein and stearin.

Projects Approved in 2008

In 2008, a total of 20 projects with investments of RM1.3 billion were approved, compared with 17 projects with investments of RM658.1 million in 2007. Of these, seven were new projects (RM522.6 million) and 13 were expansion/diversification projects (RM814.7 million). Foreign investments accounted for 52 per cent (RM694.9 million) of the total investments.

The approved projects included six projects for downstream activities such as production of cocoa butter equivalent (enzymatic process), interesterified oils, margarine, shortening, vegetable ghee, hydrogenated products, confectionery fats and animal feed granules. Other projects included refineries and palm crusher plants.

Oleochemicals

In Malaysia, oleochemicals are mainly derived from palm oil. Oleochemical products comprise basic oleochemicals (i.e fatty acids, fatty alcohol, methyl esters and glycerine) and oleochemical derivatives (i.e fatty esters, fatty amines, soap noodles and metallic soaps) and accounted for 13.3 per cent of the total value of oil palm products exported in 2008.

Currently, there are more than 50 oleochemical companies in operation producing basic oleochemicals, oleochemical derivatives as well as oleochemical preparations. The industry has gradually moved into R&D and the production of biotechnology-based products such as tocotrienols, carotenoids and vitamin E concentrates.

Malaysia is the leading producer and exporter of basic oleochemicals in the world. About 95 per cent of Malaysia's production of basic oleochemicals are exported. In 2008, a total of 2.1 million tonnes of oleochemical products valued at RM8.7 billion were exported. The EU, the USA, Japan and the People's Republic of China remained the major markets for oleochemicals accounting for about 51 per cent of total exports.

A total of 2.2 million tonnes of oleochemical products were produced in 2008 compared with 2.1 million tonnes in 2007. The major oleochemical products produced in 2008 were fatty acids and fatty alchohol which accounted for 59 per cent (1.3 million tonnes) and 19.2 per cent (423,000 tonnes) of the total production respectively. The contribution of fatty acids and fatty alcohols to the global capacity is 26 per cent and 13 per cent respectively.

Main raw materials used in the production of oleochemicals are crude palm kernel oil and processed palm oil as well as processed palm kernel oil and crude palm oil. The industry consumed 2.2 million tonnes of palm-based oils in 2008 compared with 2.1 million tonnes in 2007. Of the 2.2 million tonnes of palm-based oils consumed in the production of oleochemicals, processed palm oil and crude palm kernel oil constituted 76.5 per cent (1.6 million tonnes) with the balance from processed palm kernel oil (16.6%) and crude palm oil (6.9%).

The Malaysian Palm Oil Board (MPOB) being the leading R&D institution for palm oil products has developed and launched a total of 412 technologies and oil palm related products in 2008. Many of these technologies and products have been commercialised and licensed to industries. Among these are red palm oil, palm-based printing ink, goats' milk soap and personal care products, palm based esterquats, fabric softeners and palm based polyurethane sheets.

Projects Approved in 2008

In the olechemicals sub-sector, nine projects were approved with total investments of RM529.1 million in 2008 compared with 18 projects with investments of RM955.5 million in 2007. Domestic investments amounted to RM439.1 million (83%) while foreign investments totalled RM90 million (17%). Of these, five were new projects (RM245 million) and four were expansion/ diversification projects (RM284.1 million).

The projects approved were for production of basic oleochemicals, oleochemical derivatives and downstream products which include fatty acids, glycerine, fatty alcohol as well as tocotrienols, mixed carotene concentrates and animal feed additives.

The global demand for oleochemicals has been growing at an annual rate of three per cent over the years. The increase in demand for oleochemicals is driven by the continuing trend towards the use of natural or plant-based products, biodegradable chemicals and growing affluence of global economies. Malaysia, with the availability of basic oleochemicals, is expected to further expand production of oleochemicals derivatives and downstream products. These products include food additives and ingredients; palm carotenoids and palm tocotrienols; polyols; bio-degradable plastics; and surfactants.

Palm Biomass

Apart from palm oil, the industry produces about 30 million tonnes of fibrous biomass (dry weight) yearly from both the plantation and the processing activities. This biomass can be processed into value-added products such as panel products, moulded packaging, composite products and is also a suitable substitute for wood-based industries and pulp and paper.

To date, 82 projects with total investments of RM961.2 million were approved for processing of palm biomass into value-added products. Currently, there are 23 companies producing panel/composite products, moulded products, mulching mat, activated carbon, palm fibre, organic fertiliser and animal feed.

Projects Approved in 2008

In the palm biomass products sub-sector, nine projects with investments of RM62.8 million were approved in 2008 compared with 12 projects with total investments of RM158.7 million in 2007. Domestic investments amounted to RM50.1 million or 79.7 per cent of the total investments in this sub-sector. The approved projects included the production of pulp, mulching mat, organic fertiliser and fibre.

In addition, 20 projects with investments of RM1.1 billion were approved for the generation of energy from palm biomass, compared with seven projects with investments of RM320.9 million in 2007. Domestic investments contributed 61.3 per cent of the total investments.

CHEMICALS AND CHEMICAL PRODUCTS

Malaysia's chemicals and chemical products industry covers pharmaceuticals and other chemicals such as agricultural chemicals, inorganic chemicals, paint and paint products, soaps, detergents, industrial gases and cosmetics & toilet preparations.

Pharmaceuticals

The pharmaceutical industry is an important component of the healthcare sector in Malaysia. The domestic market for pharmaceuticals is increasing due to aging population and increasing awareness of a more healthy lifestyle. This will create more opportunities for the further growth of the local industry.

This industry is mostly dominated by small and medium-sized industries (SMIs) engaged in the production of products, broadly categorised as prescription medicines, over-the-counter (OTC) products, traditional medicines and health/food supplements. As at 31 December 2008, there were 245 pharmaceutical companies licensed by the Drug Control Authority, Ministry of Health, comprising 69 modern medicine companies and 176 traditional medicine companies. Major Malaysian companies include Pharmaniaga, CCM, Kotra Pharma and Hovid. These companies focus mainly on the production of generic drugs, particularly antibiotics, painkillers, health supplements and injectables. Some of the companies such as Pharmaniaga and Hovid have also expanded their business overseas. Among the foreign-owned companies producing pharmaceutical products include Y.S.P. Industries (Taiwan), Sterling Drug (UK) and Ranbaxy (India).

The modern medicines sub-sector has expanded its range of generic products with the expiry of more patented pharmaceutical drugs. However, the production of patented drugs is still limited and mainly confined to contract manufacturing by a few local companies. Currently only Carotech manufactures its own patented pharmaceutical product, namely Vitamin E (tocotrienol and tocopherols), extracted from palm oil. The industry is gradually moving into drug discovery activities with the establishment of three companies from India i.e. Aurigene, Malladi and Genzant Research.

In the traditional medicines sub-sector, herbal products particularly traditional herbal medicines and herbal supplements are the major products being produced by the industry. The herbal industry in Malaysia, valued at RM9 billion in 2007, is expected to grow by 15 per cent per annum despite a slower economy.

The domestic market registered a growth rate of 10 per cent, as demand for pharmaceuticals increased from RM3.5 billion in 2007 to an estimated RM3.9 billion in 2008. Imports of pharmaceutical products accounted for about 65 per cent of the domestic market.

For the period January-November 2008, exports of pharmaceutical products were valued at RM451.1 million, compared with RM584.5 million for the whole of 2007. Pharmaceutical products from Malaysia are currently exported to more than 30 countries. Major export destinations include Singapore, Vietnam, Brunei, Hong Kong, Taiwan, India, Japan and Germany.

In 2008, Malaysian pharmaceutical manufacturers continued to expand and upgrade their existing facilities to meet local and overseas demand. Some of the companies that have implemented their expansion projects include Pharmaniaga, CCM, Kotra Pharma and Xepa-Soul Pattinson.

The Government has also provided strong support to spawn the growth of research and development activities in the pharmaceutical industry. The Malaysian Institute of Pharmaceuticals & Nutraceuticals (IPHARM) in Penang was established by the Government in 2006 to complement the activities of the research institutions and enable the effective commercialisation of research findings. The priority areas identified to be undertaken by IPHARM include the screening of bioactive compounds in pharmacological research, identification and development of bioactive compounds with nutraceuticals and pharmaceutical qualities, development of rapid diagnostic kits for tropical disease and development of advanced drug delivery system.

Clinical research activities are expanding in Malaysia. Since being fully operational in 2007, the Clinical Research Centre (CRC) under the purview of the National Institutes of Health of the Ministry of Health (MOH) has expanded its clinical trial centres from 14 centres to 17 centres which allow clinical trials to be conducted in the hospitals.

Malaysia is being promoted as a preferred location for pharmaceutical, biotechnology and contract research companies to conduct their clinical trials in public hospitals, private hospitals and medical teaching hospitals. This is aimed at making Malaysia a regional hub for clinical trials.

Projects Approved in 2008

In 2008, three new projects were approved with investments of RM38.1 million compared with 10 projects (RM98.3 million) in 2007. All these projects are wholly Malaysian-owned. The projects approved were for the production of bioactive ingredients, food supplements, and pharmaceutical products in the form of tablets and capsules.

The market for generic and OTC herbal supplements as well as herbal and traditional medicines products is expected to grow further with the global trend towards patent expiry of patented drugs, coupled with the rising healthcare cost and increasingly awareness of a healthy lifestyle. This development would encourage the industry to expand production of a wider range of generic versions of newly off-patented products as well as to explore products which have a niche market, such as products in novel dosage forms as well as herbal drugs and drugs for tropical diseases.

Chemical Products

The chemical products industry supplies intermediate products and inputs to end user industries such as agriculture, electronics, automotive, construction-related industry and personal care products.

This industry encompasses a wide range of products which include agricultural chemicals (fertilisers and pesticides), inorganic chemicals, paints and paint products, industrial gases and cosmetics and toiletries preparations. There are currently more than 160 companies, mainly SMIs, in operation in this sector.

Exports of chemical products for the period January-November 2008 amounted to RM18.2 billion, compared with RM16.0 billion for the whole of 2007. The major products exported were cosmetics and toiletries preparations (RM3.0 billion), ammonia and urea (RM2.2 billion), fertilisers (RM2.0 billion), and pesticides and herbicides (RM848 million).

The increase in exports, particularly in the agricultural chemicals products, was prompted by higher external demand especially from Indonesia and Thailand. This was due to increase in demand arising from rapid expansion in rubber and oil palm production as well as modernisation of agricultural activities in some countries.

The cosmetics industry has witnessed further growth in the ASEAN market with the facilitation and liberalisation of rules under the ASEAN Harmonised Cosmetic

Regulatory Scheme and ASEAN Cosmetics Directive. Since January 2008, companies will only be required to notify/declare their products to the National Pharmaceutical Control Bureau (NPCB), Ministry of Health instead of registering their products.

Projects Approved in 2008

In 2008, a total of 48 projects with investments of RM1.9 billion were approved compared with 26 projects (RM1.1 billion) in 2007. Of the total, 22 were new projects (RM916.2 million) while 26 were expansion/diversification projects (RM1.0 billion). Domestic investments amounted to RM851.3 million (43.7%) while foreign investments totalled RM1.1 billion (56.3%). Projects approved in 2008 are expected to generate employment for 1,966 persons.

Of the 48 projects approved:

- 14 projects with a total investments of RM414.7 million were for the production of industrial gases such as oxygen, nitrogen, argon, carbon dioxide and acetylene;

- Nine projects (RM843 million) were for the manufacture of other chemical products such as graphite electrode, tellurium metal, tellurium dioxide, cadmium metal, cadmium telluride, cadmium oxide, selenium, selenium dioxide, bismuth metal, aluminium chlorohydrate (ACH), polyaluminium chloride (PAC) copper sulphate;

- 11 projects (RM331.3 million) were for the manufacture of fertilisers and pesticides;

- Four projects (RM240.1 million) were for the manufacture of basic industrial chemical products such as liquid chlorine, sodium hydroxide, sodium hypochlorite hydrochloric acid and calcium carbonate;

- Four projects (RM85.5 million) were for the manufacture of wood and industrial coatings, decorative and protective paints, automotive paints, lacquers and thinners, powder coatings and toners; and

- Six projects (RM32.6 million) were for the manufacture of personal care products, cleaning preparations and cosmetics.

Among the significant projects approved were :

- An expansion project by SGL Carbon Sdn Bhd, with investments of RM514 million for the production of graphite electrode. The company will build an additional graphitised cathode plant elevating the total investments to RM1.0 billion which will transform the site into a fully-integrated carbon and graphite hub;

- Three new projects by Air Liquide Malaysia Sdn. Bhd., with investments of RM169 million to manufacture oxygen, nitrogen, and argon in Melaka, Penang, and Selangor. The products will be supplied to the refineries, solar cell and semiconductor industries and also to general industries. These projects will be built within their customers' plants;

- An expansion project by Malay-Sino Chemical Industries Sdn. Bhd. in Telok Kalong, Terengganu to produce liquid chlorine, sodium hydroxide, sodium hypochlorite and hydrochloric acid; and

- A new project by a local company with investments of RM143.6 million to manufacture NPK compound fertilisers in Lahad Datu, Sabah.

The further development of this industry in the country is dependent on the growth of other sectors. The success of Malaysia in attracting investments in high value-added products such as solar cells and substrates has created opportunities for downstream activities such as new specialty chemicals plants producing polysilicon and monosilane to be set up in the country. The chemical products industry is expected to remain as a significant contributor to the manufacturing sector as the sector grows in tandem with the growth of the other sectors.

BIOTECHNOLOGY INDUSTRY

Biotechnology has been identified as a key driver for economic growth by the Government, given Malaysia's strength in biodiversity, where about 60 per cent of its total land area is covered by forests with over 12,000 different species of flora. Malaysia ranks 12th in the world in terms of biodiversity. The Government has set a target for the biotechnology industry to achieve a contribution of five per cent to the GDP of the country as part of its Vision 2020 plan to transform Malaysia into a knowledge-based economy.

Under the Ninth Malaysia Plan (9MP), the Government had allocated RM2.0 billion for biotechnology development. Of this, 45.9 per cent will be for physical infrastructure development. The balance will be used for soft infrastructure development including R&D and commercialisation as well as business development programmes.

Projects Approved in 2008

A total of 50 projects with total investments of RM215.2 million were approved in 2008. Domestic investments amounted to RM152.0 million (71%) while foreign investments totalled RM63.2 million (29%). The foreign investments were mainly from India, the USA, Australia, Japan, Singapore, Hong Kong, Taiwan and the UK.

Among the products/activities approved were:

- Research, development and commercialisation of enzymatic products; human vaccines and therapeutics and molecular diagnostic kits;

- Research and development services for drug discovery;

- Clinical research services, pre-clinical drug-development, drug delivery systems and its related services to pharmaceutical-based companies;

- Research, development, extraction and commercialisation of plant extracts/active compounds, and essential oils from herbs and plants; and

- Research, development and production of microorganisms for agricultural and industrial waste bioremediation applications.

There was growing interest by both local and foreign biotechnology companies in setting up preclinical drug development and drug discovery facilities as well as stem cell facilities in Malaysia. This development is expected to continue and will contribute to bridging the gaps of the biotechnology value chain to enable Malaysia to be developed into a hub for biotechnology industry in the future.

PETROLEUM PRODUCTS INCLUDING PETROCHEMICALS

The petroleum and petrochemical industry covers natural gas, petroleum products and petrochemicals. In Malaysia, the development of these sub-sectors is targeted at adding value to the petroleum crude oil and natural gas available, as well as to substitute imports. At present, the industry is one of the leading industrial sectors with total investments of RM57.2 billion. Total investments by Malaysian companies amounting to RM35.6 billion (62.2%), with PETRONAS being the largest investor in the industry.

For the first eleven months of 2008, Malaysia's total exports of petroleum products, natural gas and petrochemical products reached RM94.5 billion an increase of 35.9 per cent compared with the corresponding period in 2007 due to increase in crude oil prices. However, this is expected to moderate towards the end of the year as crude oil prices decline worldwide.

Malaysia has the world's 14th largest natural gas reserves with a capacity of 88 trillion cubic feet. Natural gas is mainly used for the production of liquefied natural gas (LNG) for power generation. LNG is also processed into olefins and hydrocarbons for fuel and as feedstocks for the petrochemical industry. Malaysia is currently the second largest producer of LNG in the world after Qatar. The Bintulu Complex in Sarawak is the world's largest LNG production facility at a single location with a combined capacity of about 23 million metric tonnes per annum (mtpa). Most of the LNG produced by MLNG Satu, Dua and Tiga is exported mainly to Japan, the Republic of Korea and Taiwan.

The petroleum products sub-sector includes refinery products such as naphtha, liquefied petroleum gas, gasoline, kerosene, diesel, fuel oils, wax, bitumen and lubricating oils. Presently, five refineries and a gas-to-liquid plant are in operation, processing 714,300 barrels of crude oil per day. To date, the total investments in the refineries amount to RM25.5 billion, of which 71 per cent is from domestic sources. The major investors are PETRONAS, Shell, Esso and Conoco. These refineries service mainly the domestic market.

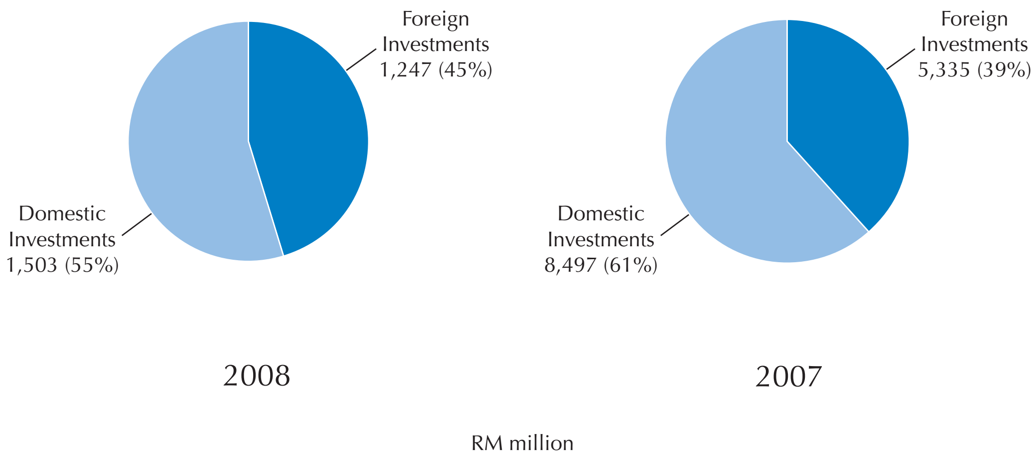
There are currently six gas processing plants (GPPs) in Malaysia, all of which are located in Terengganu with a combined capacity of 2,000 million standard cubic feet of gas per day. The GPPs produce methane (sales gas), ethane, propane, butane and condensate. Methane is used for power generation while ethane, propane, butane and condensate are used as feedstock for the petrochemical industry. The GPPs are part of the Peninsular Gas Utilisation (PGU) Project which includes a trans-peninsular gas transmission pipeline system connecting the GPPs to various industrial areas in Peninsular Malaysia.

The development of the petrochemical industry has been driven by the availability of hydrocarbon feedstocks from local oil and gas. There are two ethane crackers in Kertih, producing ethylene for the downstream ethylene products such as polyethylene, vinyl chloride monomer, polyvinyl chloride, ethylene oxide, ethylene glycol and derivatives. The aromatic plant in Kertih also uses condensates from the GPPs for the production of paraxylene and benzene.

The range of petrochemical products produced by the 41 companies currently in operation include commodity and engineering grade resins, petrochemical derivatives as well as specialised and fine chemicals. The main domestic investor in the petrochemical industry is PETRONAS. The largest source of foreign investments in the petrochemical industry is the USA (40%), followed by Germany (22.8%) and Japan (14%). The major investors are Dow Chemicals, BP, Shell, BASF, Eastman Chemicals, Toray, Mitsubishi, Idemitsu, Polyplastics, Kaneka, Dairen and Titan Petchem.

Titan Petchem has started production of a 100,000 mtpa butadiene plant and 115,000 mtpa propylene plant in Pasir Gudang, Johor. The propylene expansion project involves the establishment of a plant based on methathesis olefins conversion technology. Three major petrochemical zones have been established in Kertih, Terengganu; Gebeng, Pahang and Pasir Gudang-Tanjung Langsat, Johor with 29 petrochemical plants. Each zone is an integrated complex with crackers, syngas and aromatics facilities to produce basic feedstocks for downstream products.

Graph 26
Investments in Projects Approved in the Petroleum Products including Petrochemical Industry, 2008 and 2007



There are also other petrochemical plants in Malaysia such as the ammonia and urea plants in Bintulu, Sarawak, acrylonitrile butadiene styrene (ABS) plant in Penang, methanol plant in Labuan, the nitrile-butadiene rubber (NBR) plant in Kluang, Johor and ammonia/urea fertiliser plants in Gurun, Kedah.

Projects Approved in 2008

In 2008, a total of 16 projects were approved with total investments of RM2.7 billion compared with 17 projects with total investments of RM13.8 billion in 2007. Nine of the projects were new projects with investments of RM1.3 billion and nine were expansion/diversification projects with investments of RM1.4 billion. Domestic investments amounted to RM1.5 billion while foreign investment was RM1.2 billion. The approved projects are expected to generate employment opportunities for 487 persons including chemical engineering, process engineering and skilled workers.

The major projects approved included:

- A new project by a foreign-owned company with an investment of RM596.2 million to produce silane monomers, silicone polymers and their derivatives in Selangor. These finished products will be used in the production of specialty chemicals;

- A new project by a Malaysian-owned company with an investment of RM510 million to undertake blending activities to produce kerosene, gasoline, diesel and fuel oil as a service to their clients using their tank farm facilities in Tanjung Langsat, Johor;

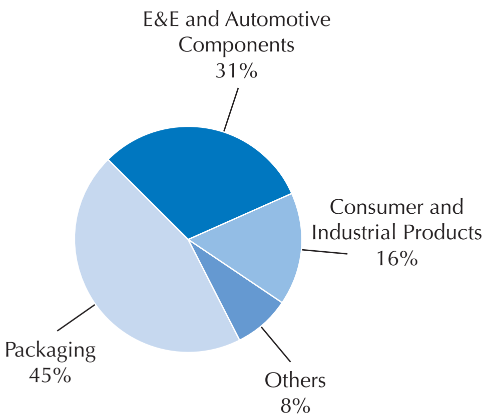
- An expansion project by a foreign-owned company to produce acrylonitrile butadiene rubber latex and styrene butadiene rubber latex with an additional investment of RM150 million at the existing location in Johor;

- An expansion project by a Malaysian-owned company in Kerteh, Terengganu with an additional investment of RM100 million to expand production capacity of ethylene. This material is used as feedstock to produce polyethylene resin, polyvinyl chloride resin and styrene monomer; and

- A new project by a Malaysian-owned company with an investment of RM46.7 million to develop and manufacture cyclo-aliphatic epoxy resins. These materials are mainly used in weather resistant solvent-based coatings for outdoor applications such as electrical insulating parts.

The petrochemicals industry assumes an important role in the country's industrial development. The products approved in 2008 are in line with the first strategic thrust of the IMP3 in increasing feedstock availability, expanding capacities, enhancing the value-added of existing products and broadening the range of petrochemicals produced in the country.

Graph 27
Sub-Sectors of Plastic Products, 2008



Source: Malaysian Plastics Manufacturers Association

Efforts will be intensified to promote investments in new technologies in materials and product applications with emphasis on environmental-friendly and biodegradable products by using bacterial fermentation of sugar or lipids. The focus will be on thermoplastic and elastomeric materials with similar material properties to olefins which have good resistance to moisture and aroma barrier properties.

PLASTIC PRODUCTS

The plastic products industry can be divided into four sub-sectors, namely plastic packaging; E&E and automotive components; consumer and industrial products and others. Plastic packaging, both flexible and rigid (including bags, films, bottles and containers), remains the largest sub-sector for the plastic industry accounting for 45 per cent of the total industry output.

Presently, there are more than 1,550 plastic products manufacturers employing about 96,000 employees recording a decrease of 3,100 persons compared with 2007. This decline can be attributed to continuous efforts by local manufacturers to use automation technology and high-speed machines.

About 80 percent of these plastic manufacturers are SMIs. Generally, the

SMIs in this industry lack economies of scale, access to capital and technical and marketing expertise to become global players. There is a need to encourage consolidation within the industry through mergers and acquisitions, joint ventures and other forms of collaborations with MNCs in order to take advantage of technology transfer, cost efficiencies and enlarged markets.

Malaysia's petrochemical sector has contributed significantly to the development of local downstream plastic processing activities. The sector provides a steady supply of feedstock materials for the plastic industry with world-scale petrochemical (resin) plants. This factor has led the plastic products industry to become one of the most established industries in the manufacturing sector, enabling the country to become one of the largest plastic producers in Asia.

Polyethylene (PE), polypropylene (PP), polyvinylchloride (PVC) and polystyrene (PS) remain the main types of resins consumed in the country. The increasing usage and availability of locally produced engineering plastics such as acrylonitrile butadiene styrene (ABS), acrylonitrile styrene (AS), polyacetal (PA) polyester copolymers and polybutylene terephthalate (PBT), has led to the production of a wider range of precision parts and components for the medical devices, automotive and E&E industries.

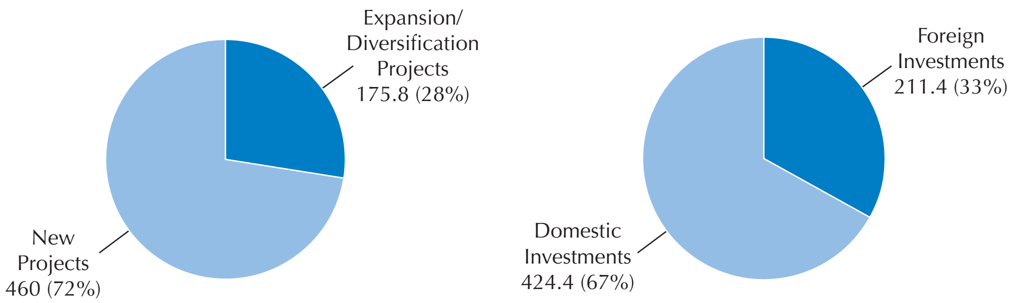
There is an increasing trend in the application of polymer blends such as glass reinforced polypropylene and nylon. These composite materials offer better performance and are lighter in weight, making them the preferred choice for automotive parts and building wares. In flexible packaging, more bio-, photo- or chemical-degradable plastics are being introduced as the industry becomes more conscious of the need to be environment-friendly.

The main production processes involved in the plastic products industry are injection moulding, film extrusion, blow moulding, pipes and profiles extrusion and foam moulding. The Malaysian plastics industry has been rated as among the most competitive in Asia.

Malaysia is currently a net exporter of plastic products. Exports of plastic products amounted to RM8.8 billion during the period January-November 2008, an increase of 14.4 per cent compared with 2007. The main products exported were containers of plastics (40%), plates, films, sheets, foils and strips (34%) and other articles of plastics (16%). The main export destinations included the EU, the People's Republic of China, Hong Kong, Singapore, Japan and Thailand.

In addition, Malaysian plastics manufacturers are diversifying their export base to new markets such as Latin America, West Asia and Oceania. Exports of plastic products to Latin America increased by 54.6 per cent from RM65.7 million in 2007 (January-

Graph 28
Investments in Projects Approved in the Plastic Products Industry, 2008



November) to RM101.6 million in 2008 (January-November). Exports to West Asia increased by 30.1 per cent from RM169.2 million to RM220.2 million and exports to Oceania also registered an increase of 10.5 per cent from RM502.5 million to RM555.5 million (10.5%).

Malaysia recently launched its first fully integrated plastics park, the Kertih Plastic Park (KPP), a major project under the Eastern Corridor Economic Region (ECER). This park will further enhance the development of a hub to support plastics and plastics-related manufacturing activities as well as service providers on a 140-hectare site. The KPP is aimed at promoting further downstream investments in the plastics and plastics-related industries by tapping into the potential synergies from integration with the nearby Kertih Integrated Petrochemical Complex (KIPC).

The KPP, which is projected to attract a total investment of about RM2.0 billion and generate employment opportunities for 7,000 employees, will be the nucleus for the development of new technologies which harness knowledge and skills in the plastics industry. This park, is equipped with facilities such as installation of various oil, gas and petrochemical related facilities and provides opportunities for downstream manufacturing activities, especially for small and medium scale enterprises. The establishment of a PETRONAS Technology Centre (PPTC), which focuses on research and development, would further enhance petrochemical product innovation.

KPP is the realisation of a strategic trust under the Third Industrial Master Plan (IMP3) to enhance linkages with the downstream plastic products industry, and to undertake full integration of petrochemical zones in Malaysia. This is also in line with the efforts to intensify the development of technologies in material and product applications.

Projects Approved in 2008

A total of 60 projects with investments of RM635.8 million were approved in 2008, of which 37 were new projects with investments of RM460 million and 23 were expansion/diversification projects with investments of RM175.8 million. Foreign investments amounted to RM211.4 million, representing 33 per cent of total investments, while domestic investment totalled RM424.4 million. Of the total, 28 projects (47%) were Malaysian-owned. Projects approved in 2008 are expected to generate employment opportunities for 5,687 persons.

Major projects approved included:

- An expansion project by an existing company with an additional investment of RM61.1 million to manufacture plastic injection moulded components and sub-assemblies for the electrical & electronics industries in Nilai, Negeri Sembilan and Kulim, Kedah;

- A diversification project by Hond Tat Polymer Sdn. Bhd. to manufacture plastic bags and films and polymeric calcium carbonate masterbatches with an investment of RM34.0 million. The polymeric calcium carbonate masterbatches are used in the formulation of raw materials in various applications such as fillers;

- A new project by a Malaysian-owned company with an investment of RM30 million to manufacture fibreglass reinforced polyester (FRP) sectional panels. About 60 per cent of these products will be exported to Middle East, South Africa and Europe; and

- A new joint-venture project by Ecotech Systems Sdn. Bhd. (previously known as Kunci Edisi Sdn. Bhd.) with an investment of RM20 million to manufacture unplasticised polyvinylchloride (UPVC) roofing sheet. UPVC roofing sheet have characteristics such as light stabiliser, ultra-violet (UV) absorbers and excellent thermal insulation. The products will be exported to Indonesia, Thailand, Vietnam and Ukraine.

The plastic products industry has a broad and rapidly growing range of industrial and consumer applications. Nevertheless, the industry faces a number of major challenges, such as declining market demand due to the impact of the global economic slowdown, high production cost and environment concerns.

Plastics used in toys, medical devices and food containers have been regulated for more than two decades. With the introduction of the Restriction on Hazardous Substances (RoHS), Waste Electrical and Electronics Equipment (WEEE), Energy Using Products (EuP), End of Life Vehicle (ELV) and Regulations such as Registration, Evaluation and Authorisation of Chemical Substances (REACH) by the EU and other developed economies, the use of plastics in electrical and electronics equipment, parts and components, automotive parts and components, and articles in general such as furniture, labels, shoes and packaging have come under more stringent scrutiny and surveillance by these regulatory bodies. Malaysian plastics products manufacturers must address these issues and concerns effectively to ensure their competitiveness in the global market place.

Globalisation poses both challenges and opportunities simultaneously for Malaysian plastics manufacturers. Therefore, it is imperative for Malaysian plastics manufacturers to sustain their competitiveness, through improved technologies and enhanced skills and penetrating new markets in developed and developing economies.

RUBBER PRODUCTS

The rubber products industry can be categorised into the latex products, tyres and tyre-related products and industrial and general rubber products. At present, there are more than 500 companies in operation, employing over 68,000 persons. Small and medium industries assume an important role in the growth of the industry.

Domestic consumption of natural rubber in 2008 was estimated at 464,490 tonnes while synthetic rubber consumption was estimated to be around 130,000 tonnes. Consumption by the latex products sector constituted 80 per cent of the total domestic natural rubber consumption in Malaysia.

For the first 11 months of 2008, the rubber products industry contributed 1.9 per cent of Malaysia's total export earnings. The total revenue from the export of rubber products amounted to RM11.8 billion, registering a growth of 24.1 per cent. The major export markets were the USA (RM4 billion), Europe (RM2.7 billion), the People's Republic of China (RM2.4 billion), and ASEAN (RM1 billion).

For the period January-November 2008, imports of rubber products totalled RM3.3 billion, comprising industrial and general rubber products (66%), tyre & tyre related products (26.4%) and latex products (6.7%).

The largest sub-sector in the rubber products industry in terms of sales, is the latex products sub-sector. Currently, there are 165 companies in this sector. At present, Malaysia is a major producer and exporter of latex products, consisting mainly of catheters, latex thread and medical gloves. For the period January-November 2008, the latex products sub-sector was the largest contributor to export earnings of rubber products amounting to RM7.5 billion (63.8%).

In the industrial and general rubber products sub-sector, there are currently 184 companies in operation. This sub-sector produces a wide range of rubber products such as anti-vibration mountings, belting, hoses, tubing, seals and sheeting for the automotive, electrical & electronics, machinery &

equipment and construction industries. For the period January-November 2008, export earnings for this sub-sector amounted to RM3.5 billion.

There are currently 120 companies in the tyres and tyre-related products sub-sector with 10 tyre producers, while the remaining companies produce tyre retreads, inner tubes, and other accessories. For the first 11 months of 2008, this sub-sector contributed RM810 milion to the export earnings of the country.

Projects Approved in 2008

A total of 25 projects with investments of RM344.4 million were approved in the rubber products industry (excluding medical devices). Of these, 16 were new projects (RM142 million), while nine were expansion/diversification projects (RM202.4 million).

The approved projects involved domestic investments of RM114 million (33%) and foreign investments of RM230.4 million (67%). A total of 15 projects approved (RM88.9 million) were wholly Malaysian-owned companies, one (RM23.2 million) was a joint-venture with Malaysian majority ownership, and two (RM10.7 million) were joint-ventures with foreign majority ownership.

The investments were mainly in latex products (RM212.8 million), industrial and general rubber products (RM107.8 million), tyres and tyre-related products (RM14 million) and recycling of waste tyres into rubber crumb, carbon black, steel tubes, fuel oil and fibres (RM9.8 million) industries.

A total of 10 projects were approved in the latex products sector, of which three were new projects (RM28.2 million) and seven were expansion/diversification projects (RM184.6 million). Domestic investments amounted to RM67.4 million (31.7%), while foreign investments totalled RM145.3 million (68.3%).

A total of 11 projects with investments of RM107.8 million were approved in the industrial and general rubber products sector. These projects were for the manufacture of products such as moulded rubber products for electrical & electronic and automotive industries, industrial & hydraulic hoses, anti-vibration dampers, seals, washers, o-rings and rubber defeathering fingers. Domestic investments amounted to RM22.8 million (21%), while foreign investments totalled RM85 million (79%). There were 10 new projects (RM104 million), while one was an expansion/diversification project (RM3.8 million). Three new projects with investments of RM9.8 million were approved for recycling of waste tyres into rubber crumb, carbon black, steel wires, fuel oil and fibres. All these projects were wholly Malaysian-owned.

The major projects approved included:

- An expansion/diversification project by Shorubber (Malaysia) Sdn. Bhd., a foreign-owned company to produce latex products, such as new grades of industrial gloves, synthetic rubber coated gloves and polyurethane gloves with an additional investment of RM91 million. The project will be located in Arau, Perlis and these products are mainly for industrial use and will be exported;

- A new project by a foreign-owned company to produce a range of hoses such as high pressure wire spiral reinforced hydraulic hoses, textile/steel reinforced industrial hoses and high pressure wire braid reinforced hydraulic hoses with a total investment of RM54.4 million. The project will be located in Johor;

- An expansion/diversification project by a foreign-owned company to produce cleanroom face masks with an additional investment of RM26 million. The project will be located in Selangor;

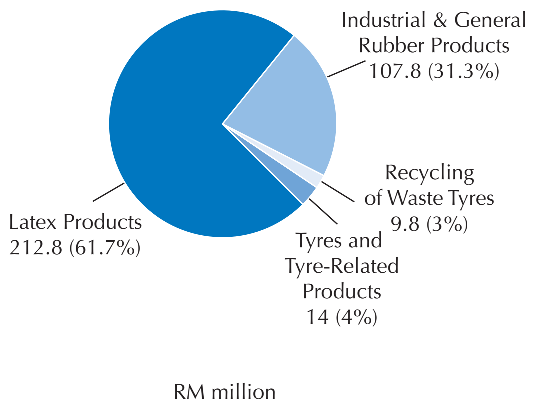
- An expansion/diversification project by CE Technology Berhad, a Malaysian-owned company with an additional investment of RM25 million to produce clean room products/critical environment products such as gloves, wipers and face masks in Taiping, Perak;

- An expansion/diversification project by Lamifoam Sdn. Bhd. with an additional investment of RM23.5 million to manufacture natural latex foam in Klang, Selangor; and

- A new project by a foreign-owned company with a total investment of RM21 million to produce high engineering industrial rubber products, such as rubber sheetings, rubber jig/trammel screen plate/stone, rubber hoses and tubings, rubber rings, plug bushes, car mats, fenders, gaskets, washers & tin ore tubs.

Other projects approved in 2008 mainly focused on the production of high technology rubber products for the machinery/automotive sector, high end technical industrial gloves and teats & soothers from synthetic rubber and clean room rubber products to complement the medical devices industry.

Graph 29
Investments in Projects Approved in the Rubber Products Industry by Sub-Sector, 2008



Malaysia has positioned itself to be the world's leading producer and exporter of rubber products. One of the challenges for the Malaysian rubber industry is to remain competitive against cheaper products from low cost producers, particularly the People's Republic of China and India, through higher productivity and quality. The Malaysian rubber products industry also has to remain resilient in competing with other natural rubber producing countries such as Thailand and Vietnam, as these countries also have easy access to readily available raw materials.

Malaysian companies need to focus on R&D activities. Efforts have been made to improve efficiency, productivity and new product development in the downstream activities to produce high value-added and high technology rubber products such as for engineering, construction and marine applications. R&D is also required to comply with stringent standards and regulations imposed by export markets, particularly in the EU.

Malaysian rubber product manufacturers and exporters will face greater challenges to penetrate the global market, particularly the EU market. The EU has implemented the Registration, Evaluation, Authorisation and Restriction of Chemical Substances (REACH) regulations since 1st June 2007. With the deadline for the process of pre-registering chemicals with the European Chemical Agency (ECHA) ending on 1st December 2008, the rubber products industry will have to reformulate its products to comply with the regulations. It was estimated that the rubber products industry will have to register over 300 substances compared with 70 for the chemical industry, 40 for the pharmaceutical industry and 38 for the petroleum industry.

Malaysian rubber manufacturers and exporters can benefit from the ASEAN-China Free Trade Agreement, Malaysia-Pakistan Closer Economic Partnership Agreement, ASEAN-Korea Free Trade Agreement and Japan-Malaysia Economic Partnership Agreement to gain new market access in these countries. Intensifying promotional and branding activities, which include the promotion of a 'green' image in the finished products need to be undertaken to further strengthen Malaysia's position in the global market.

WOOD AND WOOD PRODUCTS AND FURNITURE

The wood-based industry comprises two sub-categories namely primary and secondary wood processing activities. Primary wood processing activities utilise logs as their raw material such as sawntimber and veneer. Secondary wood processing activities turn primary products and other solid wastes such as small branches, off-cuts, edging or slabs, chippings and sawdust into downstream value-added products.

The industry has developed from a primary processing industry to a more advanced and technology driven industry producing a significant number of downstream value-added products. The Malaysian wood-based industry comprises some 3,800 mills which provide employment to about 340,000 people accounting for 3.5 per cent of the labour force in Malaysia. The industry is predominantly owned by Malaysians and about 80-90 per cent of the companies comprise small and medium-sized enterprises.

The production of sawn timber, veneer, plywood and other veneered panel products are concentrated in Sabah and Sarawak where the mills utilise tropical hardwood as their raw materials. More than 60 per cent of Malaysian timber mills are in the downstream activities such as mouldings, builders' carpentry and joinery (BCJ), fibreboard, as well as furniture and furniture components and they are mainly located in Peninsular Malaysia. This is in line with the Government's target to encourage more downstream activities by the industry to increase the production of value-added and engineered wood-based products.

Taking into consideration the declining supply of sawn timber, the Government has embarked on several projects to ensure availability of raw materials for the industry. One of the programmes undertaken is the Forest Plantation Development Programme where a total of 375,000 hectares of forest plantations will be established over a 15-year period and expected to yield an additional five million cubic metres of timber annually. About 80 per cent of the plantations will be planted with acacia mangium species while the remaining 20 per cent will be cultivated with other selected local species.

For the period January-November 2008, exports of wood-based products amounted to RM20.7 billion, the same as in the corresponding period in 2007. Wooden furniture with exports of RM6.3 billion (30.4%) was the major contributor to the exports of wood-based products, followed by plywood with exports of RM5.8 billion (28%), sawntimber and logs with exports of RM5.4 billion (26.1%) and mouldings and BCJ (builders' carpentry and joinery) with exports of RM2 billion.

For the same period in 2008, exports of wooden furniture increased to RM6.3 billion from RM5.8 billion during the corresponding period in 2007. The increase was largely attributed to the real estate development in West Asia, particularly UAE, which resulted in strong demand for furniture.

Malaysia ranks as the tenth largest exporter of furniture in the world and second in Asia after People's Republic of China. Most of the Malaysian-made furniture produced is original equipment manufacture (OEM). In the recent years, efforts have been undertaken to encourage manufacturers to produce their own design and shift to original design manufacture (ODM) and original brand manufacture (OBM) furniture products. Malaysia has diversified its export markets for furniture and currently exports to more than 160 countries. More than 80 per cent of wooden furniture is made of rubberwood while others are made from a mixture of other wood and wood composites such as MDF and particleboard.

In the panel products sub-sector, plywood, fibreboard and particleboard/chipboard remained significant contributors to export earnings of wood-based products with combined exports amounting to RM7.7 billion (37.2% of total exports) for the period January-November 2008. Plywood was the largest contributor with export value of RM5.8 billion. Malaysia is the second largest exporter of plywood after the People's Republic of China. Japan remained the largest export destination followed by Republic of Korea and Taiwan.

For the period January-November 2008, exports of fibreboard amounted to RM1.1 billion, the same as in the corresponding period in 2007. The industry has started utilising acacia mangium and mixed hardwood to produce MDF as alternatives to rubberwood. A few companies have ventured into the production of value-added MDF (laminated/printed) for export. The major destinations for MDF are UAE, Japan and Vietnam. Currently, there are 14 MDF companies in operation, with nine located in Peninsular Malaysia, three in Sarawak and two in Sabah. Malaysian panel products have attained international standards such as Japan Agriculture Standards (JAS), British Standards (BS) and Harmonised European Standards (EN).

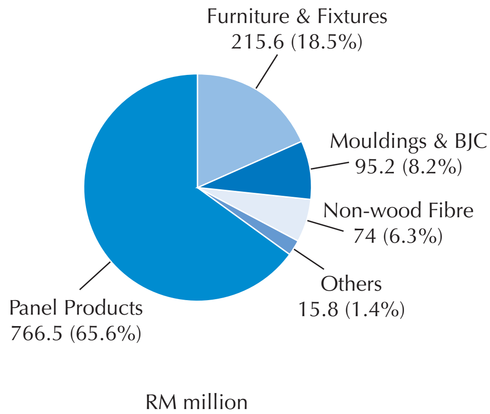
Mouldings and BCJ is another major sub-sector in the wood-based industry. BCJ products include architectural mouldings (panelling, skirting, crowns, chair rails), doors, windows and its accessories, wooden floorings and wooden railings. For the period January-November 2008, exports of mouldings totalled RM680.6 million while the exports of BCJ amounted to RM1.3 billion.
To ensure sustainability of raw material supply for the industry, the Government promotes the utilisation of agricultural wastes as alternative materials. Currently, fibres such as palm biomass (oil palm trunks, empty fruit bunches, kernels), kenaf and other agricultural materials (cocoa, coconut, sago and sugar cane) are used for the production of particleboard, fibreboard and composite products.

Projects Approved in 2008

In 2008, a total of 87 projects were approved with investments of RM1.2 billion compared with RM933.5 million in 2007. Of the 87 projects, 61 were new projects with total investments of RM753 million (64.5%) while 26 were expansion/diversification projects (RM414 million or 35.5%). Domestic investments amounted to RM650.8 million or 55.8 per cent of total investments, while foreign investments totalled RM516.3 million.

The highest investments were recorded in the panel products sub-sector with total investments of RM766.5 million (65.7%). A total of 19 projects were approved of which nine were new projects (RM411.3 million) and ten were expansion/diversification projects (RM355.2 million). More than 50 per cent of

Graph 30
Approved Investments In the Wood-based Industry by Sub-Sector, 2008



the investments were foreign investments. Among the projects approved were for the production of MDF, high density fibreboard (HDF) and bamboo panel, the first project of its kind in Malaysia.

In the furniture sub-sector, a total of 45 projects were approved with investments of RM215.6 million. Of these, 37 were new projects (RM198.9 million) and eight were expansion/diversification projects (RM16.7 million). Domestic investments contributed 92 per cent (RM197.9 million) of the total investments in this sub-sector.

A total of 11 projects were approved in the mouldings and BJC sub-sector with investments of RM95.2 million (8%). Of these, seven were new projects with investments of RM65.5 million (68.8%), while four were expansion/diversification projects with investments of RM29.7 million. Foreign investments amounted to RM50.9 million or 53.5 per cent of total investments. Most of the projects approved were for the manufacture of a combination of mouldings and BJC products such as flooring boards, picture frames and doors and windows.

In the non-wood fibre products sub-sector, nine projects were approved with total investments of RM74 million. These projects were for the manufacture of veneer, plywood, briquettes, fibre, pellets, laminated boards and flooring boards from oil palm biomass. Among the alternative raw materials used for the manufacture of pellets and other composite products are kenaf.

Among the major projects approved were:

- Bringfull Resources Sdn. Bhd., an expansion project with additional investments of RM216 million, to produce HDF and MDF. The products will be exported to Japan, Middle East and India;

- Bamboo Bio-Composites Sdn. Bhd., a new R&D commercialisation project to manufacture laminated bamboo panels (Lamella) with an investment of RM28 million. The company is Malaysian-owned and will utilise bamboo in its production. The company collaborated with the Forest Research Institute Malaysia (FRIM) in research on the abrasiveness, durability as well as other technical properties of bamboo to produce flooring panels and other panels from bamboo. The company has also initiated establishment of bamboo plantations in the surrounding rural areas to ensure sustainability of raw material supply. This will provide business opportunities to the people in these areas. About 75 per cent of the produce will be for the domestic market while the remaining 25 per cent will be exported to Indonesia; and

- GPAC Technologies (M) Sdn. Bhd., a foreign-owned project with investments of RM32.7 million to manufacture wood composite products such as pellets, household decorative items and packaging. About 80 per cent of the products will be exported to Australia, Japan, Singapore and the People's Republic of China.

The approvals marked a higher interest in the panel products sub-sector where the investments were mostly in the production of MDF and HDF. The year 2008 also witnessed more companies proposing utilisation of alternative materials, such as bamboo and kenaf as raw materials, to produce value-added products.

Malaysia as a member of the International Tropical Timber Organisation (ITTO) is fully committed to achieve sustainable forest management. Malaysia was the first ITTO member country to permit a constituent state (in Sarawak) to be examined by a group of international experts from ITTO. Malaysia has also provided up-to-date reports on progress made and steps taken to strengthen forest management.

Recognising the importance of producing timber from sustainable forest, the Government has embarked on several initiatives to enhance market access. These initiatives include voluntary partnership agreement (VPA) with the European Commission (EC). This agreement aims to combat illegal logging and reduce illegally harvested timber. Malaysia is the first country to commence formal negotiations to conclude a VPA and this will ensure Malaysian wood products will have better access to the EU market.

The wood-based industry remained competitive and resilient despite the slowdown in global growth. The industry has moved up the value chain into secondary processing activities and has invested heavily in capital-intensive industries such as MDF and particleboard manufacturing. The Government continues to provide necessary support to promote higher value-added downstream activities through the provision of special funding and grants, infrastructure and facilities, R&D, training and streamlining procedures to facilitate the industry.

NON-METALLIC MINERAL PRODUCTS

The non-metallic mineral products industry consists of glass, ceramic, cement and concrete and other products like quicklime, barite, marble and granite.

The glass industry sub-sector covers the production of float glass, safety glass, glass containers, glassware, architectural glass, glass fibre and hi-tech precision glass products such as glass funnels and panels for cathode ray tubes (CRTs), hard disc glass substrates and plasma display exhaust pipes.

The ceramic industry sub-sector covers the production of traditional ceramics and advanced ceramics. The traditional ceramic industry involves the production of refractory products, pottery bricks, tiles, sanitary wares and tableware. The advanced ceramic industry involves the production of ceramic parts and components for the E&E industry such as ceramic substrates, ceramic rods and catalytic converters.

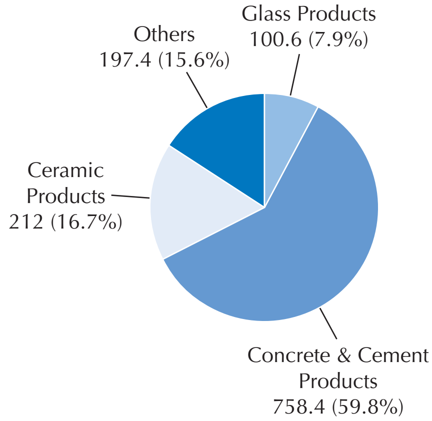
Exports of non-metallic mineral products for the period January – November 2008 totalled RM4.8 billion while imports amounted to RM3.5 billion thus making Malaysia a net exporter of non-metallic mineral products.

To date, there are 299 companies in production in the non-metallic mineral products industry. Investments in this sector totalled RM22 billion, with domestic investments amounting to RM11.9 billion and foreign investments totalling RM9.9 billion.

Projects Approved in 2008

In 2008, a total of 28 projects were approved in the non-metallic mineral products industry with investments of RM1.3 billion. Of the projects approved, 13 were new projects while 15 were expansion/diversification projects. Domestic investments amounted to RM746.8 million, while foreign investments totalled RM521.7 million.

Graph 31
Investments in Projects Approved in the Non-Metallic Mineral Products Industry by Sub-Sector, 2008



Significant projects approved included:

- A joint-venture expansion/diversification project by a company producing cement, with an investment of RM650 million;
- A wholly foreign-owned expansion/diversification project with investment of RM116 million. The company's proposed products are ceramic sanitary fixtures, ceramic bathroom accessories and ceramic insulators; and
- A new joint-venture project with an investment of RM100.6 million to produce processed cullet glass from recycled electronic waste. The entire production will be exported to Vietnam, the People's Republic of China and the USA.

The glass industry in Malaysia is currently evolving from the conventional glass manufacturing namely for the packaging, automotive and construction industries to those used in the high technology industries such as hard disc glass substrates, liquid crystal display and solar panel glass.

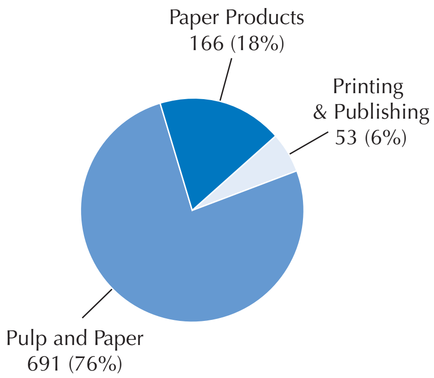
PAPER, PRINTING AND PUBLISHING INDUSTRY

The paper, printing and publishing industry encompasses the manufacture of pulp, paper, paper products as well as printing and publishing activities. The paper sub sector covers the production of medium paper, test liner, newsprint, printing and writing paper, tissue paper and joss paper. The paper products sub-sector consists of packaging products such as corrugated cartons, inner packaging and cushioning materials, labels, stickers and disposable diapers. The printing and publishing sub-sector includes all printing of packaging materials, books, magazines, security documents, greeting cards, calendars and other miscellaneous printing activities.

Projects Approved in 2008

In 2008, a total of 26 projects with total investments of RM910.5 million were approved in the paper, printing and publishing industry. Of these, 20 were new projects with investments of RM872.2 million, while six were expansion/diversification projects with investments amounting to RM38.3 million. Domestic investments amounted to RM430.2 million while foreign investments totalled RM480.3 million.

Graph 32
Investments in Projects Approved in the Paper, Printing and Publishing Industry by Sub-Sector, 2008



Significant projects approved include:

- A new joint-venture project with an investment of RM496 million to produce newsprint. The entire production of the proposed project will be for the domestic market;
- A new majority Malaysian-owned project with an investment of RM185 million to produce fibre, pulp, liner and medium paperboards packaging paper and moulded products from palm biomass; and
- A new Malaysian-owned project to undertake the activities of designing and printing of decorative surfaces for commercial applications such as the casings for handphones, with investments of RM41 million.

The paper, paper products and printing sub-sector is among the key supporting industries to the manufacturing sector in Malaysia. Local paper manufacturers mainly produce corrugated medium paper, test liner, newsprint and printing/writing paper. The main activity of the paper products sub-sector is the manufacture of packaging products, the bulk of which are corrugated carton boxes. Malaysia was a net importer of paper and paper products in 2008 (January-November) with exports of paper totalling RM946 million and imports of RM4.2 billion. Exports of paper products amounted to RM1.5 billion and imports totalled RM793 million.

The printing and publishing industry in Malaysia consists of mainly small and medium scale manufacturers who are domestic oriented. However, local printers have been able to secure contract printing of books and magazines for international publishers. Exports of this sub sector in 2008 (January–November) amounted to RM1.1 billion while imports totalled RM1.2 billion.

C. IMPLEMENTATION OF APPROVED MANUFACTURING PROJECTS

Proactive measures have been taken by the Government to facilitate investors in implementing approved projects. These measures include:

- Appointment of Special Project officers (SPOs) at federal and state level in May 2003 to assist companies through handholding activities as stipulated in Measure 69 in the Economic Stimulus Package;

- Setting-up One Stop Centres (OSCs) at both local authority and state levels since May 2003 to process planning permission, building plans, and endorsements on land development applications. To date, 103 OSCs have been established;

- Establishment of State Investment Centers (SICs) in April 1999 as a single window to promote and facilitate investments in their respective states;

- Establishment of District Industry Implementation Units (DIIUs) in August 2006 to monitor the implementation of manufacturing and services related projects at the district level and to provide the necessary assistance to enhance the implementation process;

- Online Application in MIDA was introduced since January 2008 which enables the submission of application forms to be done electronically. The applications cover all aspects relating to Manufacturing Licence, Incentives, Expatriate Post and Duty Exemption on Raw Materials and Machinery;

- Effective 1 December 2008, automatic issuance of Manufacturing Licence is granted except for activities related to security, safety, health, environment and religion;

- The replacement of the Certificate of Fitness of Occupation (CFO) with

Certificate of Completion and Compliance (CCC) in April 2007 as a step towards self certification and self regulation practices that eventually help to reduce the cost of doing business in Malaysia; and

- The establishment of Special Taskforce to Facilitate Business (PEMUDAH) in February 2007. PEMUDAH is mandated to identify and propose appropriate measures to improve procedures, regulations and existing legislation to reduce bureaucracies and further promote a business friendly environment in Malaysia.

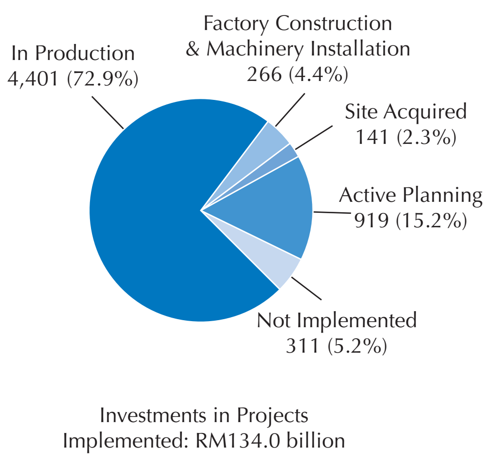
Among the measures undertaken by PEMUDAH are:

- The establishment of the Business Licensing Electronic Support Services (BLESS) in September 2008 which is aimed at further improving the Government's delivery system by providing an online service centre or single window for potential investors, centralised information for analysis, future planning and service improvements; and

- Publication of the Guidebook on the Employment of Expatriates: Processes and Procedures in October 2007.

Various measures undertaken by MIDA and the Government at the Federal and State level, have resulted in significant improvement in the rate of implementation of approved manufacturing projects. The introduction of these measures has resulted in an implementation rate of 77.3 per cent during the period 2003-2008. For the period 2003-2008, a total of 6,038 manufacturing projects were approved of which 4,401 (72.9%) projects had commenced production while 266 (4.4%) were at the stage of factory construction and machinery installation. Of the 4,401 projects in production, 692 projects had commenced production in 2008.

Graph 33
Status of Implementation of Manufacturing Projects Approved during 2003-2008 as at 31 December 2008



Total capital investment in the 4,667 projects that were implemented (which include projects which have commenced production and undertaken factory construction and machinery installation) amounted to RM134.0 billion. Apart from this, 141 projects with investments of RM35.6 billion have also acquired sites for factories, while 919 projects (RM74.7

billion) are in active planning stage. When these 1,060 projects are realised, the total investment generated will amount to RM110.3 billion.

Most of the implemented projects are located in Selangor (1,475 projects), followed by Johor (1,027 projects), Penang (715 projects), Perak (262 projects), Kedah (252 projects) and Melaka (244 projects).

Significant projects implemented in 2008 cover a broad range of industry sectors such as electrical and electronic products, machinery and equipment, fabricated metal products, plastic products and chemical and chemical products.

According to the Ministry of Human Resources, in 2008, a total of 179 companies had downsized their operations, which resulted in the retrenchment of 7,059 workers. In addition, 69 companies had ceased operations, resulting in the loss of job for 20,019 workers. The retrenchment figures include both licensed companies and unlicensed Small and Medium Enterprises (SMEs). The main reasons cited were the global financial crisis and economic downturn which resulted in declining market demand and increasing cost of production.

However, 692 projects had commenced production in 2008 resulting in the creation of 63,411 job opportunities. These projects will provide alternative employment opportunities for the 27,078 workers who were retrenched during the same period.

4

Investment Performance of the Services Sector

4 INVESTMENT PERFORMANCE OF THE SERVICES SECTOR

A. PROJECTS APPROVED

OVERVIEW

The services sector comprises a broad range of services including regional establishments, support services, MSC status companies, real estate (housing), transport, energy, telecommunications, distributive trade, hotels & tourism, financial services, health services and educational services.

A total of 403 projects were approved for Regional Establishments and Support Services in 2008 with investments of RM2.3 billion. Domestic investments amounted to RM1.4 billion (62.5%) and foreign investments totalled RM860.9 million (37.5%). In comparison, a total of 441 projects were approved with investments of RM7.0 billion in 2007.

In 2008, a total of 242 projects with investments of RM1.8 billion were approved with MSC Status. Domestic investments amounted to RM1.4 billion (79.8%) and foreign investments totalled RM359.6 million (20.2%). In 2007, a total of 266 projects were approved with investments totalling RM3.7 billion.

Statistics on investments in the other services sub-sectors are based on projects approved by the respective Government Ministries/ Agencies and are available only for the period of January - September 2008. A total of 1,707 projects were approved with investments of

Table 4
Approved Investments in the Services Sector, 2008 and 2007

Services Sub-Sector	2008 No.	2008 RM mil.	2007 No.	2007 RM mil.
Regional Establishments	158	209.7	163	700.5
Support Services [5]	245	2,085.0	278	6,279.4
MSC Status Companies	242	1,778.4	266	3,698.7
Sub-Total	**645**	**4,073.1**	**707**	**10,678.6**
Other Services Sub-Sector	**Jan - Sept 2008 No.**	**Jan - Sept 2008 RM mil.**	**2007 No.**	**2007 RM mil.**
Real Estate (Housing)	683	20,541.0	1,004	21,612.7
Financial Services	66	4,267.3	53	1,298.0
Energy	106	3,812.7	-	5,536.8
Telecommunications (including Post)	12	2,810.0	9	4,775.0
Distributive Trade	642	1,787.7	591	2,907.7
Hotels & Tourism	35	1,753.3	51	1,311.8
Transport	12	679.5	56	16,740.5
Health Services	18	97.2	8	1,012.6
Education Services	133	45.4	123	347.9
Sub-Total	**1,707**	**35,794.10**	**1,895**	**55,543.0**

[5] *Approval statistics for 2008 for other R&D financial assistance schemes under Support Services cover the period January - September only.*

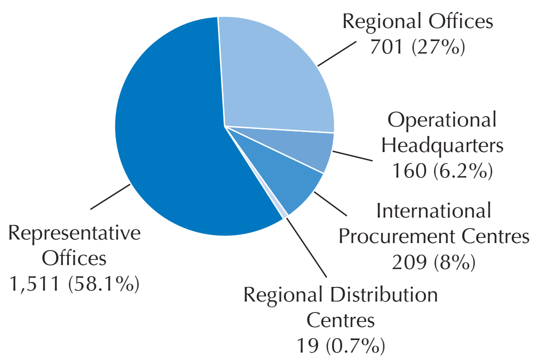
RM35.8 billion. Of the total investments, domestic investments amounted to RM32.4 billion (91%) and foreign investments amounted to RM3.4 billion (9%). The projects approved during this period were expected to create 14,299 employment opportunities. In comparison, 1,895 projects were approved for the whole of 2007 with total investments of RM55.5 billion, and potential employment of 27,400 persons.

B. PERFORMANCE OF THE SERVICES SUB-SECTORS

REGIONAL ESTABLISHMENTS

Currently there are 2,600 approved regional establishments in Malaysia, which include 160 Operational Headquarters (OHQs), 209 International Procurement Centres (IPCs), 19 Regional Distribution Centres (RDCs), 701 Regional Offices (ROs) and 1,511 Representative Offices (REs).

Graph 34
Number of Regional Establishments Approved as at 31 December 2008



The country's success in providing world class infrastructure, attractive investment incentive packages including tax incentives and a liberal policy on foreign equity participation and employment of expatriates have encouraged the establishment of these regional operations in Malaysia.

In 2008, a total of 158 (2007: 163) new regional establishments were approved to be set up in Malaysia with a total proposed investments of RM209.7 million (2007: RM700.5 million). Estimated annual sales turnover for IPCs and RDCs amounted to RM1.0 billion (2007: RM2.7 billion).

These operations will create a total of 967 jobs (2007: 1,968) for Malaysians. Operations such as OHQs, IPCs and RDCs generally create more job opportunities for Malaysians in the managerial, professional and technical levels.

Operational Headquarters (OHQs)

As at 31 December, 2008, a total of 160 OHQs have been approved. Of these, 32 were from USA, followed by Japan (14), Germany (13), UK (12), the Netherlands (12) and Australia (10). Total paid-up capital amounted to RM813.9 million with proposed investments of RM1.9 billion. These OHQs have engaged a total of 1,889 expatriates with extensive working experience at regional levels including knowledge of high end information technology. With the setting up of these

OHQs, a total of 8,920 job opportunities were created for Malaysians and through the expatriates, the locals are trained and the best practices of the parent companies are transferred to the local employees. Among the main OHQ activities undertaken by these companies include provision of common corporate functions such as finance/ accounting, human resource, IT and technical support as well as R&D services to support their operations in the Asia Pacific region.

As at 31 December, 2008, a total of 115 OHQs were in operation. These OHQs are involved mainly in oil and gas, finance, E&E, construction, food and beverages, timber, logistics, healthcare and health informatics, pharmaceutical, chemicals, automotive, power and engineering services, IT and biotechnology industries.

Some of the world renowned MNCs which have established OHQs in Malaysia include:

USA	• General Electric • Dow Chemicals • Grey Communications • Air Products • Kellogg's • Baker Hughes • Transocean • IBM	• Du Pont • PepsiCo • Hess Oil & Gas • Henry Schein • Schlumberger • Intel • Agilent • Mars Foods
Japan	• Sharp Electronics • Japan Tobacco International • NEC Infrontia • Nippon Electric Glass	• Kajima Corporation • Bridgestone • Sumitomo • Nippon Menard
Germany	• BASF • Eppendorf • Siemens • Bayer	• Muehlbauer • Arvato • Nordenia • Binder
Australia	• IBA Health • Leighton • Wagners • Ansell	• IEV Group • Linfox • Paradigm • Dome
UK	• RMC Industries • Diagonal Consulting Group • James R Knowles	• British-American Tobacco • Fitness First • Avocet Mining
Switzerland	• Michelin • SBM Group • France • Thales International	• Norvatis Corporation • Omya Group • Lafarge
Netherlands	• FlexsysPrometric • Organon	• Friesland Foods • Mammoet
Sweden	• Volvo	• UCB Group
People's Republic of China	• China Shipping	
Norway	• Aker Kvaerner • AGR	• Wilhelmsen
Singapore	• NOL Global	• ACE Asia Pacific

Projects Approved in 2008

A total of 10 OHQs were approved in 2008 (2007: 17) with investments amounting to RM 80.1 million (2007: RM323.7 million).

Of the OHQs approved, three were from the USA, two each from the Netherlands and Australia and one from the United Kingdom. The remaining two were joint-venture projects of which one was between Malaysia and the Russian Federation and the other one between Singapore and The British Virgin Islands. A total of 48 expatriate posts were approved for these OHQs and 348 employment opportunities will be provided for Malaysians, of which, 83.6 per cent of the posts were for senior management and senior executive positions. These multinational companies serve as training ground for Malaysian employees as they are trained in new technology, expertise and management practices.

Major OHQs approved in 2008 included:

- CSC Malaysia Sdn. Bhd. (formerly known as Computer Systems Advisers (M) Berhad) which is a wholly owned subsidiary of CSA Holding Limited, a global IT outsourcing service provider based in the USA. The OHQ intends to progressively provide the qualifying services to companies in Australia, New Zealand, People's Republic of China, Hong Kong, India, Indonesia, Japan, Republic of Korea, Philippines, Singapore, Thailand, Taiwan, USA, UK and Malaysia. The qualifying services will include business planning and coordination, procurement of raw materials, technical support and maintenance, marketing control and sales promotion planning, data/information management, and training and personnel management;

- The Dunham-Bush Group, a subsidiary of Agromash Holding B.V., which is one of the largest manufacturers of rotary-screw compressor-type water chillers and other commercial air condition equipment. The OHQ will provide nine qualifying services to 24 companies in the People's Republic of China, Cayman Islands, Hong Kong, Singapore, Africa, the Netherlands, Thailand, UAE, Saudi Arabia, Vietnam, USA, UK and Malaysia;

- Avocet Mining (Malaysia) Sdn. Bhd. which is a subsidiary of Avocet Mining PLC (AMP). AMP is a public listed company in London and its principal activities are gold mining, mineral processing and exploration. AMP is one of the largest gold manufacturers listed on the London Alternative Investment Markets. In Malaysia, AMP has a gold mine in Penjom, Pahang which is the largest gold mine in Malaysia. The OHQ will monitor, coordinate, support and provide training to its related companies in and outside of Malaysia;

- Friesland Foods Business Development Unit, CPI Sdn. Bhd., a subsidiary of Royal Friesland Foods N.V. established an OHQ in Malaysia to support its operating companies in the regions of Asia, Middle East, Africa and Central Europe;

- New Forest Asia Sdn. Bhd., a wholly owned subsidiary of New Forests Pty Limited, Australia was approved as an OHQ to manage four of its related companies outside Malaysia in respect of advisory and consultation services on forestry management; and

- In addition to the above projects, one project was granted special incentives for the establishment of a Principal Business Centre (PBC) in Malaysia to undertake operations as a global supply chain, global IT operations and development centre and a global treasury centre. These operations are expected to provide substantial business to the local banking sector and employment opportunities to knowledge workers, in line with the Government's initiative to enhance the human capital factor in Malaysia.

MNCs continue to choose Malaysia as their regional headquarters mainly due to its good connectivity and strategic location within ASEAN. An educated, productive and multi-lingual work force and modern infrastructural facilities have also been favourable factors that have influenced their decisions.

International Procurement Centres (IPCs)

As at 31 December, 2008, a total of 209 IPCs have been approved. The total annual sales turnover of these IPCs was estimated at RM67 billion while their investments were estimated at RM5.3 billion per annum. Of the IPCs approved, a total of 88 approvals or 42 per cent were by corporations from Japan, followed by Malaysia (35), the USA (15), Taiwan (11), Singapore (11), Germany (5) and the remaining 44 were joint-ventures.

A total of 117 or 55.9 per cent of these IPCs were servicing the E&E industry, followed by the chemicals/petrochemicals(29), machinery and industrial parts (14), textiles (10) and furniture (7) industries. To date, a total of 119 IPCs have started their operations.

MNCs have established IPC operations in Malaysia mainly to serve as their procurement and distribution centres and undertake supply chain management for their manufacturing operations in the Asia Pacific region.

Major MNCs which have located their IPC operations in Malaysia include:

Japan	• Matsushita • Sony • TDK Corporation • Murata • Hitachi • NEC Electronics • Sharp-Roxy • Mitsumi	• Sharp • Kenwood • Canon Opto • Sumiden • JVC Electronics • Brother Engineering • Nitto Denko • Mitsubishi
USA	• Dell • Smart Modular Technologies	• Knowles
Germany	• Robert Bosch • B.Braun	• Henkel
Taiwan	• Acer • Titan	• Inventec Electronics
France	• Mapa Spontex	• Safic-Alcan
Hong Kong	• Lee Kum Kee	
Netherlands	• Flextronics	
Singapore	• Ghim Li	• Jackspeed Leather

Projects Approved in 2008

A total of six projects to establish IPCs were approved in 2008 compared with 11 projects in 2007 with proposed investments of RM36.4 million (2007: RM289.6 million) and estimated annual sales turnover of RM909.9 million (2007: RM2.7 billion). Of the IPC projects approved, two were by Japanese MNCs, one each by a company from the UK and Cayman Islands and one local company. The remaining one company is a joint-venture between Japan and Malaysia. These IPCs will provide employment opportunities for 192 Malaysians (2007: 292), mainly in the managerial, technical and skilled categories.

Some of the IPC companies approved in the earlier years have embarked on expansion programmes by adding new products in their procurement and distribution network.

The IPCs approved were as follows:

- Taiko Electronics (Malaysia) Sdn. Bhd., an existing manufacturing company, will be setting up its IPC to procure and distribute PCB connectors, terminals and other related electronic components, plastic tubes, stoppers, machine parts, mould and die parts to its customers in Malaysia and outside Malaysia. This IPC provides new job opportunities to 46 Malaysian while its substantial direct exports will utilise the land, water and air transport modes in Malaysia;

- Nitritex (M) Sdn. Bhd. which is involved in the manufacturing of cleanroom products such as gloves, facemasks, overshoes, garments, wipers & swabs since 2005 will carry out its IPC operation from its LMW status factory. This IPC will export almost 100 per cent of its products out of Malaysia, using the ports and airports in Malaysia;

- MainteQ Sdn. Bhd., a newly established company which undertakes remanufacturing of computer peripherals, multimedia devices, display units, computing, car & consumer electronics, digital camera and printed circuit board, and manufacturing of LCD TV panels, modules and parts thereof. The company's existing market covers Europe, Taiwan, Thailand, Singapore, United States and People's Republic of China. This company has chosen Malaysia as its IPC to procure and distribute its products to its customers in Malaysia and outside Malaysia. The IPC will also undertake bulk breaking, relabelling and repacking activities; and

- Sanyu Rec (Malaysia) Sdn. Bhd., a subsidiary of Sanyu Rec Co. Ltd. which currently manufactures epoxy resins, polyurethane resin and conductive silver paint in a LMW status factory in Senawang, Seremban. This company has been approved with IPC status to procure and distribute its products to its related and unrelated companies in Japan, People's Republic of China and Malaysia.

These IPCs, when operational will increase the utilisation of local seaports and airports. About 65 per cent of the goods will be exported through seaports, of which 78.2 per cent of the goods worth RM173.3 million will be exported through Port Klang. A total of RM35 million worth of goods will be exported through Port of Pasir Gudang followed by RM12.8 million worth of goods to be exported through Penang Port. Of the goods to be exported through airports, RM18.8 million will be exported via Penang International Airport and the remaining RM11.6 million via Kuala Lumpur International Airport (KLIA).

These IPCs proposed to procure a total of RM158 million worth of products from local companies. In addition, existing IPCs have been approved to procure an additional RM4.2 billion worth of products of which 78.5 per cent will be directly exported. The sourcing of these products will benefit 98 local companies, providing them opportunities to integrate into the MNCs' global supply chain network.

Regional Distribution Centres (RDCs)

Since 2003, a total of 19 RDCs have been approved with total annual sales turnover of RM3 billion and annual investments of RM295.1 million. Of these, three were from Germany, two from the UK, one each from Switzerland, Malaysia, Belgium, Finland, France, Italy, Ireland, Spain, Denmark, Canada, the Netherlands, India and two were joint-venture projects with Japan and Germany. A total of 510 employment opportunities were created by these RDCs, of which 89.8 per cent will be filled by Malaysians.

Projects Approved in 2008

One project has been approved for RDC in 2008. The RDC approved was BD Agriculture (Malaysia) Sdn. Bhd., a wholly owned German company, which set up a base in Malaysia to distribute and market its poultry farming equipment mainly in the Asia-Pacific region and also to all its related companies worldwide. Their components and parts are sourced mainly from suppliers in Europe, USA, Brazil, South Africa and Asia.

To date, eleven MNCs have started their RDC operations. These RDCs are:

i. Osram Opto Semiconductors from Germany
ii. BMW from Germany
iii. UMW Toyota, Japan
iv. Scapa Group from the UK
v. Agfa from Belgium
vi. Amer Sport from Finland
vii. the Sidel Group from France
viii. Acerinox from Spain

ix. the Kerry Group from Ireland
x. EPCOS AG from Germany
xi. the Siteco Group from Germany

Regional/Representative Offices

Foreign companies are also encouraged to set up regional offices (RO) and representative offices (RE) in Malaysia mainly to plan or coordinate business activities for the corporations' affiliates, subsidiaries and agents in Malaysia and in the region. Other activities performed include information gathering and feasibility studies pertaining to investment, sourcing and business opportunities in Malaysia and in the region. The outcome of such activities provides the opportunity for these establishments to move forward to set up IPCs/RDCs in the long run. To date, a total of 701 ROs and 1,511 REs have been approved.

Major ROs and REs approved include Aramco from Saudi Arabia; Rolls Royce, Westland Helicopters and SS8 Networks from UK; Peugeot and Citroen from France; Parsons, Nexus Media, Lifecore Biomedical, WJ Communications, Gregg Protection, XM Satelite Radio from USA; Korea Petroleum, Hyundai, Samsung and Xener System from Republic of Korea; Infrasys, Soft Imaging System, D-Link, Lawson Software, Kodak Polychrome from Singapore; Tango Telecom and Red Hat from Ireland; Clarity and Petrosys from Australia; T&A Mobile Phones and QAD from Hong Kong, Maersk from Denmark; Pelikan from Switzerland; Mitra Energy from Bermuda, Sondex from UAE, Al Jazeera from Qatar, Total Waste Management from Scotland and Keihin from Thailand.

Most of the ROs use Malaysia as a base to coordinate and support their operations in the Asia Pacific region.

Projects Approved in 2008

In 2008, a total of 60 ROs and 81 REs were approved compared with 49 ROs and 84 REs approved in 2007. Total investments of these offices was estimated at RM83.8 million per annum (2007: RM85.4 million). The major sources of investments were Singapore (31), the USA (12), UK (10), and Japan (9). The major approved ROs and REs include:

- Chemtech International Ltd (UK)
- PA Sport International Limited (UK)
- Orana A/S Denmark (Denmark)
- Vivax Corporation (USA)
- Alltec Corporation (USA)
- Norsar Innovation AS (Norway)
- Thien Y Transport-Maritime Service Co. Ltd. (Vietnam)
- Stora Enso (Singapore)
- Think Global Asia (Norway)

The total investments of these ROs and REs were RM44.6 million and RM39.2 million respectively with both establishments expected to create employment opportunities to 359 Malaysians.

As Malaysia continues to move up the value chain in attracting and promoting more high-end manufacturing activities, there is a need to concentrate efforts on promoting more MNCs to establish regional establishments such as OHQs, IPCs and RDCs in Malaysia. These establishments, besides providing knowledge-based and high value managerial and technical job opportunities for Malaysians, also enhance international connectivity and linkages with the global economy.

From a promotional standpoint, the presence of these regional establishments enhances the country's image as a profitable and viable investment destination. As these types of establishments involve managing and coordinating the functions of multiple operations within the region and globally, the setting up of such operations in the country, will be a testimony to Malaysia's favourable and conducive investment environment in terms of manpower, infrastructure, banking and financial facilities as well as its strategic location.

SUPPORT SERVICES

Support services such as research and development (R&D), renewable energy and energy conservation, integrated logistics services, integrated market support services, cold chain services, central utilities facilities, sterilisation, aviation services and engineering design services are among the services activities currently being promoted to enhance value creation within the manufacturing sector in Malaysia. To further encourage the growth of these support services, the Government has put in place attractive incentives in the form of Pioneer Status (PS) and Investment Tax Allowance (ITA) to promote investments in these services.

In 2008, a total of 245 support services projects were approved with tax incentives, involving total investments of RM2.1 billion. Domestic investments accounted for 67.4 per cent or RM1.4 billion of the total investments, while foreign investments accounted for 32.6 per cent or RM679.6

Table 5
Investments in Approved Support Services, 2008

Support Services	2008	
	No.	RM mil.
Renewable Energy	21	1,107.3
Research & Development (R&D)[6]	215	449.7
Aviation Services/ Facilities	2	281.5
Integrated Logistics Services (ILS)	2	134.8
Sterilisation Services	2	56.2
Engineering Design	1	36.7
Energy Efficiency/ Conservation	1	16.7
Integrated Market Support Services (IMS)	1	2.1
Total	**245**	**2,085.0**

[6] *Approval statistics for other R&D financial assistance schemes cover the period January - September 2008 only.*

million. Of the projects approved, 21 were approved for generation of energy using renewable resources, 215 for R&D, two each for integrated logistics services, sterilisation services and aviation services, one each for energy conservation, integrated market support services and engineering design services.

Renewable Energy

Renewable energy has been identified as the fifth fuel resource for Malaysia after coal, oil, natural gas and hydro. The main renewable resources for generation of energy include biomass such as wastes from oil palm, rice, sugar cane, timber, sawmill and paper recycling mills; municipal wastes; biogas from landfills, palm oil mill effluent, animal wastes etc.; mini-hydro; solar; and wind power. Renewable energy from biomass and solar energy accounts for 90 per cent of the renewable energy potential.

Oil palm waste is the main source of biomass for renewable energy in view of the fact that there are abundant palm oil plantations in the country. It is estimated that the oil palm industry generates 65.5 million tonnes of waste yearly in the form of empty fruit bunches (EFB), fibres, shells and palm oil mill effluents (POME). If all the wastes are fully utilised and converted into renewable energy, it would be able to generate 2,400 megawatts (MW) of electricity.

Malaysia's climatic condition is conducive for generating solar energy and thus it is an important source of renewable energy. To intensify the usage of solar energy as an alternative source of energy, the Government launched the SURIA 1,000 programme in 2006 that enables premises to install solar building integrated photovoltaic (BIPV) systems. In line with the emerging demand for solar energy globally, the Government is intensifying the promotion of investments in solar modules production.

Under the Ninth Malaysia Plan, the Government will continue to encourage the utilisation of renewable energy. The Government has targeted about 350 megawatts (MW) of electricity to be generated from renewable resources by 2010. The strategies adopted to intensify the development of renewable energy include:

- Promotion of various renewable energy resources;
- Establishment of renewable energy demonstration projects;
- Research commercialisation; and
- Financial and fiscal incentives to potential energy developers.

To encourage the generation of energy using renewable resources, the Government has introduced incentives in the form of Pioneer Status (PS) with full tax exemption for a period of 10 years or Investment Tax Allowance (ITA) of 100 per cent for a period of five years for applications received until 31 December 2010. The incentives are available for companies generating electricity using renewable resources either for their own consumption or for sale through the distribution grid system. Other companies in the same group are also eligible to apply for the incentives even though one company in the group has been granted the incentive.

Companies generating renewable energy are eligible to be considered for import duty and sales tax exemption on machinery, equipment, parts and components used to generate energy which are not produced locally and sales tax exemption on equipment purchased from local manufacturers. In order to widen the usage of renewable energy, the Government has, under Budget 2009, extended the import duty and sales tax exemption facilities to importers including photovoltaic service providers approved by the Energy Commission for imported solar photovoltaic system equipment for use by third parties, and sales tax exemption on the purchase of solar heating system equipment from local manufacturers.

To date, a total of 73 projects have been granted PS or ITA incentives for renewable energy, involving total investments of RM2.4 billion. The approved projects are capable of generating 329.7 MW of electricity, 683,575.4 tonnes of steam, 369.9 giga joules (GJ) of heat and 1000 refrigerant tonnes (RT) of chilled water, utilising 11.6 million tonnes of biomass per annum. Sources of biomass are oil palm, wood, rice, sugarcane and municipal wastes. Of the 73 projects approved, 34 are in operation of which, 20 are located in Peninsular Malaysia and 14 in Sabah.

Projects Approved in 2008

Increasing awareness of the importance of sustainable and environmental friendly development, coupled with abundant supply of biomass, as well as increasing fuel prices in the first three quarters of 2008, have resulted in the increase in the number of projects and investments for renewable energy. In 2008, a total of 21 renewable energy projects were approved with tax incentives (2007: 10 projects). Total investments in these projects amounted to RM1.1 billion, an increase of RM768.8 million from RM338.5 million in 2007.

Of these, 20 projects are new projects and one project is a diversification of an existing plant. These projects would generate energy in the form of electricity, steam or heat using biomass. Of these, 17 projects would be utilising 2.9 million tonnes of palm oil mill wastes per annum, two projects would be utilising 691,200 m^3 of biogas, one project would be utilising 150,336 tonnes of sawmill wastes and another one project would be utilising 10,000 m^3 of hydro to generate energy. In terms of the types of energy generated, nine were for generation of both electricity and steam, eight for electricity generation, two for generation of steam and one for generation of both steam and heat. Total energy generated by these projects is estimated at 129 MW of electricity, 682,417 tonnes of steam and 219.2 GJ of heat. From the energy generated, 96 MW of electricity, 200,221 tonnes of steam and 8.4 GJ of heat would be sold while the balance would be for own consumption.

Among the major approved projects were:

- A new foreign-owned project involving investments of RM345 million, to generate 24.4 MW of electricity and 150 tonnes of steam utilising 448,200 tonnes of palm oil biomass (EFB) per annum. Of the energy generated, 20.4 MW of electricity and 110 tonnes of steam will be sold to the palm oil industrial cluster in Sabah and to Sabah Electricity Sdn. Bhd. (SESB);

- A new Malaysian-owned project undertaken by an existing palm oil mill, with investments of RM210.3 million, to generate 1.5 MW of electricity utilising 259,200 tonnes of palm oil mill effluent per annum. One MW of the electricity generated will be sold to Tenaga Nasional Bhd. (TNB); and

- A new joint-venture project with investments of RM85.5 million, to generate 11.4 MW of electricity utilising 180,000 tonnes of palm oil biomass (EFB), of which 10 MW of the electricity generated will be sold to SESB.

Research and Development

Research and development (R&D) services include industrial design (product and process development including designing and prototyping) and research services provided by design houses, contract R&D companies, R&D companies, and approved R&D institutes/research companies.

As at 31 December 2008, a total of 101 R&D projects involving investments of RM1.4 billion have been granted PS/ITA incentives. Foreign investments in these R&D projects amounted to RM928.4 million while domestic investments totalled RM432.1 million. R&D investments were mainly in the E&E (35 projects/ RM685.3 million), chemicals and chemical products (15 projects/RM215.3 million), machinery and equipment (10 projects/ RM141.1 million), transport equipment (19 projects/ RM78.9 million), textiles and textile products (1 project/RM72.1 million) and plastic products (2 projects/ RM67.8 million) industries. A total of 3,075 employment opportunities would be created by these projects.

Projects Approved in 2008

In 2008, three R&D projects were approved with PS/ITA incentives i.e. two R&D companies and one in-house R&D project, with total investments of RM9.7 million (2007: 7 projects/RM19 million).

In addition, for the period January - September 2008, a total of 212 R&D projects with total investments of RM440 million were approved under other financial assistance schemes. These included:

- 15 projects with investments of RM17 million approved under the MSC R&D Grant Scheme (2007: 10 projects/ RM11 million);

- 175 projects with investments of RM262 million approved under the Demonstrator Applications/ Inno/ Techno/ Science Grant Scheme (2007: 192 projects/RM94 million); and

- 22 projects with investments of RM161 million approved under the Commercialisation of R&D Fund (CRDF)/TAF Grant Scheme (2007: 45 projects/RM369 million).

Aviation Services/Facilities

The aviation industry has been identified by the Government as one of the potential growth areas to further enhance the economy. Developments in the aviation industry provide opportunities for the transfer of advanced technologies and create linkages in engineering, electronics, composite materials and other industries in the economy.

In 2008, two projects were approved to provide aviation services/facilities with total investments of RM281.5 million. Domestic investments in these projects amounted to RM100 million while foreign investments totalled RM181.5 million. These projects were for the transformation of the existing Terminal 3 at Sultan Abdul Aziz Shah Airport, Subang into a regional general and corporate aviation hub, regional aviation centre and commercial nexus, and for the provision of air charter services.

The project to transform Terminal 3 in Subang will be the catalyst to attract world class aviation companies to Malaysia. The project aims to expand the aviation industry, increase air traffic, in particular private jets and attract key decision makers and global captains of industries to Malaysia. The facility in Subang will be used not only by private jet owners and operators, but also by commercial airlines such as Firefly, Air Asia and Berjaya Air. An international aviation company has started operations in Subang providing air charter services, using Subang as its regional hub for its operations in Asia.

Integrated Logistics Services

Integrated logistics services (ILS) cover freight forwarding, warehousing, transportation and other related value-added services such as distribution, procurement and supply chain management on an integrated basis.

The logistics industry serves as an important link for Malaysia's industrialisation and international trade. With the timelines set for the liberalisation and integration of the logistics sector under the ASEAN Framework Agreement on Services (AFAS) i.e. by 2013, it is timely to prepare the local logistics sector to compete globally. The current trend among MNCs to outsource logistics activities to third party logistics service providers augurs well for the growth of this sector. It also encourages logistics service providers to engage in supply chain management directly with their customers on a global basis. An effective logistics system integrates both the supply chain within the country and the networks at the international level.

The Government by introducing the Integrated Logistics Service (ILS) incentive in 2002, has encouraged local logistics service providers to consolidate and merge to meet the global logistics standards. To date, a total of 21 companies with a total project cost of RM2.1 billion have been granted the ILS incentive. Of these, five were new projects and 16 were expansion projects.

In 2008, a local logistics company namely Bersatu Integrated Logistics Sdn. Bhd. was granted incentive to undertake integrated logistics activities, with a total investment of RM40.6 million. This project is a merger effort between three existing companies; Bersatu Freight Agency Sdn. Bhd., Bersatu Import & Export Sdn. Bhd. and Bersatu Record Management & Storage Sdn. Bhd.

Another local logistics company namely Freight Management (M) Sdn. Bhd. was approved with ILS incentive to expand its existing operation. This company will invest an additional RM43.9 million to its existing RM50.3 million operation. This company which offers international freight services is listed on the Main Board of Bursa Malaysia. The company's main activities include freight by air, marine and land modes, warehousing, transportation, customs clearance/matters, distribution and supply chain management. The expansion project will concentrate on establishing the company as a one stop centre for its group of companies through investment in IT facilities.

Sterilisation Services

Sterilisation is a process to exterminate bacteria on medical, pharmaceutical and cosmetic products, toiletries, food packaging etc. Three types of sterilisation processes are available in Malaysia i.e. ethylene oxide sterilisation, gamma sterilisation and electronic beam sterilisation. In 2008, two projects were approved with tax incentives to undertake irradiation services, involving investments of RM56.2 million. These projects would provide irradiation services in the form of gamma and electron beam sterilisation to industries such as food and medical devices industries. To date, four companies have been granted tax incentives to undertake sterilisation activities, with total investments of RM147.5 million.

Engineering Design Services

The engineering supporting industry in Malaysia is now diversifying and moving towards providing total solutions to meet the advanced requirements of high value-added and high technology industries. In 2008, a project was granted tax incentive to undertake engineering design for gas processing, petroleum refining and petrochemical industries, involving total investments of RM36.7 million.

Energy Efficiency/ Conservation

The Government encourages companies to invest in energy efficiency/conservation activities by providing attractive tax incentives and facilities for energy efficiency/ conservation consultants or service providers as well as companies investing in energy efficiency/ conservation for their own consumption. These tax incentives and facilities are in the form of PS or ITA and import duty and sales tax exemption on machinery, equipment, parts and components. To further encourage the usage of energy efficiency equipment, the Government has under the 2009 Budget, extended import duty and sales tax exemption on energy efficiency equipment such as high efficiency motors and insulation materials to importers including authorised agents approved by the Energy Commission; as well as provide sales tax exemption on the purchase of locally manufactured energy efficiency consumer goods such as refrigerators, air conditioners, lightings, fans and televisions.

To date, 14 projects have been granted PS/ITA incentives for energy efficiency/ conservation activities, involving total investments of RM8.5 billion. Of the projects approved, seven projects (RM9.7 million) involved energy efficiency/conservation service providers while seven projects (RM8.5 billion) were energy efficiency/conservation projects for own consumption. All the 14 projects are located in Peninsular Malaysia and have started operations. These projects would be able to conserve about 532MW of electricity per annum.

In 2008, a foreign-owned glove manufacturing company was granted tax incentive to undertake an energy conservation project for its own consumption, involving investments of RM16.7 million. The project uses vapour absorption chiller which is energy saving and environmental friendly.

Integrated Market Support Services

Integrated Market Support Services (IMS) comprise the activities of branding, market research and customer relationship management. To date, six companies have been granted PS incentive to undertake integrated market support activities.

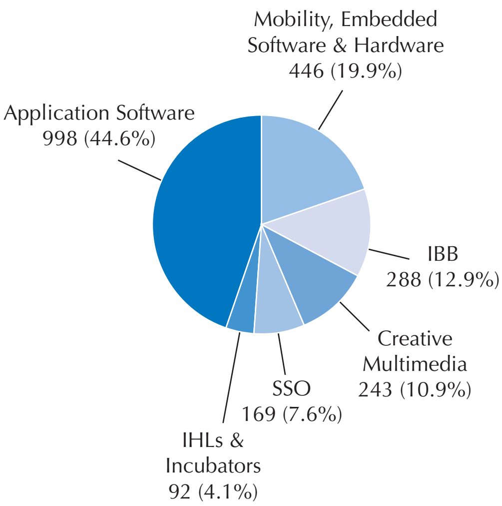
In 2008, a joint-venture project between Malaysia and Taiwan was approved with tax incentive to undertake integrated market support activities, involving investments of RM2.1 million (2007: 2 projects/RM11.1 million). The activities involved branding (i.e. brand design and development, brand promotion and packaging design); research (i.e. feasibility study, consumer research, market research and research on product development); as well as customer relationship management (i.e. customer database management and customer retention/loyalty).

MSC STATUS COMPANIES

As at 31 December 2008, a total of 2,236 companies were granted MSC Status by the Multimedia Development Corporation Sdn. Bhd. (MDeC). Of these, 1,656 were majority Malaysian-owned, 512 were majority foreign-owned and 68 were with equal ownership.

The 2,236 companies are grouped into 6 main technologies namely creative multimedia, internet-based business, shared services and outsourcing, application software and mobility embedded hardware & software (MeSH), and institutions of higher learning & incubators. Of these 2,236 companies, 1,786 or 80 per cent are in operation.

Graph 35
Approved MSC Status Companies by Technology Cluster as at 31 December 2008



Source: Multimedia Development Corporation (MDeC)

The MSC Malaysia Annual Impact Survey 2008 indicates the total operating expenditure of companies which participated in the survey amounted to RM10.4 billion. This is an increase of 37 per cent compared with RM7.6 billion reported in the 2007 MSC Malaysia Impact Survey. Total sales of these companies were reported at RM17.1 billion.

In 2008, a total of 242 companies were granted the MSC Status with approved investments amounting to RM1.8 billion. Domestic investments amounted to RM1.4 billion (79%) while foreign investments totalled RM359.6 million (21%). A total of 14,206 employment opportunities are expected to be created. In 2007, a total of 266 companies were awarded MSC Status with approved investments amounting to RM3.7 billion.

Of the 242 companies awarded MSC Status in 2008, a total of 169 (67%) were wholly Malaysian-owned, 36 (15%) were wholly foreign-owned, while the remaining 37 (18%) were joint-venture projects.

REAL ESTATE (HOUSING)

Investments in real estate cover the housing industry (excluding commercial buildings) in Peninsular Malaysia.

Real estate was the largest services sub-sector in terms of investments approved for the period January-September 2008. A total of 683 projects were approved with total investments amounting to RM20.5 billion. Of this, domestic investments totalled RM20.2 billion (98.3%). In comparison, the total investments in 2007 for this sub-sector was RM21.6 billion (1,004 projects).

FINANCIAL SERVICES

Investments in financial services cover:
- banking;
- insurance; and
- capital markets (venture capital, fund management, investment advisory and brokerage).

A total of 66 projects were approved for the period January-September 2008, with investments of RM4.3 billion. Domestic investments amounted to RM2.5 billion (57.7%) while foreign investments totalled RM1.8 billion (42.3%).

Banking attracted the largest amount of investments in the financial services sub-sector with RM3.9 billion or 91.7 per cent, followed by insurance (RM259.5 million) and capital markets (RM93.2 million).

Foreign investments under the Islamic Banking category amounted to RM1.6 billion (38.3%) as a result of participation by investors from Kuwait and Bahrain in the Malaysian financial services sector.

Table 6
Approved Investments in Financial Services, 2008 (January-September) and 2007

Activity	2008 (Jan-Sept)		2007	
	No.	RM mil.	No.	RM mil.
Banking	20	3,914.6	14	794.1
Insurance	17	259.5	9	28.8
Capital Markets	29	93.2	30	475.1
Total	**66**	**4,267.3**	**53**	**1,298.0**

ENERGY

Investments in energy cover independent power producers (IPPs); and generation, transmission and distribution of electricity by Tenaga Nasional Bhd. (TNB), Syarikat SESCO Bhd. (SESCO) and Sabah Electricity Sdn. Bhd. (SESB).

For the period January-September 2008, a total of 106 projects with investments of RM3.8 billion were approved in this sub-sector, all of which were domestic investments. These include 105 projects in generation, transmission and distribution of electricity with investments amounting to RM2.9 billion and one IPP project in Sabah (RM546.0 million). In 2007, investments in this sub-sector amounted to RM5.5 billion.

TELECOMMUNICATIONS

Investments in the telecommunications sub-sector cover network facilities, network services, application services (including content application services), post and broadcasting.

For the period January-September 2008, a total of 12 projects were approved in this sub-sector, with total investments of RM2.8 billion, all of which were domestic investments. In comparison, a total of nine projects were approved for the whole of 2007, with investments of RM4.8 billion (all domestic investments).

DISTRIBUTIVE TRADE

Investments in the distributive trade sub-sector cover:

- Projects approved with foreign participation in wholesale and retail trade;
- Hypermarkets/supermarkets, department stores and direct selling;
- Projects approved under the Petroleum Development Act, 1974; and
- Franchising.

A total of 642 projects were approved with investments of RM1.8 billion for the period January-September 2008. Domestic investments amounted to RM772.7 million (43.2%) while foreign investments totalled RM1.0 billion (56.8%). In comparison, investments approved in 2007 amounted to RM2.9 billion.

Investments in distributive trade for the period January - September 2008 were in:

- 13 hypermarket and supermarket projects, with investments of RM1.3 billion or 69.9 per cent of total investments in this sub-sector;
- 186 projects in wholesale and retail trade with investments of RM226.7 million;
- 13 projects in direct selling with investments of RM193.4 million;
- 355 projects approved under the Petroleum Development Act with investments of RM93.9 million; and
- 75 projects in franchising with investments of RM23.7 million.

HOTELS AND TOURISM

A total of 35 projects were approved in the hotels and tourism sub-sector for the period January - September 2008, with investments of RM1.8 billion. Domestic investments amounted to RM1.7 billion (95.5%) while foreign investments totalled RM78.9 million (4.5%).

Projects approved include new and expansion projects for hotels (29 projects with investments of RM1.7 billion) and tourism projects (6 projects with investments of RM56.1 million).

Table 7
Approved Investments in Hotels and Tourism, 2008 (January-September) and 2007

Activity	2008 (Jan-Sept)		2007	
	No.	RM mil.	No.	RM mil.
Hotel projects:				
- With incentives	14	860.1	34	394.0
- Others	15	837.1	12	786.7
Tourism projects:				
- With incentives	-	-	1	22.0
- Others	6	56.1	4	109.1
Total	**35**	**1,753.3**	**51**	**1,311.8**

TRANSPORT

Investments in transport cover:

- maritime transport;
- aviation; and
- highway construction and maintenance.

For the period January-September 2008, a total of 12 projects were approved with investments of RM679.5 million. Domestic investments amounted to RM524.3 million (77.2%) and foreign investments totalled RM155.2 million (22.8%). In comparison, 56 projects with investments of RM16.7 billion were approved in the transport sub-sector in 2007.For the period January-September 2008, five projects were approved in the maritime sub-sector with investments amounting to RM627.1 million while seven projects were approved for aviation (RM52.4 million).

HEALTH SERVICES

Investments in health services cover approvals for private healthcare institutions.

For the period January-September 2008, approvals were granted to 18 private healthcare institutions (comprising hospitals, maternity homes, nursing care centres, and medical specialist centres) involving investments of RM97.2 million. Domestic investments in this sub-sector amounted to RM93.9 million (96.6%).

In comparison, investments in health services for the whole of 2007 amounted to RM1.0 billion (8 projects).

EDUCATION SERVICES

Investments in education services cover private colleges/universities; private education institutions; and skills centres.

For the period January-September 2008, a total of 133 projects were granted approval for the establishment of educational institutions, involving investments of RM45.4 million. Domestic investments amounted to RM45.2 million (99.6%).

Of the RM45.4 million, a total of RM32.6 million (71.8%) was for the development of skill centres, followed by private education institutions (RM6.6 million or 14.5%) and private colleges/universities (RM6.2 million or 13.7%).

In comparison, investments in education services for the whole of 2007 totalled RM347.9 million (123 projects).

5

Investment Outlook

5 INVESTMENT OUTLOOK

Malaysia continued to be an attractive investment destination for high value-added and capital-intensive manufacturing projects in 2008, improving on the strong performance achieved in 2007. Investments amounting to RM62.8 billion were approved in 2008 compared with RM59.9 billion in 2007. Approved investments in 2008 exceeded the average annual investment target of RM27.5 billion set under the Third Industrial Master Plan (IMP3).

Malaysia was able to attract significant levels of foreign investments into the manufacturing sector amidst the slower global economic growth in 2008. Foreign investments rose to an all time high of RM46.1 billion or 38 per cent higher than the RM33.4 billion achieved in 2007. This was mainly due to the approval of several large projects involving foreign participation which is a reflection of Malaysia's success in attracting capital and technology intensive and high value-added projects.

In the previous five years (2002-2006), domestic investments in the manufacturing sector averaged about RM14.9 billion per annum. In 2007, a record level of domestic investments amounting to RM26.5 billion was achieved largely due to the approval of several capital-intensive projects. In 2008, approved domestic investments amounted to RM16.7 billion, returning to the average levels recorded in the previous years.

Investments in the services sector for the period January-September 2008 amounted to RM39.0 billion compared with RM66.2 billion for the whole of 2007. The Government is looking at liberalising the services sector in stages so that it can achieve its potential as a major contributor to investments and economic growth in the future.

The global economic slowdown and waning investor confidence is expected to affect FDI flows in the coming years. In this context, Malaysia will face a more challenging task in attracting FDI as well as domestic investments into the manufacturing and services sectors.

Against this backdrop, Malaysia has announced a stimulus package to revive the economy including stimulating private investments both foreign and domestic. Measures will continue to be undertaken to improve the investment environment through improvements in the delivery system, liberalisation policies, reducing the cost of doing business as well as other facilitation measures. Efforts will also be intensified to promote investments in new growth areas including alternative energy sources. Malaysia will continue to target and attract investments in high value-added and technology intensive projects.

Malaysia's expanding economic and business links with other developing economies particularly the People's Republic of China, India and the Middle East is expected to help reduce the impact of the global economic slowdown in developed countries. The preferential access accorded under the ASEAN Free Trade Area (AFTA) is also expected to boost business and economic activities within this region and this will provide opportunities for foreign and domestic investors to tap into the vast regional market.

Tables

Table 1

APPROVED MANUFACTURING PROJECTS, 2008 AND 2007

	New		Expansion/ Diversification		Total	
	2008	**2007**	**2008**	**2007**	**2008**	**2007**
Number	548	625	371	324	919	949
Potential Employment	58,518	65,703	42,655	31,970	101,173	97,673
Total Proposed Capital Investment (RM million)	41,992.0	31,150.0	20,793.0	28,782.2	62,785.0	59,932.2
- Local (RM million)	7,769.4	13,875.6	8,916.8	12,630.7	16,686.2	26,506.3
- Foreign (RM million)	34,222.6	17,274.4	11,876.2	16,151.5	46,098.8	33,425.9

Table 2

NEW MANUFACTURING PROJECTS APPROVED BY SIZE OF CAPITAL INVESTMENT, 2008 AND 2007

Size of Capital Investment	2008				2007			
	Number	Domestic Investment (RM million)	Foreign Investment (RM million)	Total Capital Investment (RM million)	Number	Domestic Investment (RM million)	Foreign Investment (RM million)	Total Capital Investment (RM million)
Less Than RM 2.5 million	119	157.2	11.0	168.2	160	175.0	29.6	204.6
RM 2.5 million - < RM 5.0 million	82	247.2	39.2	286.4	97	276.9	73.8	350.7
RM 5.0 million - < RM 10.0 million	104	558.2	170.9	729.1	111	598.8	182.7	781.5
RM 10.0 million - < RM 50.0 million	187	2,398.7	1,324.7	3,723.4	167	2,354.2	1,294.1	3,648.4
RM 50.0 million- < RM 100.0 million	21	786.2	637.9	1,424.1	45	1,782.6	1,151.5	2,934.2
RM 100.0 million - < RM 500.0 million	24	2,465.2	2,527.0	4,992.2	29	2,131.8	2,964.3	5,096.1
RM 500.0 million - < RM 1.0 billion	5	671.8	2,248.1	2,919.8	11	2,490.4	4,638.2	7,128.6
RM 1.0 billion & Above	6	484.9	27,263.9	27,748.8	5	4,065.9	6,940.1	11,006.0
Total	**548**	**7,769.4**	**34,222.6**	**41,992.0**	**625**	**13,875.6**	**17,274.4**	**31,150.0**

Table 3
APPROVED MANUFACTURING PROJECTS BY INDUSTRY, 2008 AND 2007

Industry	2008					2007				
	Number	Employment	Domestic Investment (RM million)	Foreign Investment (RM million)	Total Capital Investment (RM million)	Number	Employment	Domestic Investment (RM million)	Foreign Investment (RM million)	Total Capital Investment (RM million)
Basic Metal Products	53	8,289	5,321.6	20,446.6	25,768.2	52	7,133	7,183.8	4,989.6	12,173.4
Electronics & Electrical Products	132	34,196	440.9	17,332.1	17,773.0	144	32,455	1,374.5	13,737.1	15,111.6
Transport Equipment	73	7,732	2,036.9	853.1	2,890.0	53	4,581	889.4	306.5	1,195.9
Food Manufacturing	87	6,029	1,711.2	1,070.2	2,781.5	75	5,465	2,014.1	369.2	2,383.3
Petroleum Products (inc.Petrochemicals)	16	487	1,503.0	1,246.6	2,749.6	17	1,050	8,497.0	5,335.4	13,832.4
Chemicals & Chemical Products	70	2,864	1,435.4	1,221.1	2,656.5	71	3,404	2,240.6	1,560.2	3,800.8
Non-Metallic Mineral Products	28	1,150	746.8	521.7	1,268.5	16	1,619	293.4	1,007.6	1,301.0
Machinery Manufacturing	93	5,377	738.2	519.3	1,257.6	98	4,437	545.7	1,219.6	1,765.3
Fabricated Metal Products	105	5,397	518.8	554.6	1,073.4	101	4,445	418.3	239.2	657.5
Wood & Wood Products	37	5,052	433.6	496.6	930.2	33	3,316	286.4	285.4	571.8
Paper, Printing & Publishing	26	2,237	430.2	480.3	910.5	36	3,191	1,083.4	1,814.6	2,898.0
Rubber Products	37	5,790	407.4	314.5	721.9	33	3,607	268.4	241.8	510.2
Plastic Products	60	5,687	424.4	211.4	635.8	92	4,220	510.7	565.9	1,076.6
Scientific & Measuring Equipment	18	2,056	141.1	378.9	520.1	19	1,310	196.6	175.6	372.2
Textiles & Textile Products	18	3,090	105.4	303.0	408.4	22	9,487	100.1	1,300.8	1,400.9
Furniture & Fixtures	45	4,605	197.9	17.8	215.6	51	5,242	208.6	100.5	309.1
Beverages & Tobacco	3	164	27.6	60.2	87.8	10	630	78.0	22.2	100.2
Leather & Leather Products	-	-	-	-	-	1	77	-	4.6	4.6
Miscellaneous	18	971	66.0	70.7	136.6	25	2,004	317.3	150.2	467.5
Total	**919**	**101,173**	**16,686.2**	**46,098.8**	**62,785.0**	**949**	**97,673**	**26,506.3**	**33,425.9**	**59,932.2**

Table 4
APPROVED MANUFACTURING PROJECTS WITH INVESTMENTS OF RM100 MILLION AND ABOVE, 2008

Industry	New				Expansion/Diversification				Total			
	Number	Domestic Investment (RM million)	Foreign Investment (RM million)	Total Capital Investment (RM million)	Number	Domestic Investment (RM million)	Foreign Investment (RM million)	Total Capital Investment (RM million)	Number	Domestic Investment (RM million)	Foreign Investment (RM million)	Total Capital Investment (RM million)
Basic Metal Products	8	999.7	19,651.3	20,651.1	4	3,548.6	665.7	4,214.3	12	4,548.3	20,317.0	24,865.3
Electronics & Electrical Products	9	-	10,005.5	10,005.5	8	-	6,478.2	6,478.2	17	-	16,483.6	16,483.6
Petroleum Products (inc.Petrochemicals)	3	544.5	698.2	1,242.7	3	878.1	522.8	1,400.8	6	1,422.6	1,221.0	2,643.6
Transport Equipment	2	263.8	544.0	807.7	1	1,138.0	-	1,138.0	3	1,401.8	544.0	1,945.7
Chemicals & Chemical Products	4	550.2	161.9	712.2	4	322.3	642.4	964.7	8	872.5	804.3	1,676.8
Food Manufacturing	2	702.3	127.2	829.4	2	226.5	402.8	629.3	4	928.8	530.0	1,458.8
Non-Metallic Mineral Products	1	51.3	49.3	100.7	2	600.3	165.7	766.0	3	651.7	215.0	866.7
Paper, Printing & Publishing	2	234.2	446.8	681.0	-	-	-	-	2	234.2	446.8	681.0
Wood & Wood Products	1	74.3	140.7	215.0	1	-	215.7	215.7	2	74.3	356.4	430.7
Scientific & Measuring Equipment	1	-	214.0	214.0	-	-	-	-	1	-	214.0	214.0
Machinery Manufacturing	1	100.5	-	100.5	1	100.0	-	100.0	2	200.5	-	200.5
Fabricated Metal Products	1	101.1	-	101.1	-	-	-	-	1	101.1	-	101.1
Total	**35**	**3,621.8**	**32,039.0**	**35,660.8**	**26**	**6,813.9**	**9,093.1**	**15,907.0**	**61**	**10,435.7**	**41,132.1**	**51,567.8**

Table 5

APPROVED NEW AND EXPANSION/ DIVERSIFICATION MANUFACTURING PROJECTS BY INDUSTRY, 2008 AND 2007

Industry	2008						2007					
	New		Expansion/ Diversification		Total		New		Expansion/ Diversification		Total	
	Number	Total Capital Investment (RM million)	Number	Total Capital Investment (RM million)	Number	Total Capital Investment (RM million)	Number	Total Capital Investment (RM million)	Number	Total Capital Investment (RM million)	Number	Total Capital Investment (RM million)
Basic Metal Products	31	21,000.6	22	4,767.6	53	25,768.2	36	9,884.4	16	2,289.0	52	12,173.4
Electronics & Electrical Products	47	10,445.4	85	7,327.5	132	17,773.0	59	7,613.8	85	7,497.8	144	15,111.6
Transport Equipment	48	1,554.5	25	1,335.5	73	2,890.0	35	886.9	18	309.1	53	1,196.0
Food Manufacturing	45	1,327.6	42	1,453.8	87	2,781.5	50	1,997.5	25	385.8	75	2,383.3
Petroleum Products (inc.Petrochemicals)	8	1,326.3	8	1,423.3	16	2,749.6	12	752.0	5	13,080.4	17	13,832.4
Chemicals & Chemical Products	35	1,302.4	35	1,354.1	70	2,656.5	50	2,614.2	21	1,186.5	71	3,800.8
Non-Metallic Mineral Products	13	189.3	15	1,079.2	28	1,268.5	13	426.2	3	874.8	16	1,301.0
Machinery Manufacturing	68	919.4	25	338.1	93	1,257.6	77	1,637.4	21	127.8	98	1,765.3
Fabricated Metal Products	82	889.0	23	184.4	105	1,073.4	82	524.4	19	133.1	101	657.5
Wood & Wood Products	21	541.6	16	388.6	37	930.2	23	490.7	10	81.1	33	571.8
Paper, Printing & Publishing	20	872.2	6	38.3	26	910.5	28	851.4	8	2,046.6	36	2,898.0
Rubber Products	23	307.4	14	414.5	37	721.9	21	352.0	12	158.2	33	510.2
Plastic Products	37	460.0	23	175.8	60	635.8	50	713.0	42	363.6	92	1,076.5
Scientific & Measuring Equipment	11	377.9	7	142.2	18	520.1	17	372.2	2	-	19	372.2
Textiles & Textile Products	8	171.0	10	237.3	18	408.4	13	1,320.0	9	81.0	22	1,400.9
Furniture & Fixtures	37	199.0	8	16.7	45	215.6	33	211.8	18	97.3	51	309.1
Beverages & Tobacco	1	3.4	2	84.4	3	87.8	5	69.7	5	30.5	10	100.2
Leather & Leather Products	-	-	-	-	-	-	1	4.6	-	-	1	4.6
Miscellaneous	13	104.9	5	31.8	18	136.6	20	427.8	5	39.7	25	467.5
Total	**548**	**41,992.0**	**371**	**20,793.0**	**919**	**62,785.0**	**625**	**31,150.0**	**324**	**28,782.2**	**949**	**59,932.2**

Table 6

APPROVED MANUFACTURING PROJECTS WITH MALAYSIAN MAJORITY* OWNERSHIP BY INDUSTRY, 2008 AND 2007

Industry	2008						2007					
	New		Expansion/ Diversification		Total		New		Expansion/ Diversification		Total	
	Number	Total Capital Investment (RM million)	Number	Total Capital Investment (RM million)	Number	Total Capital Investment (RM million)	Number	Total Capital Investment (RM million)	Number	Total Capital Investment (RM million)	Number	Total Capital Investment (RM million)
Basic Metal Products	22	762.0	19	4,043.6	41	4,805.6	24	4,514.4	10	1,854.5	34	6,368.9
Petroleum Products (inc.Petrochemicals)	6	718.2	4	1,256.8	10	1,975.0	10	257.9	3	12,286.8	13	12,544.7
Food Manufacturing	44	1,311.0	21	583.9	65	1,894.8	44	1,763.4	17	203.6	61	1,967.1
Transport Equipment	35	506.8	19	1,245.5	54	1,752.3	32	600.4	14	296.1	46	896.5
Chemicals & Chemical Products	27	997.8	20	524.6	47	1,522.5	36	1,576.9	11	649.7	47	2,226.6
Non-Metallic Mineral Products	9	144.1	3	711.4	12	855.5	6	117.5	1	161.5	7	279.0
Machinery Manufacturing	43	529.4	17	193.7	60	723.0	56	414.8	14	82.4	70	497.2
Fabricated Metal Products	64	410.0	12	105.9	76	515.9	69	420.1	6	44.2	75	464.3
Electronics & Electrical Products	26	184.0	32	286.6	58	470.6	37	979.2	23	423.7	60	1,402.8
Plastic Products	28	355.2	11	49.2	39	404.4	31	357.9	23	172.8	54	530.7
Rubber Products	18	160.7	8	240.0	26	400.7	15	180.1	6	88.0	21	268.1
Wood & Wood Products	16	259.8	11	126.3	27	386.1	21	236.8	7	50.3	28	287.1
Paper, Printing & Publishing	18	366.2	4	15.4	22	381.6	24	801.9	5	152.7	29	954.6
Furniture & Fixtures	35	193.1	8	16.7	43	209.8	28	165.7	11	45.5	39	211.2
Textiles & Textile Products	5	109.5	5	4.8	10	114.3	8	61.1	5	17.3	13	78.4
Scientific & Measuring Equipment	4	103.1	2	10.2	6	113.3	11	210.6	1	-	12	210.6
Beverages & Tobacco	1	3.4	-	-	1	3.4	4	46.2	4	20.2	8	66.4
Miscellaneous	12	63.0	2	9.3	14	72.3	18	409.9	1	0.1	19	410.0
Total	**413**	**7,177.3**	**198**	**9,423.9**	**611**	**16,601.1**	**474**	**13,115.0**	**162**	**16,549.3**	**636**	**29,664.3**

* *Projects with Malaysian equity ownership of more than 50 per cent.*

Table 7
APPROVED PROJECTS IN THE ENGINEERING SUPPORTING INDUSTRY BY SUB-SECTOR, 2008

Sub-sector	New				Expansion/Diversification				Total			
	Number	Domestic Investment (RM million)	Foreign Investment (RM million)	Total Capital Investment (RM million)	Number	Domestic Investment (RM million)	Foreign Investment (RM million)	Total Capital Investment (RM million)	Number	Domestic Investment (RM million)	Foreign Investment (RM million)	Total Capital Investment (RM million)
Moulds, Tools & Dies	13	30.9	47.8	78.7	5	0.9	24.9	25.8	18	31.7	72.7	104.4
Machining	17	35.8	22.5	58.2	2	21.1	0.3	21.4	19	56.9	22.7	79.7
Stamping	4	5.3	-	5.3	-	-	-	-	4	5.3	-	5.3
Casting	3	70.9	5.8	76.7	1	-	3.3	3.3	4	70.9	9.1	80.0
Surface Engineering	8	111.0	82.5	193.5	5	0.9	4.3	5.2	13	111.9	86.8	198.7
Total	**45**	**253.8**	**158.5**	**412.3**	**13**	**22.9**	**32.8**	**55.7**	**58**	**276.7**	**191.3**	**468.1**

Table 8
APPROVED PROJECTS IN ELECTRICAL & ELECTRONICS INDUSTRY BY SUB-SECTOR, 2008

Sub-sector	New				Expansion/Diversification				Total			
	Number	Domestic Investment (RM million)	Foreign Investment (RM million)	Total Capital Investment (RM million)	Number	Domestic Investment (RM million)	Foreign Investment (RM million)	Total Capital Investment (RM million)	Number	Domestic Investment (RM million)	Foreign Investment (RM million)	Total Capital Investment (RM million)
Consumer Electronics	2	7.4	134.4	141.8	5	14.3	1.1	15.5	7	21.7	135.6	157.3
Electronic Components	9	32.7	3,316.1	3,348.8	30	79.9	1,707.9	1,787.8	39	112.6	5,024.0	5,136.6
Industrial Electronics	13	45.1	201.0	246.2	27	79.0	3,125.3	3,204.3	40	124.1	3,326.3	3,450.4
Electrical Products	23	79.6	6,629.1	6,708.7	23	102.9	2,217.1	2,320.0	46	182.4	8,846.2	9,028.6
Total	**47**	**164.8**	**10,280.6**	**10,445.4**	**85**	**276.1**	**7,051.4**	**7,327.5**	**132**	**440.9**	**17,332.1**	**17,773.0**

Table 9

MANUFACTURING PROJECTS APPROVED WITH FOREIGN PARTICIPATION BY SOURCE, 2008 AND 2007

Country	2008		2007	
	Number	Foreign Investment (RM)	Number	Foreign Investment (RM)
Australia	20	13,105,834,743	17	1,685,051,556
USA	22	8,668,976,778	33	3,019,981,085
Japan	63	5,594,869,207	60	6,522,739,241
Germany	19	4,438,254,903	26	3,756,800,095
Spain	1	4,156,200,000	2	44,057,082
Singapore	112	2,004,260,964	108	2,952,175,965
Netherlands	19	1,795,674,697	9	1,690,415,209
British Virgin Islands	6	1,230,417,087	3	49,352,386
Taiwan	32	911,617,377	41	408,650,978
Switzerland	8	873,227,170	7	61,269,400
United Kingdom	23	850,464,793	20	385,254,150
France	9	250,923,969	4	787,048,319
Luxembourg	2	220,717,315	1	14,500,000
Republic of Korea	9	197,619,840	23	1,118,759,178
India	8	170,975,614	8	2,923,717,459
Thailand	6	144,612,315	6	137,673,197
Denmark	7	123,343,707	3	10,978,776
Belgium	5	105,099,996	4	213,496,294
Cyprus	3	104,308,500	-	-
United Arab Emirates	5	90,877,420	2	42,500,000
Hong Kong	7	83,557,592	14	59,781,174
Italy	2	70,727,000	4	52,153,198
Sweden	8	62,897,601	2	54,000,000
People's Republic of China	17	35,655,186	13	1,883,191,954
Austria	1	35,200,000	-	-
Indonesia	2	22,106,090	5	41,162,472
Syria	1	22,050,000	-	-
New Zealand	2	12,463,736	1	9,273,200
Bangladesh	2	7,921,360	-	-
Nigeria	1	7,322,225	-	-
South Africa	1	6,699,530	-	-
Ukraine	1	6,000,000	-	-
Myanmar	1	4,489,031	-	-
Philippines	1	3,357,500	1	4,461,011
Ireland	1	3,055,140	1	13,707,720
Iran	1	2,863,284	3	3,067,759,766
Saudia Arabia	1	2,000,000	-	-
Brunei	1	960,000	2	31,069,168
Norway	2	941,940	-	-
Vietnam	1	450,800	-	-
Canada	1	330,000	2	53,055,000
Panama	1	200,900	-	-
British India Ocean Territory	5	72,350	-	-
Egypt	1	48,006	1	532,190
Mauritius	1	**0	-	-
Cayman Islands	-	-	1	892,000,252
Bermuda	-	-	3	171,498,945
Turkey	-	-	1	19,687,236
Bahamas	-	-	1	10,650,000
Finland	-	-	1	9,027,004
Pakistan	-	-	1	2,353,400
Albania	-	-	1	114,153
Others	79	669,128,864	80	1,225,990,837
Total	***	**46,098,774,530**	***	**33,425,889,050**

** *Expansion of capacities or manufacture of additional products not involving additional capital.*
*** *The number of projects approved figures are not totalled to avoid double counting.*

Table 10
APPROVED MANUFACTURING PROJECTS BY STATE, 2008 AND 2007

State	2008						2007					
	New		Expansion/ Diversification		Total		New		Expansion/ Diversification		Total	
	Number	Total Capital Investment (RM million)	Number	Total Capital Investment (RM million)	Number	Total Capital Investment (RM million)	Number	Total Capital Investment (RM million)	Number	Total Capital Investment (RM million)	Number	Total Capital Investment (RM million)
Sarawak	22	13,718.9	17	1,450.0	39	15,168.9	13	518.1	10	516.3	23	1,034.5
Selangor D.E.	202	6,353.3	100	5,517.7	302	11,870.9	231	7,021.5	87	4,159.9	318	11,181.5
Johor D.T.	93	10,100.1	80	1,611.6	173	11,711.7	102	7,217.0	86	2,025.9	188	9,242.8
Penang	84	3,425.7	67	6,730.6	151	10,156.3	84	3,622.0	50	1,146.6	134	4,768.7
Melaka	28	3,554.4	13	80.1	41	3,634.5	19	1,007.0	19	2,830.7	38	3,837.7
Perak D.R.	26	2,135.3	24	994.7	50	3,130.0	46	1,510.2	13	524.4	59	2,034.6
Kedah D.A.	26	352.5	20	2,214.9	46	2,567.3	27	838.3	19	13,151.9	46	13,990.2
Negeri Sembilan D.K.	12	350.6	14	765.1	26	1,115.8	24	1,256.7	16	1,418.9	40	2,675.6
Pahang D.M.	11	867.3	12	213.5	23	1,080.7	18	790.0	10	773.8	28	1,563.8
Terengganu D.I.	4	313.2	5	679.1	9	992.3	9	6,148.2	2	15.0	11	6,163.2
Sabah	29	609.8	11	354.6	40	964.4	33	1,093.3	8	2,164.3	41	3,257.5
Perlis I.K.	1	79.0	1	91.3	2	170.3	1	7.1	1	-	2	7.1
Kuala Lumpur	8	104.0	4	13.8	12	117.8	11	39.4	1	52.9	12	92.4
Kelantan D.N.	1	17.6	2	66.0	3	83.6	7	81.2	2	1.5	9	82.7
Labuan	1	10.3	1	10.2	2	20.5	-	-	-	-	-	-
Total	**548**	**41,992.0**	**371**	**20,793.0**	**919**	**62,785.0**	**625**	**31,150.0**	**324**	**28,782.2**	**949**	**59,932.2**

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