MALAYSIA

PERFORMANCE OF THE MANUFACTURING AND SERVICES SECTORS

2007

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INTRODUCTION

1 INTRODUCTION

The Malaysian economy continued to strengthen in 2007 with Real Gross Domestic Product (GDP) registering a growth of 6.0 per cent in the first three quarters of 2007[1], compared with 5.9 per cent for the whole of 2006. The favourable performance was attributed to continued expansion in domestic demand and exports. Services was the fastest growing sector (9.9%) followed by construction (4.5%). The manufacturing sector grew by 2.3 per cent during this period.

Manufacturing

Manufacturing continued to be an important sector in the economy contributing to an estimated 30.3 per cent of GDP in 2007[2]. Value-added of the manufacturing sector expanded by 2.3 per cent in the first three quarters of 2007. Exports of manufactured products amounted to RM452.5 billion in 2007 compared with RM451.7 billion in 2006. Exports of manufactured products accounted for 74.8 per cent of Malaysia's total exports in 2007. Manufacturing is also a major contributor in terms of employment, accounting for an estimated 29.3 per cent of total employment in 2007.

The improved performance 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 1.4 per cent in 2007 (January-November). Sales of manufactured products amounted to RM474.3 billion in 2007 (January-November) exceeding the RM467.6 billion recorded in 2006 (January-November). Productivity in the sector, as measured by sales value per employee recorded a growth of 2.7 per cent in 2007.

The implementation of the Third Industrial Master Plan (IMP3) is expected to sustain the manufacturing sector as a major source of growth. Total investments in approved projects in the first two years of the IMP3 period, i.e. RM46 billion in 2006 and RM59.9 billion in 2007, have exceeded the average annual investment target of RM27.5 billion set in the IMP3.

[1] Department of Statistics.
[2] Economic Report 2007/2008, Ministry of Finance Malaysia.

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 accounted for the largest share of Malaysia's GDP. In 2007, it was estimated to contribute 53.2 per cent of GDP with a growth rate of nine per cent. Employment in the services sector was estimated at 5.9 million persons or 51.4 per cent of total employment in 2007.

Within the services sector, the finance, insurance, real estate and business services sub-sector maintained its position as the leading sub-sector contributing an estimated 15.7 per cent of GDP (RM78.7 billion).This was followed by the wholesale and retail trade sub-sector (12.2% or RM61.2 billion) and the transport, storage and communications sub-sector (7.4% or RM 37.4 billion).

During the IMP3, the services sector is expected to assume a pivotal role in economic development. Service activities targeted for promotion are business and professional services, distributive trade services, construction services, education and training services, tourism services, health services, logistics services and ICT services. In 2007, investment in projects approved in the services sector amounted to RM65.4 billion, surpassing the investment target of RM45.8 billion per annum set in the IMP3.

2

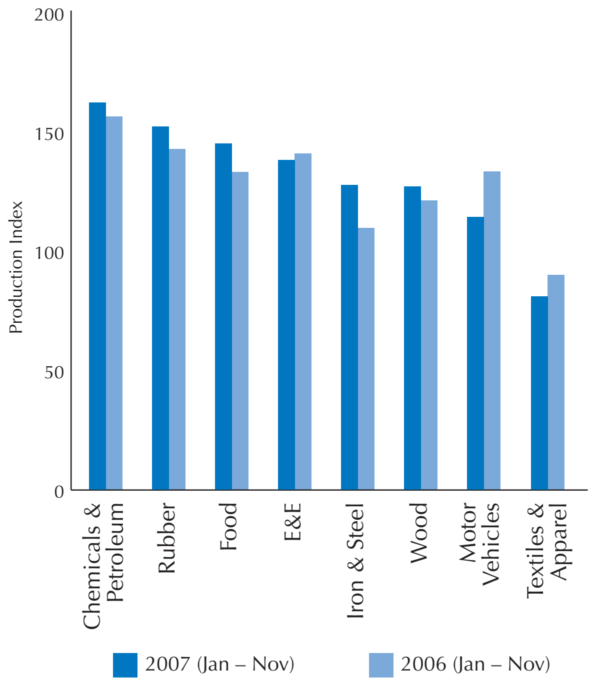
PRODUCTION, SALES AND EMPLOYMENT

2 PRODUCTION, SALES AND EMPLOYMENT

The Industrial Production Index (IPI)[3] of the manufacturing sector increased by 1.4 per cent to 140.9 in 2007[4] from 138.9 in 2006. The positive growth was driven by the increase in the indices of 47 out of a total of 86 industries covered in the survey by Department of Statistics (DOS).

billion in 2006. The electrical and electronics (E&E) industry contributed 36.9 per cent (RM174.9 billion) while the chemicals and petroleum products industry accounted for 30 per cent (RM142.4 billion) of the total sales of the manufacturing sector in 2007.

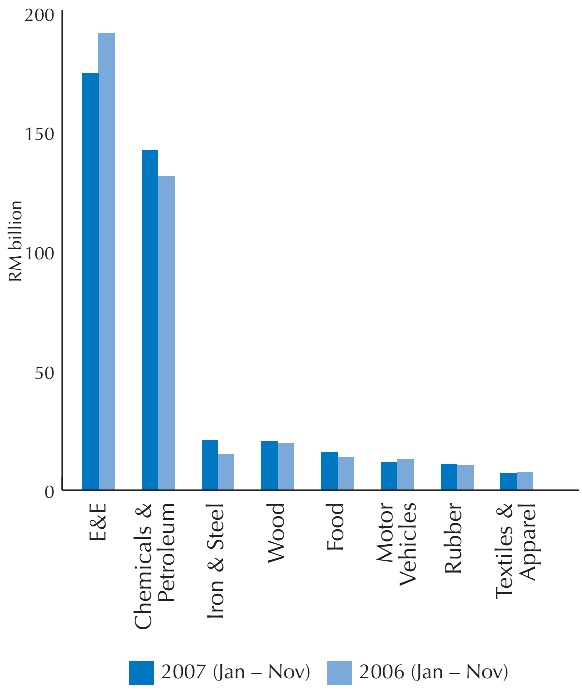
Graph 1
Production Indices of Selected Industries, 2007 and 2006



Note: Production Index (2000=100)

Source: Department of Statistics

Graph 2
Sales of Selected Industries, 2007 and 2006



Source: Department of Statistics

Sales value of the manufacturing sector increased by 1.4 per cent to RM474.3 billion in 2007[2] compared with RM467.6

Based on the monthly manufacturing survey by DOS, employment in the manufacturing sector in 2007 increased

[3] The IPI, published by the Department of Statistics, is a measure of the rate of change in the production of industrial commodities in real terms over time.

[4] Production, sales and employment data for 2006 and 2007 in this section are for the period January-November.

by 1.8 per cent to 1,103,124 persons compared with 1,083,396 persons in 2006.

Eight industries were selected for analysis for 2007 based on the impact of these industries on the overall manufacturing sector in terms of their contribution to exports, output and employment. The eight industries are E&E, chemicals and petroleum products, wood and wood products, iron and steel, transport equipment, food manufacturing, rubber products, and textiles and apparel.

Electrical and Electronics

The production index of the E&E industry contracted by 1.9 per cent in 2007. Despite a slowdown in the global semiconductor market, production of semiconductors and other electronic components expanded by 2.2 per cent in 2007. However, the output of radios, televisions and sound reproducing and recording equipment declined by 14 per cent.

Sales of the E&E industry decreased by 8.7 per cent to RM174.9 billion in 2007 compared with RM191.6 billion in 2006. Sales of computers and computer peripherals contracted by 21.6 per cent to RM49 billion in 2007 compared with RM62.6 billion in 2006. The decrease in demand for computers was due to the weaker consumer spending in the US, EU and Japan. Sales of semiconductors and other electronic components increased by 1.3 per cent to RM74.8 billion in 2007 compared with RM73.8 billion in 2006.

Employment in the E&E industry decreased by 3.3 per cent to 372,927 persons in 2007 compared with 385,784 persons in 2006.

Chemicals and Petroleum Products

Production of chemicals and petroleum products registered a growth of 3.6 per cent in 2007. The output of refined petroleum products increased by 5.4 per cent while the production of plastic products decreased by 3 per cent.

Sales of the chemicals and petroleum products industry expanded by 8.1 per cent to RM142.4 billion from RM131.7 billion in 2006. Sales of the refined petroleum products sub-sector increased by 7.2 per cent to RM80.5 billion. Other sub-sectors which recorded double digit growth included plastic extruded products (36%), pharmaceuticals (26.5%) and industrial gases (24.8%).

Employment in the chemicals and petroleum products industry increased by 2.8 per cent to 133,584 persons in 2007 compared with 129,979 persons in 2006.

Iron and Steel

Output of iron and steel in 2007 increased by 16.4 per cent mainly due to the improvement of demand in the domestic market. Implementation of Ninth Malaysia Plan projects and the positive economic outlook have resulted in the increase in the output, sales and employment of the iron and steel industry.

Sales of iron and steel industry recorded an increase of 24.7 per cent in 2007 due to higher prices of products as a result of the upward trend in raw materials cost.

Employment registered an increase of 9.8 per cent to 20,242 persons in 2007 partly due to the implementation of projects approved in the sector.

Wood and Wood Products

The production of wood and wood products increased by 4.9 per cent in 2007 compared with 2006 due to sustained demand from traditional export markets such as the USA, Japan and Europe. The production of paper products recorded an increase of 10.7 per cent in 2007 due to strong demand from the manufacturing industry especially for packaging products.

Wood and wood products (including wooden and cane furniture) recorded a 3.8 per cent increase in sales to RM20.5 billion in 2007 from RM19.7 billion in 2006. Products that registered growth in sales were laminboard, particle boards and other panels and boards (7%), builders carpentry and joinery (6.9%) and wooden and cane furniture (5.3%).

Employment in the wood and wood products industry (including wooden and cane furniture) recorded an increase of 4.2 per cent to 142,005 persons in 2007 from 136,339 in 2006.

Food Manufacturing

The food manufacturing industry registered an output growth of 8.9 per cent in 2007. The rice milling sub-sector expanded by 28.6 per cent while the manufacture of biscuits increased by 17.4 per cent. This increase is attributed to the increase in demand for rice and confectionery products.

Sales value of the food manufacturing industry increased by 16.1 per cent to RM16 billion in 2007 from RM13.8 billion in 2006. Condensed, powdered and evaporated milk (RM3.3 billion), cocoa products (RM2.9 billion) and sugar (RM2 billion) accounted for 51.3 per cent of total sales of the food manufacturing industry.

Employment in the food manufacturing industry increased by 6.5 per cent to 41,640 persons in 2007 from 39,107 persons in 2006.

Transport Equipment

Output of the transport equipment industry contracted by 8.3 per cent in 2007. The reduction in output was mainly contributed by the decrease in production of motor vehicles by 14.3 per cent and motor vehicle parts and accessories by 3.1 per cent. The reduction in production was due to the excess stock in the market following the low demand for motor vehicles in 2006. Production of motorcycles, however, increased by 4.3 per cent in 2007.

Sales of motor vehicles manufactured and assembled locally declined by 9.5 per cent to RM11.7 billion. The lower sales volume was due to the low trade-in value of cars and consumers adopting a wait-and-see approach in anticipation of new models and attractive purchase packages in the later part of 2007 and early 2008. Sales of motor vehicle parts and accessories increased by 2.1 per cent to RM5 billion. Motorcycle sales increased by 8.5 per cent to RM1.8 billion in 2007.

Employment in this industry totalled 53,277 persons in 2007 compared with 52,098 persons in 2006.

Rubber Products

Production of rubber products increased by 6.6 per cent in 2007. Production of rubber tyres and tubes increased by 7.4 per cent largely due to the increase in demand from the domestic and regional automotive sector. Malaysia remains the world leading producer and exporter of natural rubber gloves. Production of rubber gloves was at the same level in 2007 as in 2006.

Sales of rubber products recorded an increase of 4.3 per cent to RM10.8 billion in 2007 from RM10.4 billion in 2006. Sales of rubber gloves registered an increase of 1.4 per cent to RM5.1 billion in 2007 from RM5 billion in 2006.

Employment in the rubber products industry increased by 2.2 per cent to 65,050 persons in 2007. The rubber gloves industry employed the largest number of workers i.e. 33,207 persons.

Textiles and Apparel

Output of textiles and apparel decreased by 10 per cent in 2007. Sales of this sector also decreased by 6.4 per cent to RM7.1 billion from RM7.6 billion in 2006. Sales of all sub-sectors, except for knitted and crocheted fabrics, decreased in 2007. The reduction in sales value was due to price competitiveness of imported textiles and apparel that resulted in lower prices for domestic producers.

Employment in the textiles and apparel sector increased by 4 per cent to 67,375 persons in 2007 compared with 64,796 persons in 2006.

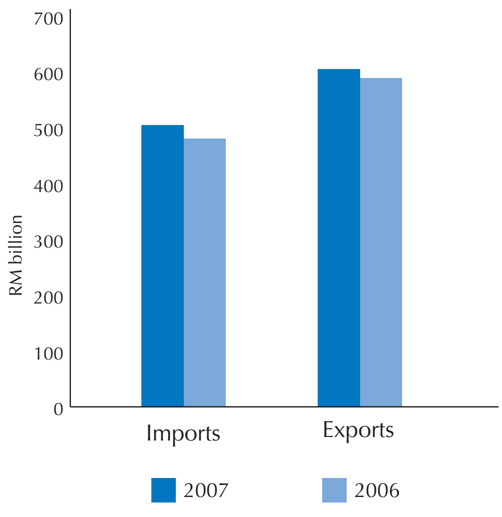
3

EXTERNAL TRADE

3 EXTERNAL TRADE

Malaysia's total trade in 2007 was valued at RM1.11 trillion, an increase of 3.7 per cent from RM1.07 trillion in 2006. Exports increased by 2.7 per cent to RM605.1 billion in 2007 from RM589 billion in 2006. Imports increased by 4.9 per cent to RM504.6 billion from RM480.8 billion in 2006. The growth in exports in 2007 had resulted in Malaysia recording a trade surplus for the tenth consecutive year, valued at RM100.5 billion.

Graph 3
Malaysia's External Trade, 2007 and 2006



	2007	2006
Total Trade	RM 1,109.7 bil.	RM 1069.7 bil.
Trade Balance	RM 100.5 bil.	RM 108.2 bil.

Source: Department of Statistics

ASEAN, the USA, Japan and People's Republic of China remained Malaysia's major trading partners, accounting for RM666.7 billion or 60.1 per cent of total trade. Together, these countries contributed 59.2 per cent of Malaysia's total exports and 61.1 per cent of Malaysia's total imports in 2007.

Malaysia's trade with ASEAN increased by 2.9 per cent to RM278.9 billion in 2007, accounting for 25.1 per cent of the country's total trade. Singapore remained Malaysia's main trading partner within ASEAN, accounting for 52.5 per cent of total trade with ASEAN. Overall, Singapore was Malaysia's second largest trading partner in 2007.

The USA was Malaysia's largest trading partner in 2007, accounting for 13.4 per cent of Malaysia's total trade. Trade with the USA decreased by 12.7 per cent to RM149.2 billion in 2007 from RM170.8 billion in 2006.

Japan was the third largest trading partner for Malaysia in 2007 accounting for 10.9 per cent of Malaysia's total trade. Total trade increased by 4.3 per cent to reach RM120.7 billion in 2007.

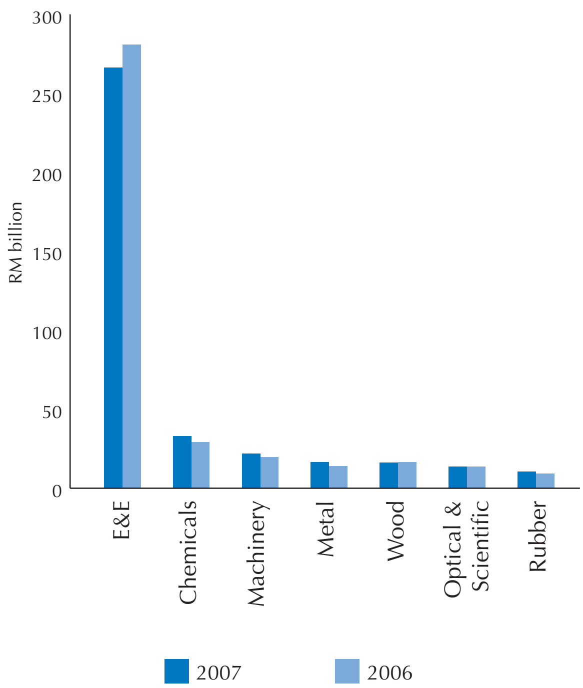
The People's Republic of China was Malaysia's fourth largest trading partner, accounting for 10.6 per cent of Malaysia's total trade in 2007. Total trade with

People's Republic of China recorded an increase of 16.9 per cent to RM117.9 billion in 2007.

Exports of Manufactured Products

Exports of manufactured products increased by 0.2 per cent to RM452.5 billion in 2007 compared with RM451.7 billion in 2006. Manufactured products accounted for 74.8 per cent of Malaysia's total exports in 2007.

Graph 4
Exports by Selected Industries, 2007 and 2006



Source: Department of Statistics

Electrical and electronic (E&E) products remained the largest contributor, constituting 58.9 per cent of total exports of manufactured products in 2007. The E&E sector recorded a decrease of 5.2 per cent in export earnings to RM266.4 billion in 2007 from RM281 billion in 2006. The decrease in exports of E&E products was attributed to the decrease in exports mainly to the USA, Singapore, Hong Kong SAR and Japan. E&E products that registered a decline in exports were parts for office machines and automatic data processing (ADP) machines, which decreased by 12.3 per cent, telecommunication equipment and parts (14.5%), ADP machines (7.2%) and sound recorders (28.1%).

Other major exports were chemicals and chemical products valued at RM33.2 billion, machinery, appliances and parts (RM21.9 billion), manufactures of metal (RM16.6 billion), wood products (RM16.3 billion), and optical and scientific equipment (RM13.6 billion).

Chemicals and chemical products recorded a growth of 14.3 per cent in exports to RM33.2 billion and accounted for 7.3 per cent of total exports of manufactured products. The industry was the second largest export earner for Malaysia. The export growth was attributed mainly to increases in exports of alcohols and phenols; carboxylic acids and anhydrides; soap, cleansing and polishing preparations as well as polymer of ethane in primary forms. Collectively, these products contributed 36.6 per cent of total exports of the chemicals and chemical products sector. Major export markets which registered increases were People's Republic of China (15.8%), Thailand (8.1%), Singapore (13.8%), Indonesia (13.2%), and India (10%).

Exports of machinery, appliances and parts increased by 10.3 per cent to RM21.9 billion in 2007. The industry accounted for 4.8 per cent of total exports of manufactured products. The export growth was mainly due to the increase in exports of heating and cooling equipment and parts; specialised machinery for particular industries and parts; and pumps, compressors, fans and parts. Major export markets which recorded increases were Thailand (8.4%), Indonesia (18.8%) and People's Republic of China (11.7%).

Exports of manufactures of metal registered an increase of 17.4 per cent to RM16.6 billion from RM14.2 billion in 2006. The increase was largely due to the increase of exports of manufactures of aluminium, zinc and structures of iron and steel. Major export markets which recorded increases were Singapore (31.6%), Japan (2.0%), Thailand (19.5%), the USA (4.7%) and People's Republic of China (16.5%).

Exports of wood-based products decreased by 2.4 per cent to RM16.3 billion in 2007, mainly due to the decrease in exports of veneer, plywood and particle board. Exports to major markets registered increases, namely, Republic of Korea (12.5%), United Kingdom (0.6%) and Australia (10.9%).

Exports of optical and scientific equipment registered an increase of 0.4 per cent to RM13.6 billion. The growth was recorded mainly in measuring and controlling instruments and apparatus. Major export markets which recorded increases were the USA (3.5%), Singapore (11.1%), Thailand (5.8%) and the Netherlands (13.7%).

Other products which registered increases in 2007 were iron and steel products (12.4%), rubber products (13.4%), manufactures of plastics (6.7%), processed food (19.4%), non-metallic mineral products (13.1%), petroleum products (16.4%), beverages and tobacco (14.1%), jewellery (29.3%), and paper and pulp products (17.2%).

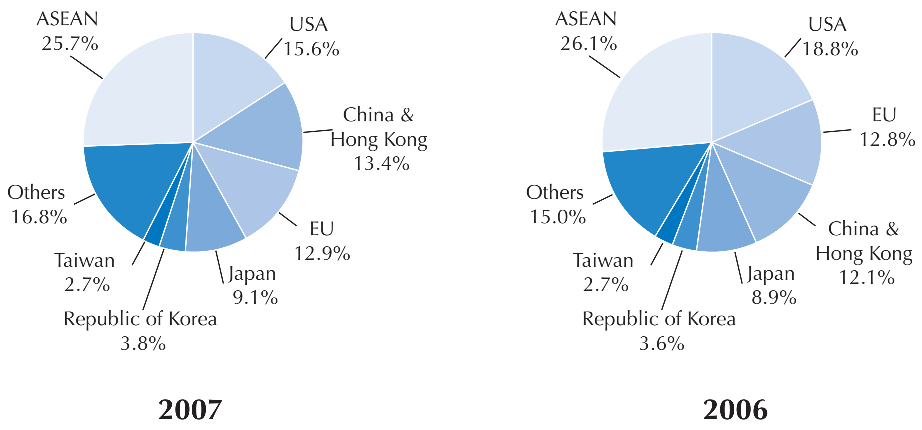
Major Markets

ASEAN

Malaysia's exports to ASEAN increased by 1.3 per cent to RM155.5 billion in 2007 compared with RM153.6 billion in the previous year. ASEAN accounted for 25.7 per cent of Malaysia's exports in 2007. Singapore was Malaysia's largest export market in ASEAN with a share of 56.9 per cent. Exports to Singapore decreased by 2.5 per cent to RM88.5 billion in 2007. Indonesia and Viet Nam's share of Malaysia's exports expanded to 2.9 per cent and 1.3 per cent, respectively.

Exports of E&E products to ASEAN decreased by 5.1 per cent from RM60.9 billion in 2006 to RM57.7 billion in 2007. E&E products accounted for 37.1 per cent of Malaysia's total exports to ASEAN. The main products exported were parts for office machines and automatic data processing machines, digital monolithic integrated units, hybrid integrated circuits, telecommunication equipment and parts, which together contributed 63.5 per cent

Graph 5
Major Export Markets, 2007 and 2006



Source: Department of Statistics

of total exports of E&E products to ASEAN. Other main products exported to ASEAN were refined petroleum products, crude petroleum, chemicals and chemical products, machinery appliances and parts, and manufactures of metal.

United States of America

The USA accounted for 15.6 per cent of Malaysia's total exports in 2007. Exports to USA recorded a decrease of 14.5 per cent to RM94.5 billion in 2007 from RM110.6 billion in 2006.

Exports of E&E products decreased by 18 per cent to RM70.4 billion, accounting for 74.5 per cent of Malaysia's total exports to the USA in 2007. Major export items were automatic data processing machines, semiconductor devices, integrated circuits, microassemblies, transistors and valves; and telecommunication equipment and parts. Collectively, these products accounted for 71 per cent of total exports of E&E products to the USA.

Other major manufactured products which registered increases were chemicals and chemical products (28.5 per cent), transport equipment (27.5 per cent), manufactures of metal (4.7 per cent) as well as optical and scientific equipment (3.5 per cent).

Japan

Japan maintained its position as Malaysia's third largest export destination, accounting for 9.1 per cent of Malaysia's exports in 2007. Exports to Japan increased by 5.8 per cent to RM55.2 billion in 2007 compared with RM52.2 billion in 2006.

E&E products were the main exports to Japan, valued at RM16.1 billion or 29.2 per cent of Malaysia's total exports. Other major exports of manufactured products were wood products, chemicals and chemical products, optical and scientific equipment and manufactures of metal.

People's Republic of China

Exports to People's Republic of China increased by 24.3 per cent to RM53 billion in 2007 from RM42.7 billion in 2006. The share of People's Republic of China in Malaysia's total exports increased to 8.8 per cent in 2007 from 7.2 per cent in 2006.

E&E products were the main exports to People's Republic of China, accounting for 47 per cent of total exports. Exports of E&E products recorded a double digit growth of 29.9 per cent to RM24.9 billion in 2007. The increase was due mainly to exports of semiconductor devices, ICs, microassemblies, transistors, valves; automatic data processing machines and parts; and sound recorders. Other major manufactured products which registered increases in exports were rubber products; machinery, appliances and parts; manufactures of metal as well as chemicals and chemical products.

4

PRODUCTIVITY

4 PRODUCTIVITY

MANUFACTURING SECTOR[5]

The productivity for the manufacturing sector recorded a growth of 2.7 per cent in 2007. The growth was mainly attributed to the expansion in the resource-based industries and selected domestic-oriented industries. Among the sub-sectors that registered productivity growth were:

	Productivity Growth Rate (%)
• Electric power cables and wires	62.2
• Other food products	35.7
• Structural metal products	30.7
• Instruments and appliances	26.7
• Pineapple canning	25.8
• Flour milling	23.1
• Tin cans and metal boxes	20.2
• Iron and steel	19.5
• Retreading and rebuilding of rubber tyres	18.5

The manufacturing sector registered a decline in labour cost competitiveness as reflected by the increase of 6.3 per cent in Unit Labour Cost. This was further supported by a 4.1 per cent increase in Labour Cost per Employee (LCE), which was faster than the growth in productivity.

Some of the sub-sectors that were able to sustain labour cost competitiveness were:

- Iron and steel (-9.6%);
- Textiles and apparel (-5.5%);
- Food and beverages (-5.3%);
- Fabricated metal products (-3.7%);
- Non-metallic mineral products (-2.4%); and
- Machinery and equipment (-2.0%).

SERVICES SECTOR

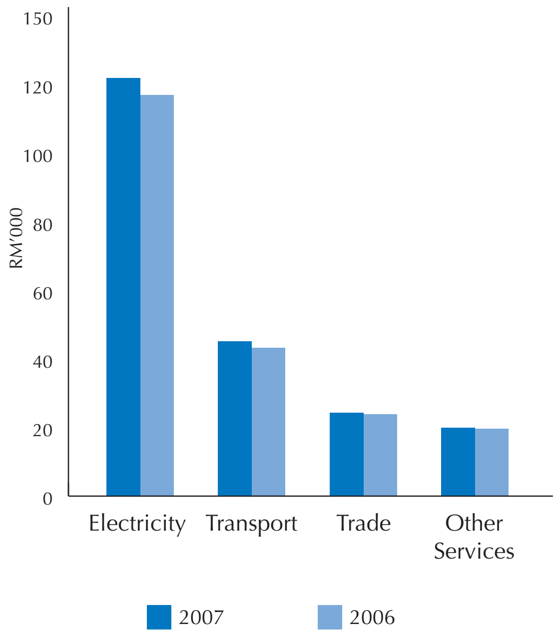
All services sub-sectors recorded positive growth in productivity in 2007. Productivity growth of the services sector was led by the electricity sub-sector, followed by transport, trade and other services.

Transport, Storage and Communications Sub-sector

The transport, storage and communications sub-sector which includes activities in providing passenger and freight transport, storage as well as courier and telecommunications industry recorded a productivity growth of 4.4 per cent to RM45,267 in 2007 compared with RM43,361 in 2006.

[5] The productivity for the manufacturing sector was analysed based on the Sales Value per Employee which was computed in nominal terms.

Graph 6
Productivity in the Services Sector, 2007 and 2006



In 2007, ports experienced continued growth with the robust growth in trade related activities and increase in world container trade. The industry recorded a significant growth in container throughput. The growth was also contributed by initiatives in enhancing connectivity and providing value-added services such as distribution park services, *halal* hub services, shipbuilding, repair and maintenance and vehicle transit centres. It was supported with capacity expansion to handle bigger vessels as well as continuous efforts in upgrading facilities and services by port operators.

In the communications industry, the growth was mainly contributed by the mobile phone segment, with a significant increase recorded in subscriber base as well as usage of voice and data. In addition, affordable prices of handsets, low starter kit prices and aggressive marketing strategies by service providers also contributed to the growth in this industry.

Wholesale and Retail Trade, Hotels and Restaurants

The wholesale and retail trade, hotels and restaurants sub-sector recorded a productivity growth of 2.1 per cent to RM24,261 in 2007 compared with RM23,754 in 2006. This sub-sector benefited from strong international and domestic demand. The total number of tourist arrivals in 2007 has achieved the target of 20.1 million and tourist receipts increased to RM49 billion in 2007. The Visit Malaysia Year 2007 and the Fifty Years anniversary celebrations of the country's independence with various events, activities and festivals being held, have contributed to the growth of tourism. Domestic tourism also assumed an important role in the industry as the number of domestic tourists increased as a result of rising household incomes.

The distributive trade industry also assumed an important role in providing linkages for the growth of the services sector. The productivity growth in this industry was due to modernisation of the retailing industry to cater for the continuous changes in customer lifestyle, tastes and needs.

Electricity

The electricity sub-sector registered a productivity growth of 4.3 per cent to RM122,679 in 2007 from RM117,659 in 2006. This was due to sustained demand for electricity and water mainly from trade, industrial and commercial sub-sectors.

Other Services

Other services comprise education and training, healthcare and professional services. This sub-sector registered a productivity growth of 1.5 per cent to RM19,865 in 2007 from RM19,578 in 2006. The growth was mainly attributed to the increased productivity in the private health and education sub-sectors. Private healthcare services contributed to the improvement in productivity and quality of services.

5

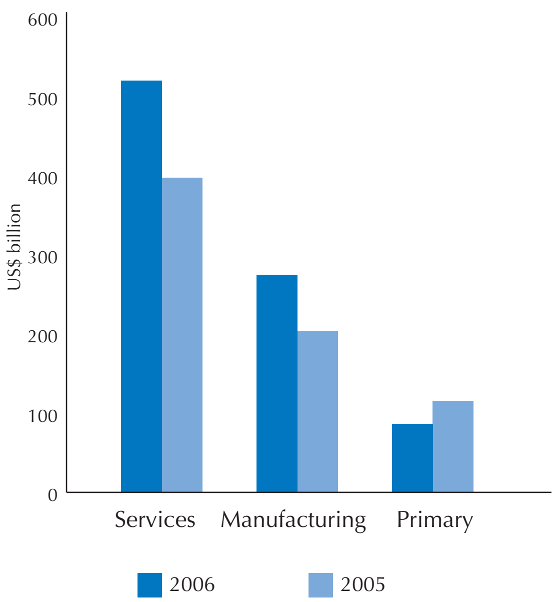
GLOBAL INVESTMENT SCENARIO

5 GLOBAL INVESTMENT SCENARIO

FDI Inflows

According to the World Investment Report by the United Nations Conference of Trade and Development (UNCTAD), global foreign direct investment (FDI)[6] inflows increased to US$1.3 trillion in 2006, a growth of 38 per cent compared with US$946 billion in 2005. This marked the third consecutive year of growth and almost reached the record level of US$1.4 trillion achieved in 2000.

Graph 7
Cross Border M&As by Sector, 2006 and 2005



Source: World Investment Report, 2007

The United States regained its position as the largest recipient of FDI inflows (US$175 billion) in 2006, followed by the United Kingdom (US$139.5 billion) and France (US$81 billion). The increase in global FDI inflows in 2006, was attributed to an increase in cross border mergers and acquisition (M&As) and as well as increase in greenfield investments.

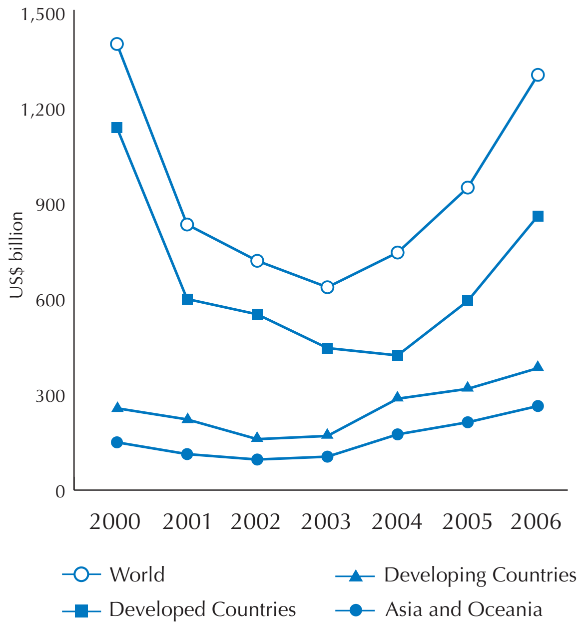
M&As continued to account for a bulk of FDI flows with an increase of 23 per cent to reach US$880 billion in 2006 compared with US$716.3 billion in 2005.

Significant cross border M&As were recorded in consumer goods and service industries (including financial services) and in energy supply and basic materials. In 2006, cross border M&As were largely driven by favourable financing conditions worldwide.

Investments increased rapidly in many countries that are rich with natural resources. The revival of foreign direct investment in extractive industries (i.e. mining, quarrying and petroleum) was reflected in higher commodity prices. The rise of new transnational corporations has also given mineral-rich countries a wider spectrum of potential sources of investment.

[6] 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. Data on FDI inflows and outflows is on a net basis.

Graph 8
FDI Inflows by Region, 2000 - 2006



Source: World Investment Report, 2007

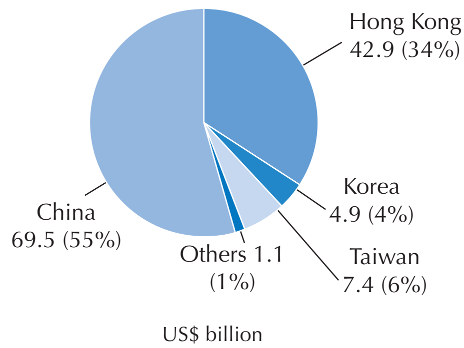
FDI inflows increased for both developed and developing countries. FDI inflows to developed countries increased by 45 per cent to US$857 billion in 2006, given the rise in cross border M&As. Meanwhile, FDI inflows to developing countries increased by 21 per cent from US$314 billion in 2005 to US$379 billion in 2006.

In terms of sectoral distribution, FDI in the services sector grew in all economies in 2006, while the primary and manufacturing sectors experienced uneven patterns of growth. The pattern confirms not only the increasing importance of services in FDI over the years but also the re-emergence of the primary sector in developing and transition economies due to the significant rise in mining, quarrying and petroleum.

East Asia (US$125.8 billion) remained the most important regional destination for FDI among developing countries.

The largest recipients of FDI among developing economies were People's Republic of China (US$69.5 billion), Hong Kong (US$42.9 billion), Singapore (US$24 billion) and India (US$17 billion). FDI inflows to South East Asia increased by 25 per cent to reach their highest level of US$51 billion in 2006.

Graph 9
FDI Inflows to East Asia, 2006



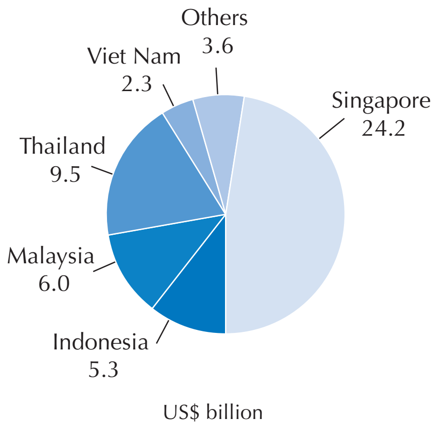
Source: World Investment Report, 2007

FDI inflows to Malaysia increased by 53 per cent to US$6 billion in 2006 from US$3.9 billion in 2005, the highest level since the Asian financial crisis. Malaysia was the third largest recipient among ASEAN countries in 2006, after Singapore and Thailand.

FDI inflows to ASEAN in 2006 were mainly to the following countries:

- Singapore - US$24.2 billion
- Thailand - US$9.5 billion
- Malaysia - US$6.0 billion
- Indonesia - US$5.3 billion
- Viet Nam - US$2.3 billion

Graph 10
FDI Inflows to ASEAN Countries, 2006



Source: World Investment Report, 2007

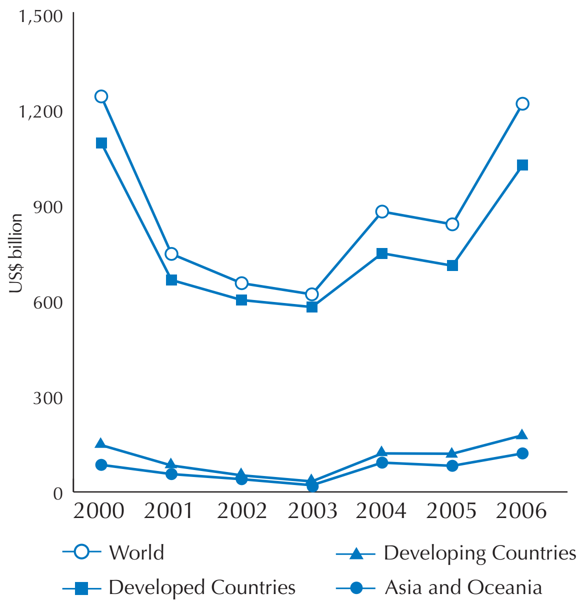
FDI Outflows

Reflecting the trend for inflows, global FDI outflows reached a peak of US$1.2 trillion in 2000 and declined to US$617 billion in 2003 before rebounding to US$1.2 trillion in 2006. Developed countries remained the main sources of global FDI outflows in 2006, accounting for US$1 trillion or 84.1 per cent of total outflows.

A notable feature of the FDI flows in 2006 were large investments made in extractive industries such as mining and primary industries. The FDI flows in these sectors were largely driven by selected Asian economies such as People's Republic of China, India, Malaysia and the Republic of Korea.

The main sources of FDI outflows from developing countries in Asia in 2006 were Hong Kong (US$43.5 billion), People's Republic of China (US$16.1 billion), Singapore (US$8.6 billion), Kuwait (US$7.9 billion), Taiwan (US$7.4 billion) and Republic of Korea (US$7.1 billion). FDI outflows from Malaysia amounted to US$6.04 billion in 2006.

Graph 11
FDI Outflows by Region, 2000-2006



Source: World Investment Report, 2007

According to the World Investment Report 2007, developing and transition economies in Asia are becoming important sources for outward FDI.

Asia's share of the total stock of outward FDI among developing and transition economies increased from 23 per cent in 1980 to 62 per cent in 2005 and 71.9 per cent in 2006. 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, 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, 2006

Rank	Economy	(US$ million) 2006
1	Hong Kong	688,974
2	Russian Federation	156,824
3	British Virgin Islands	123,512
4	Singapore	117,580
5	Taiwan	113,910
6	Brazil	87,049
7	People's Republic of China	73,330
8	Republic of Korea	46,760
9	South Africa	43,499
10	Malaysia	27,830
	TOTAL	**1,479,268**

Source: World Investment Report, 2007

FDI Inflows for 2007

The preliminary figures for global FDI inflows for 2007 was estimated at US$1.5 trillion, surpassing the US$1.3 trillion recorded in 2006 based on UNCTAD's year-end review. The figures are estimated by analysing the available data, in most cases the first three quarters of 2007.

The United States maintained its position as the largest recipient of FDI in 2007, followed by the United Kingdom (US$171.1 billion) and France (US$123.3 billion).

FDI inflows were on an increasing trend for both developed and developing countries. FDI inflows to developed countries in 2007 reached US$1.0 trillion, an increase of 16.8 per cent while FDI inflows to developing countries grew by 15.7 per cent from US$379.1 billion in 2006 to US$438.4 billion in 2007. South, East and South East Asia Countries (US$224 billion) remained the most important regional destinations of FDI inflows to developing countries.

Malaysia ranked as the third largest recipient among ASEAN countries, with investments amounting to US$9.4 billion in 2007 after Singapore (US$36.9 billion), and Thailand (US$10.0 billion).

Based on UNCTAD's 2007 year-end review, the increase in global FDI inflows in 2007 was attributed to cross border mergers and acquisitions. The economies of both developed and developing countries were mainly responsible for this trend globally.

BOX ARTICLE 1: ASEAN INITIATIVES ON INVESTMENT

Introduction

The ASEAN economic integration process gained further impetus in 2007 with the launching of the ASEAN Economic Community (AEC) Blueprint by ASEAN leaders at their Summit in November 2007 in Singapore. The AEC will establish ASEAN as a single market and production base, making ASEAN more dynamic and competitive with new mechanisms and measures to strengthen the implementation of its existing economic initiatives, accelerate regional integration in the priority sectors, facilitate movement of capital and business people, and strengthen the institutional mechanisms of ASEAN.

ASEAN was among the earliest in Asia to launch trade and investment initiatives to promote freer movement of goods, trade in services and investment. These were tariff liberalisation in 1992 to create an ASEAN Free Trade Area (AFTA), liberalisation of trade in services in 1995, and investment liberalisation in 1997 to establish the ASEAN Investment Area. In line with the AEC Blueprint, ASEAN leaders endorsed the decisions of the Economic Ministers to revise the Framework Agreement on the ASEAN Investment Area (AIA) into a ASEAN Comprehensive Investment Agreement (ACIA). The decision to revise the AIA is timely in order to capitalise on increasing global FDI flows, and to ensure that ASEAN capture a larger portion of investment as well as to remain competitive to FDI.

ASEAN Investment Outlook

The upward trend in FDI inflows to ASEAN is expected to continue in 2008. Intra-ASEAN investment is also expected to increase. The positive outlook is due to the following expectations:

- Strong regional macroeconomic fundamentals;
- Further deepening of regional integration and opening up of industries for FDI;
- Manufacturing sector will remain strong;
- Further growth in the services sector; and
- Mergers and acquisitions in telecommunications, finance and oil and gas sub-sectors.

ASEAN Investment Initiatives

The Framework Agreement on the AIA, 1998 is one of the main investment instruments of ASEAN.[7] The objective of the AIA is to increase intra-ASEAN investment as well as attract FDI into ASEAN. ASEAN member countries commit to jointly

[7] The other instruments are the 1987 ASEAN Agreement for the Promotion and Protection of Investment, and the 1995 ASEAN Framework Agreement on Services.

undertake measures to liberalise, promote and facilitate investments within ASEAN.

The AIA has had a positive effect on investment flows in ASEAN, particularly in the past few years. This was confirmed by an independent study undertaken for the ASEAN Secretariat[8] to assess the effectiveness of the AIA. The various measures and programmes implemented under the AIA include:

- Progressive liberalisation of sensitive sectors and measures;
- Jointly organising investment seminars, business matching activities and other promotional activities to promote investments into and among ASEAN member countries;
- Publication of ASEAN investment information to enhance transparency of member countries' investment regimes and to provide information on investment opportunities in ASEAN;
- Compilation of statistics and database on Foreign Direct Investment (FDI) in ASEAN and intra-ASEAN investment to assist in policy formulation;
- Organisation of capacity-building programmes for ASEAN investment promotion officials; and
- Consultation with the business sector and other organisations to improve the ASEAN investment environment.

The independent AIA Study however, indicated that the AIA by itself is not sufficient for ASEAN to attract FDI, and recommended that ASEAN must complement it by other policies and programmes.

Based on a SWOT analysis of the AIA Agreement undertaken by MIDA as mandated to Malaysia by the ASEAN Economic Ministers (AEM), the 39th AEM meeting in August 2007 agreed that the AIA Agreement should be revised to make it more comprehensive. This will further enhance ASEAN's effectiveness in attracting investments in the light of the challenges and objectives of the AEC.

ASEAN Comprehensive Investment Agreement

The ASEAN comprehensive investment agreement will build upon the existing AIA Agreement. Its main principles will include, among others:

- Forward-looking, reaffirming, improving and building upon the 1998 Framework Agreement on the ASEAN Investment Area and the 1987 ASEAN Agreement for the Promotion and Protection of Investment;
- Commitment to not back-track on obligations under the Agreement;

[8] Completing the AIA – Road Traveled, Road Ahead, April 2007

- Incorporation of elements of investment promotion and awareness, investment facilitation, investment protection, and investment liberalisation;

- Benefits to be enjoyed by both ASEAN investors and ASEAN-based foreign investors;

- Special and differential treatment and other flexibilities to ASEAN member countries depending on their level of development and sectoral sensitivities;

- Reciprocal treatment in the enjoyment of concessions, where appropriate; and

- Preservation of preferential treatment among ASEAN member countries.

The ASEAN comprehensive investment agreement is expected to benefit Malaysia. It will complement Malaysia's industrialisation strategies of promoting higher levels of FDI inflows. It will facilitate Malaysian cross border investments into the ASEAN region. The ASEAN initiatives will help Malaysian companies to further integrate into the regional economy and thereby enhance their competitiveness in the regional and global market.

6

INVESTMENT PERFORMANCE OF THE MANUFACTURING SECTOR

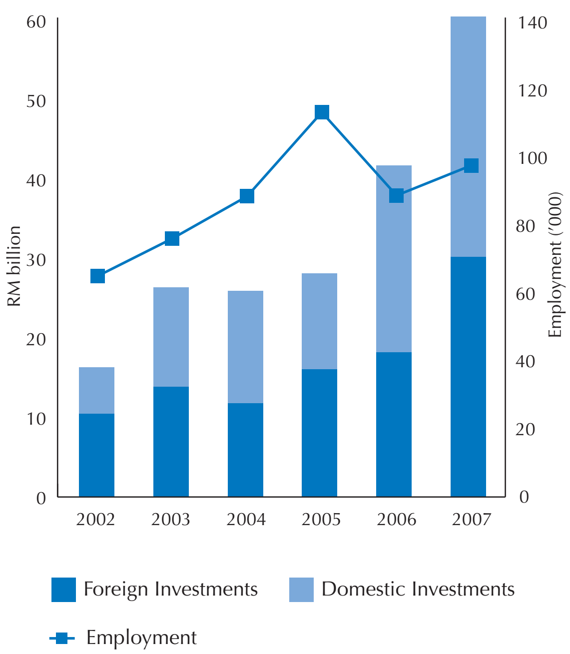
6 INVESTMENT PERFORMANCE OF THE MANUFACTURING SECTOR

A. PROJECTS APPROVED

OVERVIEW

Malaysia attracted significantly higher levels of investments in the manufacturing sector in 2007, surpassing the record levels achieved in 2006. Though the number of projects approved was lower, i.e. 949 projects in 2007 compared with 1,077 projects in 2006, approved investments reached a new peak of RM59.9 billion (2006: RM46.0 billion). This was attributed to the greater interest in capital-intensive and high value-added projects among both domestic and foreign investors.

Graph 12
Investments and Employment in Projects Approved, 2002-2007



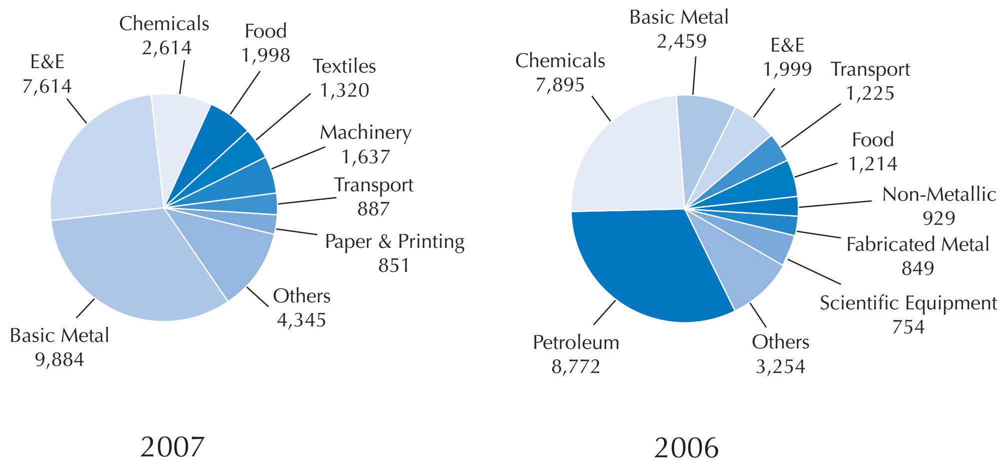
Approved investments in 2007 were more than double the average annual investment target of RM27.5 billion set in the IMP3. Foreign investments and domestic investments which had already reached unprecedented levels in 2006, achieved new record levels in 2007.

New Projects

There was sustained interest to establish new manufacturing projects in the country. Of the 949 projects approved in 2007, a total of 625 (65.9%) were new projects involving investments of RM31.1 billion or 51.9 per cent of total investments. In comparison, 653 new projects were approved in 2006 with investments amounting to RM29.4 billion. In 2007, investments in new projects were mainly in the following industries:

- Basic metal products (RM9.9 billion);
- Electrical and electronic (E&E) products (RM7.6 billion);
- Chemicals and chemical products (RM2.6 billion);
- Food manufacturing (RM2.0 billion);
- Machinery manufacturing (RM1.6 billion);
- Textiles and textile products (RM1.3 billion);
- Transport equipment (RM886.9 million); and
- Paper, printing and publishing (RM851.4 million).

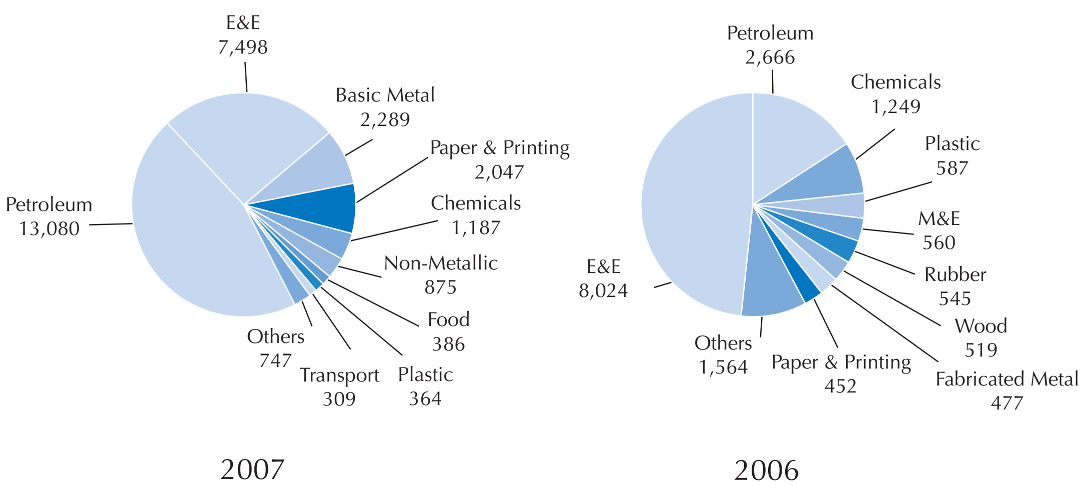
Graph 13
Investments in New Projects by Industry, 2007 and 2006



Expansion/Diversification Projects

Existing companies in Malaysia continued to expand and diversify their operations, reflecting their continued confidence in the country's investment environment. Of the 949 projects approved 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. In comparison, there were 424 expansion/diversification projects approved in 2006 with investments of RM16.6 billion. Investments in

Graph 14
Investments in Expansion/Diversification Projects by Industry, 2007 and 2006



expansion/diversification projects in 2007 were mainly in the following industries:

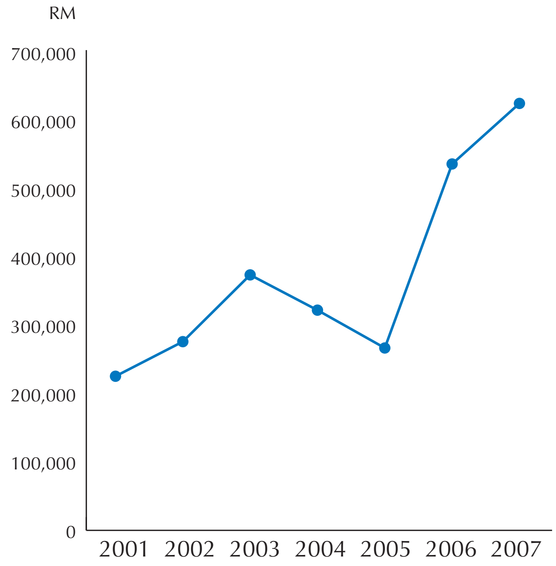
- Petroleum products including petrochemical (RM13.1 billion);
- E&E (RM7.5 billion);
- Basic metal products (RM2.3 billion);
- Paper, printing and publishing (RM2.0 billion);
- Chemicals and chemical products (RM1.2 billion); and
- Non-metallic mineral products (RM874.8 million).

Capital-Intensive Projects

Capital intensity, as measured by the capital investment per employee (CIPE) ratio, of projects approved was RM613,600 in 2007 compared with RM517,054 in 2006. The higher CIPE ratio was mainly attributable to capital intensive projects in the petroleum products including petrochemicals industry. The CIPE ratio of manufacturing projects has registered a generally increasing trend since 2001 (RM241,024). This reflects the trend towards more capital-intensive, high value-added and high technology projects.

A total of 11 projects involving investments of more than RM1 billion each were approved in 2007. These projects were mainly in the petroleum products including petrochemicals (2 projects/RM12.3 billion), basic metal products (4 projects/RM9.2 billion), E&E (4 projects/RM6.5 billion) and paper, printing and publishing (1 project/RM1.9 billion) industries. Total investments in these projects amounted to RM29.9 billion.

Graph 15
CIPE Ratio of Projects Approved, 2001-2007



Among the major projects approved were:

- A project by SKS Refinery Sdn. Bhd. with investments of RM9.8 billion for the expansion of production capacity of LPG, gasoline, kerosene and diesel and diversification to produce coke and sulphur;

- A new project by Eastern Steel Sdn. Bhd. with investments of RM4.5 billion to manufacture hot rolled coils, plates, cold rolled coils and hot rolled bars;

- An expansion project by Malaysian Refinery Company Sdn. Bhd. with investments of RM2.4 billion to expand its refinery and production of liquefied petroleum gas, chemical naptha, gasoline, dual purpose kerosene/jet fuel, diesel, fuel oil, sulphur, lube base oil, asphalt and coke ;

- An expansion project with an investment of RM2.1 billion to produce fabricated wafers for power semiconductor devices and manufacture power semiconductor devices;

- A new project by Osram Wafer Technologies (M) Sdn. Bhd. to produce 4 inch fabricated wafers for light emitting diodes (LEDs);

- A new project by Lion Group with investments of RM3.4 billion to produce liquid hot metal, pig iron, iron ore pellets, furnace slag, furnace gas coke, coke breeze, crude tar, ammonia sulphur, benzol, coke oven gas, slabs, plates, hot and cold rolled coils, ductile, iron pipes, welded pipes and galvanised coils and sheets; and

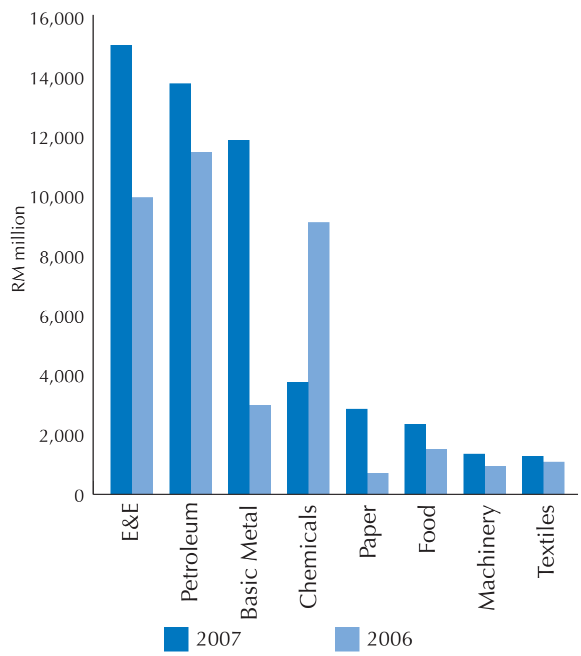
- An expansion/diversification project by Sabah Forest Industries Sdn. Bhd. with an investment of RM1.9 billion to produce pulp.

Projects Approved by Industry

There was renewed interest among investors in the E&E industry which attracted the highest amount of approved investments in 2007 amounting to RM15.1 billion. This was followed by the petroleum products including petrochemicals (RM13.8 billion), basic metal products (RM12.2 billion), chemicals and chemical products (RM3.8 billion) and paper, printing and publishing (RM2.9 billion). These five industries accounted for RM47.8 billion or 79.8 per cent of total investments approved.

Investments in the E&E industry registered a 50.8 per cent increase to RM15.1 billion from RM10 billion in 2006. Foreign investments amounted to RM13.7 billion or 90.7 per cent of total investments in the E&E industry in 2007, indicating the dominant role of foreign MNCs in the industry. Investments in the E&E industry were mainly in the electronic components sub-sector which amounted to RM7.6 billion.

Graph 16
Investments in Projects Approved by Major Industry, 2007 and 2006



The high level of investments in the petroleum products including petrochemicals industry was largely due to the approval of a petroleum refinery expansion/diversification project with investments of RM9.9 billion. In the basic metal products industry, investments were concentrated in a new project with investments of RM4.5 billion for the expansion of production capacity of pig iron/flat iron, slabs, billets and blooms.

Export-Oriented Projects

Of the 949 projects approved in 2007, a total of 323 (34%) projects would be exporting at least 80 per cent of their output. Total investments in these export-oriented projects amounted to RM28.8 billion, of which RM18.3 billion (63.5%) were foreign investments and RM10.5 billion (36.5%) were domestic investments.

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

- E&E (69 projects/RM11.6 billion);
- Chemicals and chemical products (32 projects/RM2.6 billion);
- Furniture and fixtures (31 projects/ RM220.9 million);
- Machinery manufacturing (30 projects/ RM423.6 million); and
- Food manufacturing (28 projects/ RM629.9 million).

Malaysia's competitive investment environment continues to attract export-oriented industries to locate their new and expansion/diversification projects in the country to serve the regional and global markets. These export-oriented projects, when implemented, are expected to contribute to the further increase in exports of manufactured products.

Employment Opportunities

There was an increase in employment opportunities expected to be generated by projects approved in 2007, compared with projects approved in 2006. Projects approved in 2007 are expected to generate a total of 97,673 employment opportunities, of which 71,974 or 73.7 per cent will be in the managerial, technical, supervisory and skilled manpower categories. In 2006, approved manufacturing projects were expected to generate 88,952 employment opportunities of which 66 per cent were in the managerial, technical, supervisory and skilled manpower categories.

The increase in the percentage of managerial, technical, supervisory and skilled manpower jobs highlights the changing industry needs, in line with the focus on higher value-added, higher technology and knowledge intensive industries. Industries which were expected to create the most number of employment opportunities were E&E (32,455), textiles and textile products (9,487), basic metal products (7,133), food manufacturing (5,465), and furniture and fixtures (5,242) industries.

Expatriate Posts

The Government continued to grant approvals for expatriate posts, particularly managerial and technical posts to

Malaysian as well as foreign-owned companies to facilitate technology transfer and to supplement the local pool of managerial and technical skills. Technical expatriate posts approved were mainly in the engineering supporting industries such as moulds, tools and dies and machining. In 2007, a total of 2,312 expatriate posts were approved, of which 621 were key posts which could be permanently filled by foreigners. The remaining 1,691 were term posts, generally granted for three to five years where Malaysians are trained to eventually take over the posts.

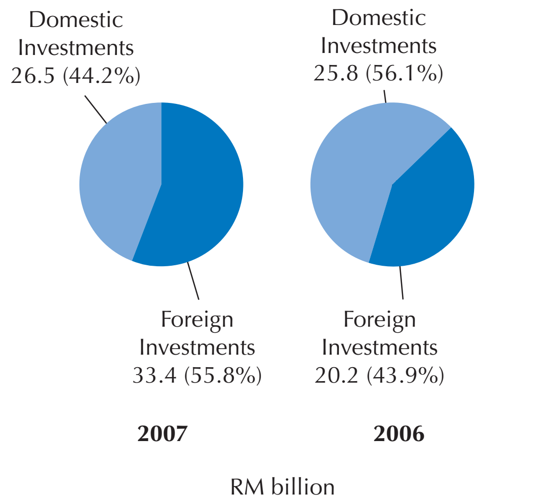
APPROVED PROJECTS BY OWNERSHIP

DOMESTIC INVESTMENTS

Domestic investments in projects approved in 2007 amounted to RM26.5 billion and were the highest recorded to date. This reflected continued interest by domestic investors in investing in the manufacturing sector particularly in the petroleum products industry and basic metal industry in response to the strong global demand and higher prices of oil and steel. Investments in these capital-intensive industries will not only result in an increase in production capacities but also technology upgrading such as in fully integrated blast furnaces to meet the demand for better quality steel by the automotive and E&E industries. In comparison, investments in 2006 were largely driven by domestic interest in the biodiesel industry.

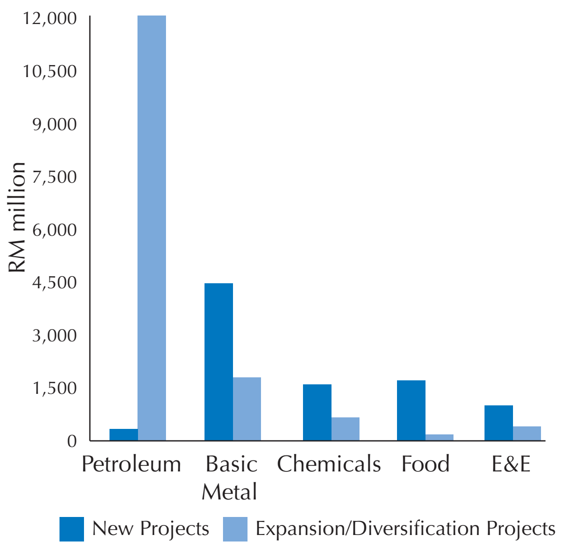
Domestic investments accounted for 44.2 per cent of total approved investments in 2007. In comparison, domestic investments amounted to RM25.8 billion or 56.1 per cent of total investments approved in 2006. Of the domestic investments, RM13.9 billion was in new projects while RM12.6 billion was in expansion/diversification projects.

Graph 17
Sources of Investments in Projects Approved, 2007 and 2006



A total of 636 projects or two-thirds of the total number of projects approved were Malaysian-owned, involving investments of RM29.7 billion (2006: 707 projects/RM25.7 billion). The majority of the Malaysian-owned projects were new projects (474) with investments of RM13.1 billion or 44.1 per cent of total investments in Malaysian-owned projects. The remaining 162 projects were expansion/diversification projects involving investments of RM16.6 billion.

Graph 18
Investments in Malaysian-Owned Projects Approved by Type and Major Industry, 2007



Note: Malaysian-owned projects – Projects with Malaysian equity ownership of more than 50 per cent

Investments in new projects were concentrated in the basic metal products (RM4.5 billion), food manufacturing (RM1.8 billion), chemicals and chemical products (RM1.6 billion), E&E (RM979.2 million), paper and printing (RM801.9 million) and transport equipment (RM600.4 million) industries.

Investments in expansion/diversification projects were mainly in the petroleum products including petrochemicals (RM12.3 billion), basic metal products (RM1.9 billion), chemicals and chemical products (RM650 million) and E&E (RM424 million) industries.

Of the 636 Malaysian-owned projects approved in 2007, a total of 170 projects (26.8%) with investments amounting to RM13.3 billion, would be exporting at least 80 per cent of their output. These export-oriented projects were mainly in the furniture and fixtures (24 projects/RM162.7 million), food manufacturing (21 projects/RM444.1 million), chemicals and chemical products (20 projects/RM1.4 billion) and machinery manufacturing (16 projects/RM66.3 million) industries.

Malaysian-owned projects are expected to generate a total of 48,007 employment opportunities or 49.2 per cent of total employment in approved projects. In 2006, proposed employment in Malaysian-owned projects totalled 51,590 persons.

FOREIGN INVESTMENTS

Despite the intense global competition for foreign direct investment, Malaysia was successful in attracting foreign investments into the manufacturing sector. Foreign investments approved in 2007 were the highest recorded to date. Foreign investments in these projects, which amounted to RM33.4 billion, recorded a 65.3 per cent increase compared with RM20.2 billion in 2006. This marked a third consecutive year of increase in foreign investments. Foreign investments accounted for 55.7 per cent of total investments approved in 2007.

The substantial increase in foreign investments was largely due to the increased investments by foreign investors in the E&E industry which amounted to RM13.7 billion in 2007, an increase of 59 per cent compared with RM8.6 billion in 2006. There was an increasing interest by foreign MNCs to invest in high value-added activities and capital intensive industries such as wafer fabrication and solar cells/modules.

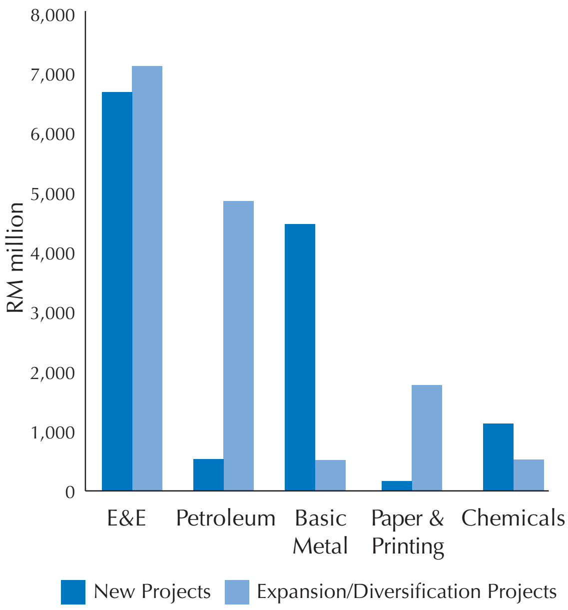
Foreign investments in 2007 were concentrated in the following industries:

- E&E (RM13.7 billion);
- Petroleum products including petrochemicals (RM5.3 billion);
- Basic metal products (RM4.9 billion);
- Paper and printing (RM1.8 billion);
- Chemicals and chemical products (RM1.6 billion);
- Textiles and textile products (RM1.3 billion); and
- Non-metallic mineral products (RM1.0 billion).

Foreign investments in new projects amounted to RM17.3 billion in 2007, almost double the RM9.2 billion registered in 2006. Foreign investments in new projects in 2007 were mainly in the E&E (RM6.6 billion), basic metal products (RM4.4 billion), textiles and textile products (RM1.2 billion), machinery manufacturing (RM1.2 billion) and chemicals and chemical products (RM1.1 billion) industries.

Foreign investments in expansion/diversification projects also recorded a significant increase of 47 per cent to RM16.2 billion in 2007 from RM11 billion in 2006. Foreign investments in expansion/diversification projects in 2007 were mainly in the E&E industry (RM7.1 billion), followed by the petroleum products including petrochemicals (RM4.8 billion), paper

Graph 19
Foreign Investments in Projects Approved by Major Industry, 2007

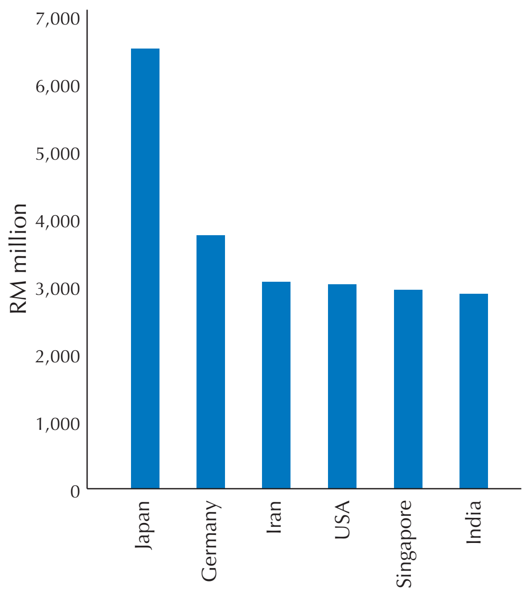


and printing (RM1.7 billion), non-metallic mineral products (RM722.3 million) and basic metal products (RM553.4 million) industries. Foreign investors continued to reinvest particularly in high value-added activities and technology-intensive operations including research and development (R&D) and engineering and product design centres.

Major Sources of Foreign Investments

For the second year in succession, Japan was the largest source of foreign investments approved in the manufacturing sector with RM6.5 billion. This was followed by Germany (RM3.8 billion), Iran (RM3.1 billion), the USA (RM3.0 billion), Singapore (RM2.95 billion), and India (RM2.92 billion). These six countries together accounted for RM22.2 billion or 66.5 per cent of total foreign investments in approved projects.

Graph 20
Major Sources of Foreign Investments in Projects Approved, 2007



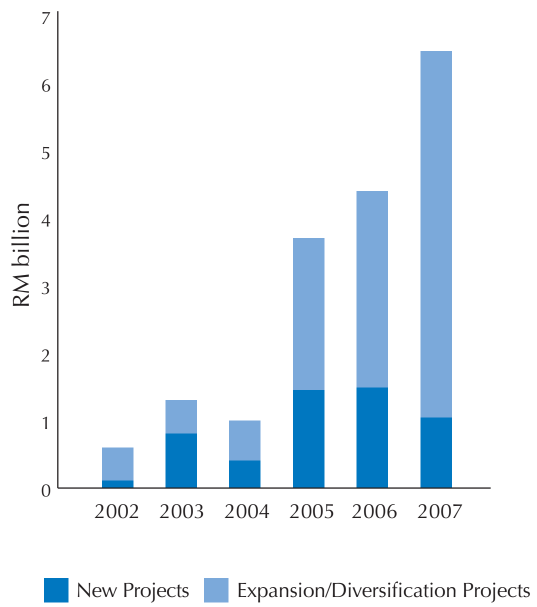
Japan

Japanese investments increased to RM6.5 billion in 2007, the highest level ever recorded. Japanese investments in 2007 were 47.8 per cent higher than the RM4.4 billion (81 projects) recorded in 2006. Japanese investments were in 60 projects, of which 19 (RM1.1 billion) were new projects and 41 (RM5.4 billion) were expansion/diversification projects.

Investments from Japan in new projects were mainly in the E&E (RM500.1 million), chemicals and chemical products (RM294.1 million), wood and wood products (RM189 million) and basic metal products (RM48.2 million) industries. A major new project (RM269 million) approved was for the production of methyl ester sulfonates and sulphuric acids.

Japanese investments in expansion/ diversification projects were mainly in the E&E (RM3.9 billion), non-metallic mineral products (RM699.8 million), petroleum products including petrochemicals (RM688 million), fabricated metal products (RM71.7 million) and food manufacturing (RM26.5 million) industries.

Graph 21
Japanese Investments in Approved Projects, 2002-2007



Among the significant expansion projects with Japanese investments were:

- A project with an investment of RM2.1 billion to produce fabricated wafers for power semiconductor devices and manufacture power semiconductor devices;

- A project with an investment of RM699.8 million for the production of glass fibre in all forms;

- A project with an investment of RM688 million for the production of polyacetal resins/compounded polyacetal resins; and

- A project with an investment of RM379.3 million for the production of LCD television receivers.

Germany

Germany was the second largest source of foreign investments in 2007, with 26 projects approved involving investments of RM3.7 billion. In comparison, 15 projects with investments of RM232.3 million were approved in 2006. Of the RM3.7 billion, a total of RM2.7 billion or 71 per cent was in 15 new projects, while RM1 billion or 29 per cent was in 11 expansion/diversification projects.

Investments from Germany in new projects were mainly in the E&E (RM1.9 billion) and petroleum products including petrochemicals (RM301.6 million) industries. Among the new projects approved was a project for the production of fabricated wafers for LEDs.

Investments from Germany in expansion/diversification projects were concentrated in the E&E (RM851.9 million) and chemicals and chemical products (RM148.9 million) industries. The high level of investments from Germany in the E&E industry was mainly due to a RM851.9 million expansion project for the manufacture of integrated circuits and memory modules.

Iran

Iran was the third largest source of foreign investments in 2007 with investments totalling RM3.1 billion in three projects. The large investments from Iran were primarily due to an expansion/ diversification project by SKS Refinery Sdn. Bhd. with foreign investments amounting to RM3.0 billion. The project involved the expansion of production capacity of LPG, gasoline, kerosene and diesel, and diversification to produce coke and sulphur. The other two projects approved were new projects for the manufacture of gas and steam turbine blades for the oil and gas, petrochemical and power generation industries (RM92 million) and wood adhesives (RM7.3 million).

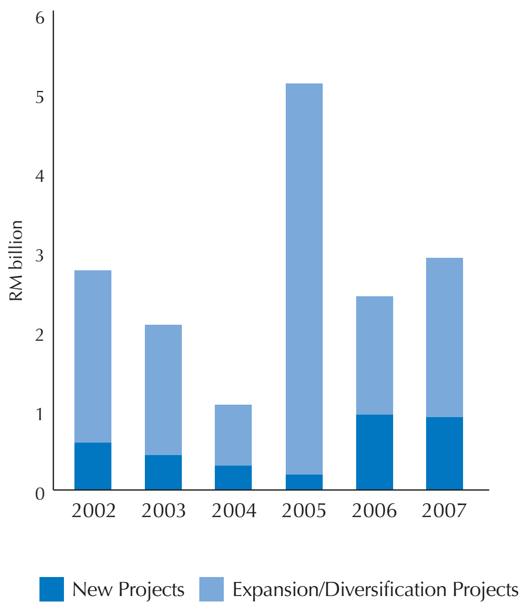
USA

The USA was the fourth largest source of foreign investments in 2007 with investments of RM3.0 billion in 33 projects approved, compared with RM2.5 billion (38 projects) in 2006. Of the 33 projects approved, 13 were new projects involving investments of RM958.6 million, while 20 were expansion/ diversification projects with investments of RM2.1 billion. A major part of US investments in new projects was accounted by a RM568 million project to produce solar cells and modules.

Investments from the USA in expansion/diversification projects were concentrated in:

- A project with an investment of RM1.1 billion for the production of hydrogen, liquefied petroleum gas (LPG), naphtha, gasoline, dual purpose kerosene (DPK)/jet fuel, diesel and fuel oil; and
- A project with an investment of RM702.8 million for the production of RF/IF (radio frequency/intermediate frequency) and microwave components/ devices.

Graph 22
US Investments in Approved Projects, 2002-2007

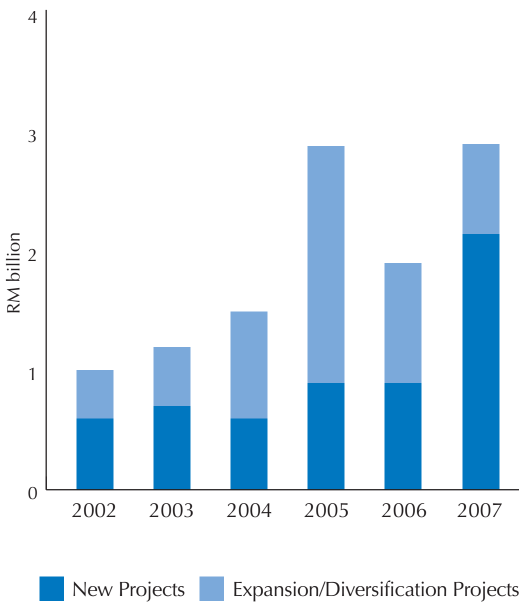


Singapore

Singapore was the fifth largest source of foreign investments in 2007. Investments from Singapore amounted to RM2.95 billion in 108 projects approved. In comparison, 130 projects were approved in 2006 involving investments of RM1.9 billion. Investments from Singapore in new projects in 2007 amounted to RM2.22 billion (48 projects), while investments in expansion/diversification projects totalled RM733.1 million (60 projects).

Singaporean investments in new projects were mainly in the E&E (RM1.2 billion) and basic metal products (RM681.2 million) industries. A major part of Singaporean investments in new projects was accounted for by a RM755.4 million project to produce silicon wafers.

Graph 23
Singaporean Investments in Approved Projects, 2002-2007



India

In addition to developed countries, emerging economies such as India have also enormous potential as a source of foreign investments for Malaysia. India was the sixth largest source of foreign investments in 2007 with investments of RM2.9 billion in eight projects approved (2006: 6 projects/RM8.3 million). This was the highest level of investments ever recorded from India. With the continued growth in the Indian economy, many Indian companies have become global players and are venturing abroad. India's large investments in 2007 were primarily a result of two separate acquisitions of Malaysian companies by Reliance Industries Ltd. and Ballapur Industries Ltd. Of the eight projects approved in 2007, seven were new projects involving total investments of RM1.2 billion, while one was an expansion/diversification project with an investment of RM1.7 billion.

Investments from India in new projects were mainly in the textiles and textile products industry (2 projects/RM1.2 billion). Among the major new projects approved were for the manufacture of polyester chips, fibres, yarns and fabrics, bleaching, dyeing, finishing and printing by Reliance Industries Ltd with investments of RM1.2 billion. Other new projects approved were for the production of biodiesel (RM20 million) and recycled low density polyethylene (LDPE) resins (RM18.6 million).

The expansion project involved an existing company which was acquired by an Indian company, Ballapur Industries Ltd., which proposed to expand the production of pulp with a total investment of RM1.7 billion.

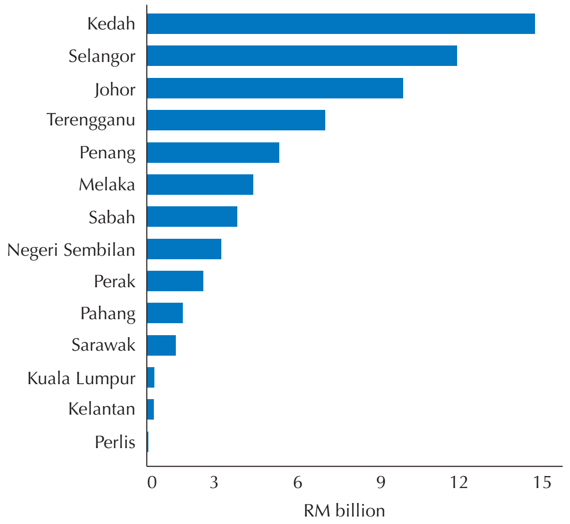
APPROVED PROJECTS BY LOCATION

The majority of projects approved in 2007 were proposed to be located in the states of Selangor (318), Johor (188) and Penang (134). A total of 640 projects or about 67.4 per cent of the total number of projects approved will be located in these three states. In terms of investment, the state of Kedah (RM14 billion) registered the highest level, followed by Selangor (RM11.2 billion), Johor (RM9.2 billion), Terengganu (RM6.2 billion) Penang (RM4.8 billion), Melaka (RM3.8 billion), Sabah (RM3.3 billion), and Negeri Sembilan (RM2.7 billion).

Investments in Kedah were mainly in the petroleum products including petrochemicals (RM9.9 billion), E&E (RM3.3 billion), chemicals and chemical products (RM564 million) and rubber products (RM70.2 million) industries. The high level of investments in Kedah was primarily due to a RM9.9 billion project for expansion of production capacity of LPG, gasoline, kerosene and diesel and diversification to produce coke and sulphur.

Investments in Selangor were concentrated in the basic metal products (RM3.8 billion), E&E (RM1.4 billion) and chemicals and chemical products (RM1.2 billion) industries. In Johor, investments were in a wide range of industries including the E&E (RM4.2 billion), machinery manufacturing (RM1 billion), basic metal products (RM918.7 million), food manufacturing (RM675 million) and chemicals and chemical products (RM513 million) industries.

Graph 24
Investments in Approved Projects by Location, 2007



The Government continues to promote balanced industrial development in the country. In 2007, a total of 115 projects (RM12.6 billion) were approved to be located in the promoted areas of the Eastern Corridor of Peninsular Malaysia and the States of Perlis, Sabah and Sarawak. More than half the projects approved (64) were proposed to be located in the states of Sabah (41 projects) and Sarawak (23 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. Of the total investments approved in the promoted areas, RM9.2 billion was in 82 new projects, while RM3.4 billion was in 33 expansion/ diversification projects.

APPROVED PROJECTS BY INCENTIVE

In 2007, the Government continued to provide incentives to projects engaged in promoted products/activities which will generate spin-offs and economic benefits to the country such as R&D, technology transfer, industrial linkages, social economic development and employment. A total of 397 projects with investments of RM38.8 billion were approved with incentives in 2007.

Table 2
Manufacturing Projects Approved with Incentives, 2007

Type of Incentives	No. of Projects	Domestic Investments (RM million)	Foreign Investments (RM million)	Total Investments (RM million)
General	168	3,163.6	1,108.4	4,271.0
Small-Scale Manufacturing	146	283.3	7.1	290.4
High Technology	11	39.1	203.5	242.6
Strategic	3	-	247.5	247.5
Special Incentives for Selected Industries	33	598.5	59.5	657.0
Customised	36	12,398.0	20,737.1	33,135.1
Total	**397**	**16,481.5**	**22,361.1**	**38,842.6**

General Incentives

Companies engaged in promoted products/activities, which fulfil criteria such as value-added, technology and/or industrial linkages, are eligible for Pioneer Status (PS) or Investment Tax Allowance (ITA). In 2007, a total of 168 projects were approved general incentives involving investments of RM4.3 billion, of which 150 projects (RM3.5 billion) were granted PS, while 18 projects (RM0.7 billion) were granted ITA.

These investments were in a broad range of industries, including chemicals and chemical products (RM1.7 billion), food manufacturing (RM679 million), wood and wood products (RM351.8 million), paper, printing and publishing (RM210.4 million) and petroleum products including petrochemicals (RM196.9 million) industries.

Incentives for Small-Scale Manufacturing Projects

The Government continued to grant incentives to small-scale manufacturing projects to further promote their development. Companies with shareholders' funds not exceeding RM500,000 and with at least 60 per cent Malaysian equity, involved in the manufacture of promoted products/ activities are eligible for PS or ITA.

In 2007, a total of 146 small-scale projects were granted incentives with investments amounting to RM290.4 million. These projects were mainly in the fabricated metal products (45 projects/RM70.8 million), machinery manufacturing (21 projects/RM36.1 million), E&E (15 projects/RM38.0 million), food manufacturing (15 projects/RM34.8 million) and transport equipment (11 projects/RM17.1 million) industries.

Incentives for High Technology Projects

Companies engaged in promoted activities or production of promoted products in areas of new and emerging technologies are eligible for these incentives. In 2007, a total of 11 projects with investments of RM242.4 million were granted these incentives.

Incentives for high technology projects were approved mainly in the plastic products (4 projects/RM108.1 million), E&E (3 projects/RM93.5 million) and chemicals and chemical products (1 project/RM19.5 million) industries.

Incentives for Strategic Projects

Strategic projects are those that are of national importance and generally involve heavy capital investments, high levels of technology and generate extensive linkages. Three projects were granted incentives for strategic projects involving investments of RM246.5 million in 2007. The strategic projects approved were in the petroleum products including petrochemicals (RM192.5 million), scientific and measuring equipment (RM33.2 million) and non-metallic mineral products (RM20.8 million) industries.

Special Incentives for Selected Industries

The Government provides enhanced incentives to selected industries, namely production of specialised M&E; design, R&D and production of automotive component modules or systems; and the utilisation of biomass to produce value-added products.

In 2007, a total of 33 projects were approved these incentives involving investments of RM657.0 million. Of these, 21 projects were approved for the production of specialised machinery, with investments of RM179.8 million and 10 projects for the utilisation of oil palm biomass (RM332.8 million).

Customised Incentives

Customised incentives are granted for projects in selected industries. Projects granted these incentives are those which are technology, capital and R&D intensive, knowledge and skills-driven and capable of generating significant linkages as well as contributing to the development of manufacturing support services such as procurement, marketing and distribution. In 2007, a total of 36 projects were granted customised incentives with investments of RM33.1 billion.

These projects were mainly in the E&E (12 projects/RM8.2 billion), basic metal products (5 projects/RM8.9 billion), petroleum products including petrochemicals (3 projects/RM10.9 billion), machinery manufacturing (3 projects/RM767.8 million) and chemicals and chemical products (3 projects/RM679.9 million) industries.

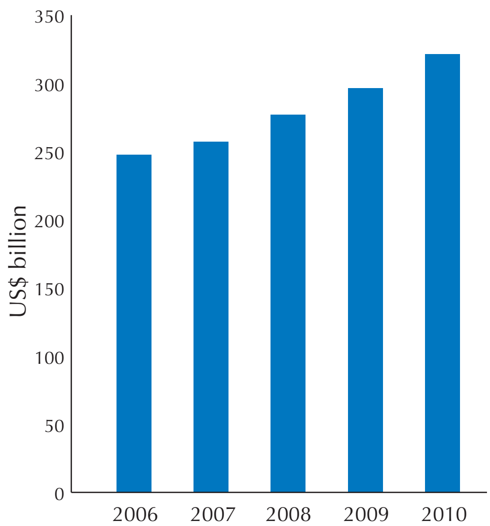
B. PERFORMANCE OF THE MANUFACTURING SECTOR BY INDUSTRY

ELECTRICAL AND ELECTRONIC PRODUCTS

Global Trends in the E&E Industry

The semiconductor and ICT sub-sectors continued to spearhead the growth of the global E&E industry. According to the USA-based Semiconductor Industry Association (SIA), the worldwide semiconductor revenue increased by 3.8 per cent to US$257.1 billion (RM892.6 billion) in 2007 from US$247.7 billion (RM860 billion) in 2006. The sales of personal computers and mobile phones which registered a high growth accounted for 60 per cent of semiconductor demand.

Graph 25
Global Annual Semiconductor Sales Forecast, 2006-2010



Source: World Semiconductor Trade Statistics, Inc.

According to World Semiconductor Trade Statistics (WSTS), the USA was expected to record a 4.7 per cent decline in semiconductor sales in 2007 as compared with 2006. However, semiconductor sales in Europe was expected to grow by 3.2 per cent and in Japan by 4.7 per cent. The WSTS projected that the semiconductor market for Asia Pacific region will achieve 7.0 per cent growth in 2007 and continue to be the fastest growing geographical area, due to the dynamics of both rising domestic demand and the continuing manufacturing shift to the region. Semiconductor manufacturing in Asia has been increasing at an impressive pace. The trend is expected to continue for the next several years. Asian semiconductor manufacturing capacity will increase at a compound annual growth rate of 10.8 per cent from 2006-2011.

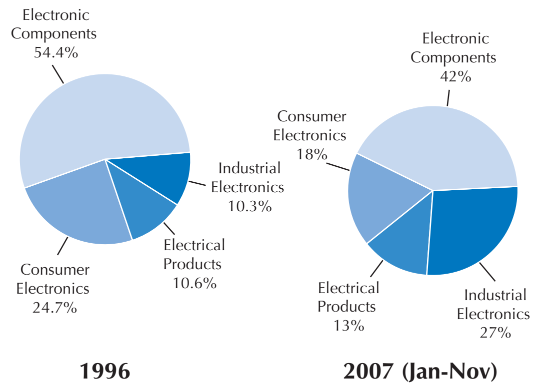
The ICT sector is increasingly globalised. Digitalisation enables the convergence of the computer, telecommunications and consumer segments. According to the World Information Technology and Services Alliance (WITSA), ICT spending grew at about 8 per cent annually from 2003 to 2007. Asia was the centre of global growth in ICT spending, growing at a compound annual rate of 9.3 per cent from US$568.2 billion (RM1,972.8 billion) in 2003 to US$811.1 billion (RM2,816.1 billion) in 2007.

The computing segment is the largest application segment for semiconductor consumption in Asia. Communications and consumer applications are the fastest growing segments. Computing will continue to be the largest application segment in Asia through 2010, but its share is expected to decrease to 41.9 per cent. According to the Research & Consultancy Solutions (RNCOS) market research report, the consumer electronics market in Asia is forecasted to grow at a compound annual growth rate of 17.2 per cent during the period 2004-2009.

E&E Industry in Malaysia

The E&E industry in Malaysia, comprising four sub-sectors, namely electronic components, industrial electronics, consumer electronics and electrical products has undergone structural changes over the years. The major activities of the E&E industry in Malaysia is in the area of semiconductor components such as linear and digital integrated circuits, memories and microprocessors, optoelectronics, discrete devices, hybrids, and arrays. Since the establishment of the first semiconductor plant in Penang in 1972, the export-oriented electronics industry has developed rapidly to become

Graph 26
Output Structure of the E&E Industry, 1996 and 2007 (January-November)



Source: Department of Statistics

one of Malaysia's major industrial sub-sectors within the manufacturing sector and a significant contributor to the country's economy.

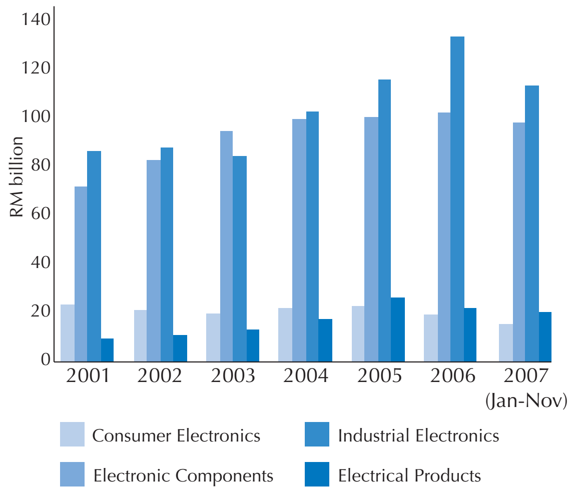
As one of the leading producers and exporters of semiconductors and integrated circuits in the world, Malaysia has developed a strong manufacturing base for high-end consumer electronic goods, such as various ICT products and computers and parts. Malaysia is particularly known for the production of semiconductors, memory chips, computer monitors and disk drives. Major global players which have set up their facilities in Malaysia are Dell, Fuji, Intel, Motorola, Osram and Western Digital.

The industry has moved away from labour-intensive to more capital-intensive operations as reflected by the capital investment per employee (CIPE) ratio which increased from RM79,149 per employee in 1995 to RM333,830 per employee in 2000 and RM578,469 per employee in 2007.

Based on MIDA's records, from a total of just four companies with 577 employees and total output value of RM25 million in 1970, the E&E industry has to date expanded to more than 1,695 companies with total investments of RM108 billion and a workforce of more than 600,000 people.

Exports of E&E components increased from RM31 million in 1970 to RM7.97 billion in 1986. By the early 1980s, Malaysia had emerged as the world's major exporter of integrated circuit components and electrical appliances such as air-conditioners.

Graph 27
Exports of E&E Products by Sub-Sector, 2001-2007



Source: Department of Statistics

During the period 1996-2006, exports of E&E products registered an average annual growth of 11 per cent, from RM99 billion in 1996 to RM280 billion in 2006.

In 2007 (January-November), exports of E&E products amounted to RM242 billion. A major portion of the export amount was contributed by industrial electronics (RM111 billion), followed by electronic components (RM97 billion). Major products exported were semiconductor devices, transistors, computers, parts for office machines and telecommunication equipment and parts. Major export destinations were the USA, Singapore, People's Republic of China, Hong Kong, and Japan.

During the IMP3 period (2006-2020), the E&E industry is expected to undergo rapid expansion and diversification and remain the largest contributor to the exports of manufactured products. E&E is expected to contribute the largest share of investments during the first five years of the IMP3 period (2006-2010) amounting to RM19.9 billion. With approved investments of RM10 billion in 2006 and RM15.1 billion in 2007 for this industry, this target has already been met.

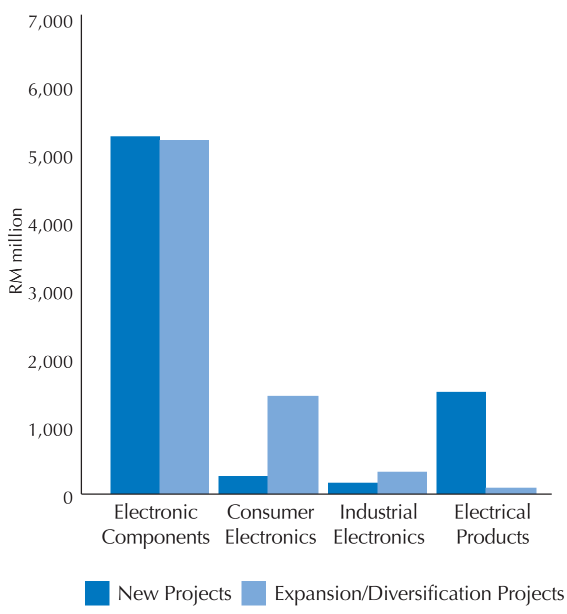
Malaysia is continuously attracting investments in high value-added products/activities such as wafer fabrication for ICs and light emitting diodes (LED), solar cells, advanced packaging and substrates. The presence of these activities is testimony that Malaysia is ready in terms of infrastructure, facilities, human resource and Government support to meet the demands of high technology and knowledge-intensive industries.

Projects Approved in 2007

Investment in the E&E industry increased by 51 per cent to RM15.1 billion in 2007 compared with RM10 billion in 2006. In 2007, a total of 144 E&E projects with investments of RM15.1 billion were approved. This represents 25.2 per cent of the total approved investments of RM59.9 billion. Of the projects approved, 59 were new projects with investments of RM7.6 billion (50%) while 85 projects with investments of RM7.5 billion (50%) were expansion/ diversification projects. Foreign investments in the 144 approved projects amounted to RM13.7 billion (91%) while domestic investments totalled RM1.4 billion (9%). In 2006, a total of 170 projects with investments of RM10 billion were approved. Existing MNCs such as Fuji Electric, Osram, STMicroelectronics, Samsung, Seagate, and Qimonda continued to expand and diversify their operations in 2007.

Approved investments in 2007 were mainly in the electronic components (RM10.7 billion or 70.9%) and consumer electronics (RM1.9 billion or 12.6%) sub-sectors, followed by electrical products (RM1.7 billion or 11.2%) and industrial electronics (RM0.8 billion or 5.3%) sub-sectors.

Graph 28
Investments in Projects Approved in the E&E Industry by Sub-Sector, 2007



Electronic Components

The electronic components sub-sector covers a wide range of products from semiconductor devices [which include fabricated wafers, ICs and IC design] to passive components (such as capacitors, resistors, connectors, inductors, crystal quartz and oscillators); and other components (such as storage media, disk drive parts, PCBs and metal and plastic parts/components for E&E applications).

Semiconductor devices which makes up the largest share of the electronic components sub-sector, have attracted leading semiconductor companies in microprocessors, microchips, power ICs, linear ICs, opto-electronics devices and other logic and discrete devices. These companies include MNCs such as Intel, AMD, Freescale Semiconductor, Avago, Infineon, Qimonda, Toshiba, STMicroelectronics, Texas Instruments, STATS ChipPAC, Spansion, National Semiconductor, Fairchild, Renesas and NEC, and Malaysian-owned companies such as Carsem, Globetronics, Omega, Unisem, AIC Semiconductor and IDS Electronics. To date, there are 60 companies producing semiconductor devices. According to the UNCTAD Handbook of Statistics, 2006-2007, Malaysia was among the five largest exporters of semiconductor devices in the world.

Semiconductor companies in Malaysia have made significant strides in the area of product development and design. There is an increasing trend among the MNCs in the setting up of design centres focussing on IC design, validation and characterisation, as well as for package and process development. Companies which have undertaken R&D and D&D activities include Freescale Semiconductor, Intel Technology, AMD, Avago and STMicroelectronics. This trend indicates that Malaysia has the capacity to host R&D and D&D activities.

Currently, the semiconductor companies are involved in high value-added activities such as processing of silicon wafers, IC design and wafer fabrication. According to a report by Frost and Sullivan, chip design has increasingly moved to South East Asia, including Malaysia and the market is expected to follow the growth path of the semiconductor market. To-date there are more than 20 companies undertaking IC design activities in Malaysia, such as development of smart cards, card chips, flash memory products, non volatile memory, radio frequency (RF) designs, mixed analog and digital designs. Most of them are MSC status companies.

Apart from designing, semiconductor packaging, assembly and testing is also one of the growing segments of the semiconductor services value chain in Southeast Asia. A large number of integrated device manufacturers (IDMs), and fabless companies are outsourcing their activities to semiconductor assembly and test companies in Malaysia such as STATS ChipPAC, Globetronics, Carsem, Unisem, AIC Semiconductor and ASE. Notably, Globetronics, a Malaysian company, has found success in providing manufacturing outsourcing capacity for the local MNCs. Malaysian companies which are involved in the assembly, testing and packaging have also progressed to complex and advanced packages such as bumped families of packages [flip chip, ball grid array (BGA), chip scale packages (CSPs)], stacked (3D) packages, systems-in-a-package (SIP) and multi chip modules.

The five wafer fabrication plants which are in operation include two foundry companies, Silterra and X-Fab Sarawak (formerly known as 1st Silicon); and two integrated device manufacturers (IDM), SCG Industries (ON Semiconductor), Infineon Kulim and MIMOS Semiconductor. While Infineon Kulim is the first of its kind in Malaysia to produce power and logic semiconductors used in the automotive and industrial power applications, the other three companies are fabricating wafers for Application Specific Integrated Circuit (ASIC) applications. MIMOS Semiconductor, a Government-funded corporation, undertakes wafer fabricating and IC design activities.

The development of supporting industries in Malaysia is largely attributed to and moving in tandem with the growth of the semiconductor industry. These supporting industries encompass the production of leadframes and bonding wires; metal and plastic parts; specialised machinery and equipment; moulds, tools and dies; and activities such as failure analysis; prototyping; and burn-in and testing services. Some of the Malaysian-owned companies that are supporting the semiconductor industry in Malaysia include Polytool Industries, Eng Teknologi, Kobay Technology, Genetec and Pentamaster. These companies started by serving the tooling needs of the MNCs' semiconductor assembling industries, and have developed world-class capabilities to meet the diversified tooling needs of most electronic components and equipment manufacturers.

In addition to semiconductor manufacturers, there are also more than 190 companies involved in the manufacture of passive components (such as capacitors, inductors, resistors, coils, transformers, magnets and oscillators). Major companies in the industry include Panasonic, TDK, Alps, Taiyo Yuden, Murata, Shin-Etsu, Rohm-Wako, Epson and Kamaya Electric. This sector assumes a significant role in creating linkages with the manufacturers of end products in the consumer, industrial and communication segment. In tandem with the growth of the end products segments, passive components sector also offers tremendous growth potential.

The presence of companies such as WD Media (formerly known as Komag), Fuji Electric, Penang Seagate, Toyo Memory Technology and Showa Denko in Malaysia has strongly benefited the development of the disk drive industry. Among the components manufactured are disk media and substrates and magnetic heads. Since their establishment, many of these companies particularly Penang Seagate, WD Media and Fuji Electric have undertaken continuous development and expansion.

Projects Approved in 2007

In 2007, a total of 44 projects in the electronic components sub-sector were approved with investments amounting to

RM10.7 billion. The projects approved were for the production of semiconductor devices, memory modules, solar modules, PCB assemblies, disk drive parts, hard disk media and substrates, and metal stamped parts.

Of the total investments approved in the electronic components sub-sector, foreign investments amounted to RM10.3 billion (96.3%), while domestic investments totalled RM393.4 million (3.7%). A total of 16 projects involving investments of RM5.3 billion were new, while 28 projects (RM5.3 billion) were for expansion/diversification.

Within the electronic components sub-sector, the semiconductor devices have been the leading contributor to exports of the E&E industry. In 2007 (January – November), exports of semiconductor devices amounted to RM88.7 billion or 39.7 per cent of total exports of electronic products. Exports of passive components (such as capacitors, resistors, inductors, crystal quartz and oscillators); and other components (such as PCBs; metal and plastic parts/components for E&E applications) amounted to RM8.5 billion during the same period.

The major electronic component projects approved in 2007 were:

- An expansion project with an investment of RM2.1 billion to produce fabricated wafers for power semiconductor devices and manufacture power semiconductor devices;

- A new project by Osram Wafer Technologies (M) Sdn. Bhd., one of the world's leading lighting manufacturers, to produce 4-inch fabricated wafers for light emitting diodes (LEDs). The project would create employment opportunities for 250 persons and would also involve R&D activities;

- A new project by Seagate International (Johor) Sdn. Bhd., a wholly foreign-owned company to produce substrates for data storage devices. This project would involve an investment of RM892.0 million and is expected to create employment opportunities for 2,186 persons. It will also be the first project for the group to produce substrates for data storage in the country;

- An expansion project by Qimonda Malaysia Sdn. Bhd. to produce integrated circuits and memory modules. The project which is expected to create employment opportunities for 3,486 people would also include the establishment of a Global Module House in the country, making this the only location that produces memory modules for the Qimonda group;

- An expansion project by a wholly foreign-owned company to produce RF/IF (radio frequency/intermediate frequency) and microwave components/ devices with an investment of RM702.8 million. The company plans to upgrade its existing processes using the latest technology, InP-based and GaN-based technology. With this expansion, the existing R&D centre in the country will also be upgraded to become the Centre of Excellence for the group. Malaysia will be the global hub for RF/IF (radio frequency/ intermediate frequency) and microwave components/devices;

- An expansion project by a Japanese company to produce multilayer ceramic chip capacitor elements and multilayer ceramic chip capacitors amounting to RM370.5 million;

- An expansion project by Silterra Malaysia Sdn. Bhd., a Malaysian-owned entity to produce semiconductor fabricated wafers with investments amounting to RM221.0 million. This project is expected to create additional employment opportunities for 278 persons and would also involve R&D activities.

Industrial Electronics

The industrial electronics sub-sector covers information technology products such as computers and computer peripherals, multimedia equipment/ devices; communications products such as telecommunication equipment/ devices, data networking equipment/ devices, optoelectronics, optics and photonics; and other industrial electronic products such as office equipment (copier machines, fax machines, typewriters, calculators and word processors), measuring and test equipment (oscilloscopes, multimeters, signal generators) and industrial controllers.

ICT is the fastest growing sub-sector driven by rapid development in digital and wireless technologies. The trend towards extensive application of electronics and the development of the multimedia/information and communication technology industries, provide ample growth potentials for the industry in Malaysia. The market growth for ICT is expected to be driven by the trend towards mobile technology for communication and data transfers. The market for more matured products such as PCs and software is also expected to register significant growth.

According to the Digital Planet Report 2006, ICT expenditure in Malaysia will increase from US$11.4 billion in 2007 to US$12.8 billion in 2008. Malaysia's IT industry is a growth sector, mirroring the rapid expansion of e-commerce worldwide and the demand for the related hardware appliances, software and internet related products and services. The domestic spending on IT is expected to grow by a compounded annual growth rate of 10 per cent from 2005 to 2010, reaching RM22 billion.

In 2007 (January – November), exports of industrial electronic products were valued at RM111 billion while imports were valued at RM62 billion. Exports of computers, computer peripherals and parts amounted to RM50 billion (45%), while exports of office machines and parts were valued at RM34 billion (31%), telecommunication equipment and parts was RM26 billion (23%) and other industrial electronic products such as indicator panels was RM1 billion (1%).

Presently, there are 161 manufacturers of industrial electronic products, including 52 in computers and computer peripherals, 80 in telecommunications equipment and 19 in optics and photonics products. The majority of the manufacturers in these segments are MNCs. Most of the MNCs are world leading technology companies and undertake integrated manufacturing and services activities. The presence of the MNCs has led to the establishment of local supporting activities such as specialised machinery and equipment, moulds and dies, and metal and plastics parts.

Computers and computer peripherals are produced by two major global manufacturers, Dell and NEC. These companies started with the manufacture of PCs but have since diversified into higher value-added products such as laptops/notebooks. Dell, currently one of the world's largest PC suppliers has shifted most of its manufacturing facilities including the manufacture of high-end network computer servers to Malaysia. The Asia Pacific Customer Centre (APCC) in Penang manufactures desktops, workstations, notebooks, servers and storage products for customers throughout the Asia Pacific (excluding North Asia) and is the regional centre for manufacturing, software development, engineering, logistics and quality management.

These computer manufacturers are supported by other leading MNCs supplying critical parts and components like processors (Intel), hard disk drives (Western Digital), motherboards (SCI), keyboards (Fujitsu and Mitsumi), printers (Flextronics) and batteries (Sony and Panasonic). Local vendors and component/part manufacturers such as Eng Teknologi, Sanmatech and Globetronics (system integration and ICs) have developed their own competencies in producing computer casting parts, precision parts and components, system integration and ICs.

Leading MNCs in the telecommunications sub-sector include Motorola, Flextronics, Sanyo PT, Polar Twin, Panasonic, Balda Solutions and Fujitsu. Local companies with a strong presence in this segment are CSL and KUB. These companies produce switching equipment, transmission equipment/devices, radio base stations, digital wireless transceivers, mobile phones and VoIP phones.

Motorola, one of the world's leading telecommunication companies, has integrated value-added activities such as product development, manufacturing, distribution, service and support functions at the existing facility. It has a strong R&D set-up that produces locally designed analogue and digital walkie-talkies for the world market. Motorola has also been very active in the local vendor development programme and has created several established local vendors such as BCM Electronics (PCB assembly). Flextronics (Shah Alam) is the first major producer of mobile phones in the country. A Malaysian-Finnish joint-venture company, Polar Twin Advance is involved extensively in R&D activities and manufacture of MEMS pressure sensors, RFID and wireless telecommunication equipment and advanced semiconductor devices, while CSL, a local company, is currently involved in R&D activities for mobile phones.

The optics and photonics sub-sector is largely dominated by MNCs such as Finisar, Iriichi, Nichia, Avago, Osram Technologies, Philips Lumileds Lighting, Fujikura Federal Cables, Opcom Cables and Huber & Suhner. Finisar, one of the world's major producers of photonic components from the USA ,has set up a facility in Ipoh, Perak to produce photonic components such as optical transceivers, passive optics components and optical filters. Nichia, a leading player in LED technology had set up the first integrated project in Malaysia to undertake fabrication of LEDs. Osram is the first company in Malaysia to produce a new generation of LEDs used in high technology products such as measuring instruments, PDAs and mobile phones. PWB Technologies, a German company, produces optical encoders and optical modules which are major components for the production of laser printers and copiers.

Projects Approved in 2007

In 2007, a total of 31 projects were approved in the industrial electronic sub-sector with total investments of RM765 million. Of the projects approved, 11 were new projects with investments amounting to RM287 million (38%), while 20 projects were for expansion/diversification with investments amounting to RM478 million (62%). Foreign investments amounted to RM660 million (86%) while domestic investments totalled RM105 million (14%).

Of the 31 projects approved:

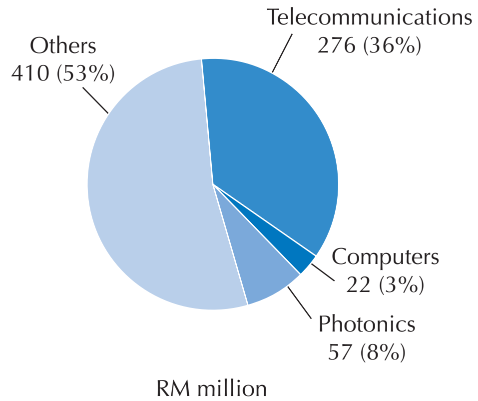
- 11 projects with a total investment of RM410 million (53%) were for other industrial electronic products such as measuring and test equipment (oscilloscopes, multimeters, signal generators) and industrial controllers;

- 10 projects were for the telecommunication sub-sector with investments amounting to RM276 million (36%);

- Seven projects were for the manufacture of computers and computer peripherals with investments amounting to RM22.0 million (3%); and

- Three projects were for the manufacture of optics and photonics with investments amounting to RM57 million (8%).

Graph 29
Investments in Projects Approved in the Industrial Electronics Sub-Sector, 2007



Among the notable projects approved were:

- An expansion project with an investment of RM156.2 million for the production of intelligent factory transportation and resources and system and media cleaning equipment. The project is expected to create employment opportunities for 142 persons;

- A new project by Aion (M) Sdn. Bhd., with an investment of RM90.5 million to produce video phone accessories and parts thereof within the next 5 years upon successful implementation of R&D activities. The project is expected to create employment opportunities for 226 persons; and

- An expansion project by a Singapore-based manufacturing company with an investment of RM80 million. The expansion activities would involve the production of medical and scientific equipment, test and measurement instruments and advanced electronics communication equipment. The project is expected to create employment opportunities for 619 persons.

Consumer Electronics

The consumer electronic products sub-sector includes home theatre systems, colour TV receivers, audio/visual products, DVD/VCD players, digital video cameras, digital and still-image cameras and electronic games. The sub-sector currently represents 11.7 per cent of the output of the electronics industry.

The consumer electronics industry was first established in Malaysia in the early 1970s. During this period, only a few European and Japanese companies set up their operations to manufacture audio/visual products. The operations were labour-intensive, and most of the raw materials were imported.

The industry has undergone restructuring, consolidation and rationalisation since then. Companies such as Sony, Panasonic, Hitachi, Kenwood and Sharp have relocated their low-end assembly operations to lower cost countries, while maintaining their high value-added operations such as design and R&D in Malaysia.

The convergence of technologies has resulted in a greater demand for consumer devices, offering multiple functions. The revolution brought about by digital technology has enabled the consumer electronics sector to benefit from the growing interaction of digital applications such as camcorders, DVD players/recorders, still cameras, computer monitors and LCD televisions. It has also witnessed the emergence of mobile telecommunications technology incorporating both digital visual and digital MP3 capabilities.

According to Research and Markets Consumer Electronics Market Forecast, the global sales of consumer electronics is estimated to reach US$135.4 billion, an increase of 8.0 per cent from 2005. By 2008, sales are expected to increase to US$158.4 billion, up by 65.0 per cent over 2000. The Asia Pacific region is expected to account for the biggest share of the market, closely followed by Europe.

The consumer electronics industry in Malaysia comprises 144 companies undertaking production of high-end consumer electronic products which include audio and video compact disks and digital audio video products, digital versatile disk (DVD) players and components, home theatre systems, electronic games, multimedia products (set top boxes, PDAs, home theatre systems) and digital cameras.

Based on MIDA's record, there are 56 companies producing colour TVs in Malaysia, of which 26 are producing TFT-LCD/plasma TVs. These companies include Hitachi Electronic Products Sdn. Bhd., Samsung Electronic Display (M) Sdn. Bhd., Sharp-Roxy Electronics (M) Sdn. Bhd., Sony EMCS Sdn. Bhd and Panasonic AVC Networks Sdn. Bhd.

Malaysia's exports of consumer electronic products amounted to RM15.2 billion in 2007 (January – November). The main products exported were television receivers and sound recorders or reproducers.

Projects Approved in 2007

A total of 15 projects were approved in the consumer electronics sub-sector with investments of RM1.9 billion in 2007. Of these, two were new projects with investments of RM386.5 million (19.8%) and 13 were expansion/diversification projects with investments of RM1,561.3 million (80.2%). Foreign investments amounted to RM1,946.8 million (99.9%) while domestic investments totalled RM0.9 million (0.1%).

The major consumer electronics projects approved in 2007 were:

- An expansion project with an investment of RM1.0 billion to produce colour monitors, chassis assemblies, PCBA and colour television receivers. The project will generate an additional employment for 661 persons; and

- An expansion project by Panasonic AVC Networks Malaysia Sdn. Bhd. to produce LCD television receivers in Shah Alam, Selangor. The project would involve an investment of RM379.3million and would create employment opportunities for 1,104 persons.

Electrical Products

The electrical products industry in Malaysia started in the 1960s with the manufacture of household appliances, electrical fittings, wires, cables, electrical switchboards, control panels and automotive batteries to cater for the domestic market. Currently, there are many companies producing a wide range of electrical goods, many of which are exported worldwide.

The electrical products sub-sector can be categorised into three segments, namely industrial, components and consumer products. To date, there are about 238 companies in operation producing a wide range of products such as household electrical appliances, wires and cables and electrical industrial equipment and other electrical products.

The solar industry is expected to be the growth industry in this sub-sector. Malaysia recognises the enormous growth potential of the solar energy sector and is putting in place attractive incentives and support facilities to realise its development. Malaysia is ready to create a globally competitive solar industry cluster and First Solar's choice of locating its Giga-watt photovoltaic project in Malaysia is testimony to Malaysia's ideal location for solar photovoltaic manufacturing. First Solar is one of the world major players in manufacturing solar modules with an advanced thin film semiconductor process that significantly lowers solar electricity costs.

With the current unprecedented increase in fuel cost and the impact of global warming, the demand for renewable energy and also energy efficient products and systems is expected to accelerate. The global solar industry revenue was USD10.6 billion in 2006. With an estimated growth of 20-25 per cent per annum, a bright future exists for this sector of the industry.

Realising the potential, the Government is putting special efforts in the solar energy sector in the country and has launched the Malaysian Building Integrated Photovoltaic (MBIPV) project under the auspices of Pusat Tenaga Malaysia (PTM). This project is aimed at intensifying the usage of solar energy as an alternative source of electricity as well as to jump start local capabilities and development of the solar industry in Malaysia. Since its launching, MIDA and PTM have been collaborating to further promote the industry by identifying major players to invest in the country.

In 2007 (January – November), Malaysia's exports of electrical products were valued at RM18.6 billion and imports were valued at RM19.4 billion. The major exports of electrical products were industrial equipment totalling RM10.3 billion (55%), consumer products amounting to RM5.8 billion (31%) and electrical components totalling RM2.5 billion (14%). The major items exported were electrical appliances, electric control panels and parts, air-conditioners, switching apparatus and transformers.

Industrial Electrical Products

This segment includes electrical apparatus for switching/signaling/distribution, electrical connection and circuit protection and industrial lighting, illumination and miscellaneous items such as energy saving device/equipment/system. Growth in this segment is dependent on the demand for electricity transmission and distribution especially in the manufacturing and housing sectors. This segment is dominated by Malaysian-owned companies such as Tamco, Malaysian Transformer, AM SGB, TNB Switchgear and EPE Power catering for the local power utility companies such as TNB, SEB and SESCO.

A number of companies such as Tamco and ABB Manufacturing are also exporting their products while others are also gearing towards exploring export market potentials. Major market destinations are to the USA, Singapore, Thailand, People's Republic of China and Japan.

Electrical Components

This segment covers products such as cables, wires, conductors, industrial components and parts. The major products are wires and cables, dominated mainly by local companies, namely Leader Cable, Universal Cable, Tenaga Cable, Power Cable and Mitti Cable, which cater mainly for TNB and Telecom Malaysia and other domestic customers. Major MNCs are Fujikura, Elektrisola, Hitachi Cable and Sumitomo that are producing electric wires, cables and enamelled copper wires catering mainly for the export market. Elektrisola has set up one of the most advanced ultra fine enamelled wire manufacturing plants in the world in Malaysia.

Electrical Consumer Products

This segment, covers 'white goods' such as washing machines, air-conditioners, refrigerators, vacuum cleaners and microwave ovens and other small home appliances such as electric ovens, water dispensers, grinders, juice extractors, coffee makers, electric kettles and electric irons.

Major foreign companies with a strong presence in this segment are Samsung, Panasonic, OYL and Dyson. These companies also undertake R&D activities locally while Dyson outsources the manufacturing of its product to local companies. Samsung produces medium and high-end microwave ovens including locally designed smart ovens.

More companies in this segment are moving towards the production of higher-end products such as multi-feature air-conditioners, instantaneous water heaters, power motors and precision parts. Malaysian-owned brand products such as Pensonic, Joven and Khind have made enormous headway in the export market especially in ASEAN and the Middle East.

Projects Approved in 2007

Investments in the electrical products sub-sector increased by 21 per cent to RM1.7 billion in 2007 compared with RM1.4 billion in 2006. The increase was mainly attributed to the solar industry which is expected to be the growth industry in this sub-sector. In 2007, a total of 54 projects were approved in the electrical industry with total investments of RM1.7 billion of which 30 were new projects (RM1.6 billion) and 24 were expansion/ diversification projects (RM124 million). Domestic investments amounted to RM875 million (51%) while foreign investments totalled RM848 million (49%). Of the total 54 electrical projects approved, 21 (RM1,281 million) were in components, 25 (RM385 million) in industrial, and eight (RM57 million) in consumer.

Notable projects approved in 2007 include:

- A new project with an investment of RM568 million to produce thin-film solar modules. The project is expected to create employment opportunities for more than 500 people, of which 50 per cent will be professional staff. This project would be the first of its kind in Malaysia. The establishment of the project will promote the development of the renewable energy industry in the country. By 2010, the company's production is expected to account for 5 per cent of the global demand; and

- A new project with an investment of more than RM500 million to undertake design, development and production of submarine and land cables for HVD/HVAC and power transmission. The project is expected to create employment opportunities for 1,104 persons.

The E&E industry is distinguished by fast technological advances and has grown more rapidly than most other industries over the past 30 years. The Government is promoting the further development of this industry in Malaysia through the strengthening of backward and forward linkages by promoting activities such as IC design, wafer fabrication and photo masking services. Besides the semiconductor industry, the Government also encourages investment in new and emerging technologies such as photonics, wireless communication, flat panel displays, solar and nanotechnology.

There are opportunities for E&E manufacturers to establish their manufacturing-based operations/offices in Malaysia to serve not only the domestic market but also to penetrate the new and emerging regional markets in ASEAN. The favourable tariff concessions provided by the ASEAN Free Trade Area (AFTA) would enable foreign E&E manufacturers to use Malaysia as a spring board to penetrate the ASEAN market.

Manufacturers of E&E products are under constant pressure to develop new and innovative products in shorter time cycles, at reduced costs, and with improved quality. The industry is slowly and gradually shifting its base to Asia Pacific countries, which is now an important source of electronic components to meet worldwide market demand.

TRANSPORT EQUIPMENT

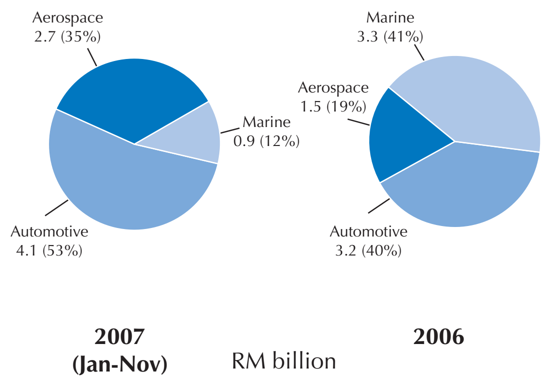
The transport equipment industry covers the following sub-sectors:

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

For the period January to November 2007, exports of transport equipment totalled RM7.7 billion compared with RM8.0 billion for the whole of 2006. Exports of road vehicles (comprising passenger vehicles, commercial vehicles, motorcycles/ scooters, trailers/ semi-trailers, bicycles/other cycles and parts and components) amounted to RM4.1 billion. Exports of ships, boats and floating structures amounted to RM940.5 million and exports of aircraft and associated equipment and parts totalled RM2.7 billion.

Major export destinations were Singapore (RM1.6 billion), Indonesia (RM637.3 million), United Kingdom (RM630.7 million), the USA (RM625.3 million) Thailand (RM580.5 million) and Taiwan (RM446.3 million).

Graph 30
Exports of Transport Equipment by Sub-Sector, 2007 and 2006



Source: Department of Statistics

Total export and investment targets set under the IMP3 for the period 2006-2020 in the transport equipment sector were RM232.5 billion, (with an average annual growth rate of 6.3%) and RM42.3 billion respectively. The total investments in this sector amounted to RM989.0 million in 2007, compared with an annual target of RM2.8 billion set for the year under the IMP3.

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 manufacturers (National Projects) and nine assemblers in the motor vehicle sector, with an annual installed capacity of 963,300 units. In addition, there are 10 manufacturers/assemblers of motorcycles and scooters with an installed capacity of 1,063,000 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, Wira, Waja, Satria and Perdana; PERODUA's Viva, Myvi, Kancil, Kelisa, Kenari and Kembara; INOKOM's Atos, Permas and Lorimas; NAZA's Naza Ria, Citra, Spectra and Sorento; Honda's CR-V, City, Civic and Accord; and various models of Toyota, Ford, Mazda, Volvo, Mercedes Benz, Hyundai and BMW. 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 totalled 441,678 units in 2007 (comprising 403,245 units of passenger vehicles and 38,433 units of commercial vehicles), a decrease of 61,370 units or 12.2 per cent compared with production of 503,048 units in 2006. Sales of motor vehicles also decreased, by 0.7 per cent from 490,768 units in 2006 to 487,176 units in 2007. Sales comprised 442,885 units of passenger vehicles and 44,291 units of commercial vehicles. According to the Motorcycle and Scooter Assemblers and Distributors Association of Malaysia, production of motorcycles and scooters increased by three per cent from 432,300 units in 2006 to 446,430 units in 2007. In terms of sales, there was an increase of 27,270 units or six per cent from 422,550 units in 2006 to 449,820 units in 2007.

The slight decrease in the sales of motor vehicles in 2007 was mainly due to the reduction in trade-in value of used cars, the tightening of financial facilities, an issue which continued into 2007 from the earlier year, and the strict screening of borrowers' credit worthiness. However, there was a six per cent increase in the sales of motorcycles and scooters in 2007, which was mainly attributed to the many new attractive models introduced with competitive prices and the increase in fuel prices.

The value of imports and exports of motor vehicles and parts (including accessories) in 2006 and 2007 (January-November) were as follows:

Table 3
Imports and Exports of Motor Vehicles and Parts, 2007 and 2006

	RM million			
	Exports		Imports	
	2007 (Jan-Nov)	2006	2007 (Jan-Nov)	2006
Passenger Motor Vehicles	565.1	554.9	3,971.7	5,005.3
Goods & Special Purpose Transport Vehicles	124.7	131.6	1,076.2	1,108.7
Road Motor Vehicles	89.7	130.7	350.1	400.1
Cycles, Motorcycles, Non-Motorised & Motorised	910.0	898.2	619.3	743.0
Trailers, Semi-Trailers	627.6	254.3	244.4	225.3
Parts, Tractors, Motor Vehicles	1,777.2	1,600.2	3,706.5	3,856.4
TOTAL	**4,094.3**	**3,569.9**	**9,968.2**	**11,338.8**

Source: Department of Statistics

Exports of motor vehicles and parts and components in 2007 (January-November) amounted to RM 4.1 billion, which exceeded the RM3.6 billion recorded for the whole of 2006. The bulk of the exports comprised motor vehicle parts.

Imports of motor vehicles and parts and components in 2007 (January-November) totalled RM 9.9 billion compared with RM11.3 billion for the whole of 2006. The bulk of the imports comprised passenger vehicles and automotive components. The reduction in imports is attributed mainly to the decrease in production of motor vehicles and motor vehicle parts and accessories. The reduction in production is due to the industry reducing excess stock in the market following the low demand for motor vehicles in 2007.

The automotive sub-sector employed about 46,932 workers in November 2007. PROTON and PERODUA together employed about 17,315 workers or 35.8 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 50 per cent.

As at December 2007, there were more than 690 automotive component manufacturers and about 120 motorcycle/ scooter component manufacturers. The automotive component industry produces over 5,000 components and of the 690 component manufacturers, 226 are PROTON vendors (32 tier one vendors) and 161 PERODUA vendors (some vendors are supplying to both PROTON and PERODUA).

More than 70 per cent of the automotive component companies are Malaysian-owned. A number of these companies have technical collaborations with global automotive component companies. More than 50 per cent of the component manufacturers have acquired international standards such as TS16949 and ISO 14000. There are also a number of foreign global automotive component manufacturers operating in Malaysia, including Bosch, GKN, Denso, Delphi, Nippon Wiper Blade, Siemens VDO Instruments, TRW and ZF.

About 50 of the automotive component manufacturers are presently exporting their components, mainly for the replacement market. Major components exported include steering wheels, rims, bumpers, brakes, radiators, shock absorbers, clutches, exhausts and accessories. The total sales value of automotive components and accessories in 2007 (January – November) amounted to RM4.9 billion, compared with RM5.2 billion for the whole of 2006. Total exports of motor vehicle components and parts for the period January-November 2007 was RM1.8 billion, which exceeded the RM1.6 billion registered for the whole of 2006. Major export destinations were Singapore (RM285.1 million), Thailand (RM274.4 million) and Indonesia (RM166.3 million) in ASEAN and Taiwan (RM 134.6 million), United Kingdom (RM130.3 million) and Japan (RM119.6 million) in the non-ASEAN region.

The automotive component industry, which commenced manufacture and assembly of accessories and replacement parts in the 1960s, today has moved into the realm of R&D, and product design, and has established its presence in selected emerging markets. With the introduction of modular manufacturing by Proton, there was a radical transformation in the development and purchase of automotive components/parts. From merely manufacturing/assembling components from the specifications drawn up by motor vehicle manufacturers, the component manufacturers have attained competency in totally developing the product by themselves. Today ,there are about 32 tier one manufacturers with the ability to design and develop, source components/ parts and manufacture the whole module for the motor vehicle manufactures. Currently, about 80 per cent of all national car components are either supplied or manufactured by local vendors.

Under the National Automotive Policy, various funds, grants and incentives, such as Automotive Development Fund, Industrial Adjustment Fund, training grants, R&D grants and customised incentives, have been put in place, while in the Third Industrial Master Plan, nine strategic thrusts have been formulated to integrate the industry into the global supply chain.

As at 31 December 2007, twelve loan applications worth RM52.9 million have been disbursed under the Soft Loan Scheme for Automotive Development.

Automotive Industry in ASEAN

Sales of passenger cars in ASEAN 4 countries (Indonesia, Thailand, Philippines and Malaysia) totalled

968,986 units in 2007. Motor vehicle sales in these ASEAN countries in 2006 and 2007 are shown in the table.

Table 4
Motor Vehicles Sales in selected ASEAN Countries

(units)

Countries	2006			2007		
	PC	CV	TIV	PC	CV	TIV
Indonesia	17,710	300,978	318,688	314,769	118,572	433,341
Thailand	191,763	490,398	682,161	170,118	461,133	631,251
Philippines	38,061	61,369	99,430	41,214	76,689	117,903
Malaysia	366,738	124,030	490,768	442,885	44,291	487,176
ASEAN 4	**614,272**	**976,775**	**1,591,047**	**968,986**	**700,685**	**1,669,671**

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

Sources: Malaysian Automotive Association
Toyota Motor Corporation through UMW Toyota Motor

Malaysia remained the largest market for passenger cars in ASEAN 4 countries, accounting for almost 46 per cent (442,885 units) of the market in 2007. However, for the commercial vehicle segment, Thailand was the largest market in ASEAN main 4, accounting for 66 per cent (461,133 units).

Projects Approved in 2007

In 2007, a total of 36 projects were approved in the automotive industry with investments of RM342.6 million, compared with 51 projects approved in 2006 with investments of RM536.3 million. A total of 18 projects with investments of RM44.5 million (12.9%) were new projects while another 18 projects with investments of RM298.1 million (87.1%) were expansion/diversification projects. Domestic investments amounted to RM300.7 million (87.7%), while foreign investments totalled RM 41.9 million (12.3%).

Of the 36 projects approved, 30 were Malaysian-owned projects with investments of RM328.7 million. Malaysian-owned companies were mainly involved in the manufacture of automotive parts and components, such as, production of front cross member, automotive batteries, door modules, alloy wheels, vehicle bodies, wiring harnesses, automotive accessories, automotive plastic parts, window regulators and control cables.

Major projects approved included:

- An expansion project with an investment of RM134.5 million for the design, research and development and production of front cross member module;

- An expansion project with an investment of RM50.1 million to manufacture automotive batteries and sealed maintenance free (SMF) batteries;

- An expansion project with an investment of RM30.0 million to manufacture and assemble buses; and

- An expansion project with an investment of RM12.7 million to manufacture door modules.

Over the past decade, global integration arising from multilateral and bilateral initiatives has posed significant challenges to the automotive sector. These challenges arise from the need for industries to enhance their efficiency to contribute meaningfully to the dynamics of trade as well as address several issues that are critical from the economic, social and environmental perspectives.

Malaysia has been taking several policy initiatives since the early 1990's to address global integration. In recent years, initiatives taken by Malaysia have been in the direction of regional integration.

In light of the above, the domestic automotive industry has to assess the impact of these developments and the likely challenges and alternatives in the years ahead. In particular, the industry needs to find the right balance between the dynamics of the economies in the region and the challenges faced by the domestic industry.

The future of the automotive industry in Malaysia will be determined by its ability to increase efficiency and competitiveness, widen the existing product range, expand into regional and global markets, and to seek alliances with other regional and global automotive manufacturers. That competition will inevitably become stiffer in future cannot be ignored especially since several global auto makers are already making their presence felt, with budget cars to meet the specific needs of a liberalised market.

While AFTA provides market access to 560 million people, with already enormous trade, investment and economic benefits ASEAN is looking further for even greater market access through Regional Trading Agreements (RTAs) with People's Republic of China, Japan, Korea, Australia, New Zealand and India. ASEAN trade agreements with these countries will create the world's largest RTA serving a combined population of more that 3 billion people. Malaysian automotive companies are already strategizing to take full advantage of these linkages that are in the pipeline.

With the rapid development of the motor vehicle assembly and manufacturing industry in Malaysia, the total sales value of component parts and accessories manufactured in the country totalled RM4.9 billion in the period January-November 2007. However, there is still tremendous potential for growth as Malaysia currently imports a substantial amount of automotive components and parts, such as engines, transmissions and auto electronic components. The total import value, including those for completely knocked-down parts, amounted to about RM9.9 billion in the period January-November 2007.

With the Malaysian automotive industry moving into modular concept manufacturing, the Government has provided generous incentives to attract international tier-one component manufacturers who can take advantage of the well-established vendor network in the country.

The removal of trade barriers within ASEAN has opened up a vast regional market for automotive companies which stand to benefit from potential economies of scale and enjoy access to cost competitive components produced in ASEAN countries.

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; support services; and training. Currently, there are seven manufacturers of aircraft parts and components and 28 companies are involved in MRO activities.

Several companies involved in the manufacture of composite and metal aero-structural parts and components have proven their capabilities by securing more jobs from major international companies such as Airbus, Boeing and BAE Systems. The growth of parts and components manufacturing in Malaysia has expanded as a result of more work packages coming from these first tier suppliers who are contracting out to low cost countries including Malaysia.

CTRM Aero Composites Sdn. Bhd., a manufacturer of parts and components, produces composite parts mainly for Airbus aircraft series. It has also successfully penetrated into the Boeing supply chain, besides securing bigger work packages from Airbus itself. Asian Composites Manufacturing Sdn. Bhd. (ACM) is the sole supplier of fixed trailing edge panels for Boeing. It has also secured new projects from Fischer Advanced Composite Components of Austria. In the production of metal based parts, SME-Aerospace Sdn. Bhd. and Upeca Aerotech were recently awarded more projects from BAE Systems and Singapore Aerospace Manufacturing.

MRO activities in Malaysia are expanding in tandem with the arrival of new military and commercial aircraft. The MRO sub-sector is expected to grow by 12 per cent to 15 per cent annually. The activities of this sub-sector range from modification and remanufacturing of engines and engine components, repair and overhaul of aircraft parts and components, repair and testing of aircraft instruments and components and provision of line and heavy maintenance to both military and civil aircraft. Of the 28 MRO companies in operation, 12 companies are involved in the repair and overhaul of aircraft parts and components, including testing of aircraft instruments, 12 companies provide line and heavy maintenance; and four companies are involved in engine and engine parts maintenance. Major MRO companies in Malaysia include MAS (Engineering Department), GE Engine, NADI (holding company for AIROD, SME), Hamilton Sundstrand, Honeywell, Parker Haniffin and Eurocopter.

The Government continued to promote the Malaysia International Aerospace Centre (MIAC) in Subang as the aerospace hub in Malaysia in line with its vision to propel Malaysia into the global aerospace industry. Gathering users, manufacturers and maintenance companies into productive clusters, the MIAC is expected to emerge as a state-of-the-art research, design, engineering and manufacturing base handling aerospace-related activities for Malaysia and the world.

The MIAC currently has 28 tenants, comprising eight MRO companies, 15 general aviation and five aviation-related companies. The latest tenants in the MIAC are Spirit AeroSystems (Europe) Ltd., the world's largest supplier of aircraft assemblies and components which will establish its custom-built and state-of-the-art aerostructure manufacturing and assembly plant in Malaysia; the Malaysian Institute of Aviation Technology, which will build its training centre; and Subang Skypark which will transform Terminal 3 into ASEAN's biggest hub for corporate jets.

For the period January to November 2007, exports of 'aircraft and associated equipment, spacecraft and spacecraft launch vehicles and parts' amounted to RM2.7 billion, compared with RM1.6 billion in 2006. Imports of these products totalled RM4.8 billion for the period January-November 2007, compared with RM5.9 billion in 2006.

Projects Approved in 2007

In 2007, five projects were approved for MRO activities and the design and manufacture of cabin and cargo parts with investments amounting to RM299.7 million, compared with three projects in 2006 with investments of RM113.2 million. Domestic investments in these projects amounted to RM153.5 million or 51 per cent, while foreign investments totalled RM146.2 or 49 per cent.

The projects approved included:

- Sepang Aircraft Engineering Sdn. Bhd., a new Malaysian-owned project with an investment of RM110.6 million for MRO activities especially for Air Asia aircrafts;

- A new joint venture project with an investment of RM168.1 million to manufacture and provide maintenance of cabin and cargo parts;

- A new Malaysian-owned project to manufacture aircraft precision machined parts; and

- An expansion joint venture project to manufacture aircraft engine casings.

The decision by Spirit AeroSystems (Europe) Ltd. to establish its project in the country has generated interest in Malaysia as a hub for aerospace manufacturing and related activities. A number of companies, both foreign and domestic, are investigating the possibility of establishing aerospace manufacturing projects in Malaysia. The redevelopment plan of the present Subang Terminal 3 into a regional general and corporate aviation hub is also a new growth area in the aviation support services industry. In view of the growth potential of the aerospace industry, the Government will continue to provide support and direction for the development of the aerospace industry in Malaysia. The Government is cognisant of the industry's requirement of a stable input of skilled personnel, and has taken appropriate measures to ensure that there is adequate manpower to meet the needs of the industry. Presently, several institutions have embarked on aerospace-related training to provide direct support for the industry by supplying trained and skilled workers.

The aerospace industry is one of the world's largest technology-based and knowledge-intensive industries. The aerospace sub-sector of the transport equipment industry has been identified as one of the new sources of growth in the Ninth Malaysia Plan, 2006-2010.

The development of the sub-sector has enormous potential in the nation's industrialisation programme and technological development. The main activities include the assembly of light aircraft, manufacture of parts and components, maintenance and repair of aircraft (MRO), as well as modification and conversion activities. The current emphasis is on the manufacture of avionics components, composite material parts and the design or development and assembly/production of light aircrafts.

The country also aims to be a regional aviation centre for maintenance, repair, overhaul, modification and conversion services. Towards this end, strong Government support, an educated and skilled workforce and good infrastructure facilities, including design, research and development capabilities, have attracted international companies such as Boeing, General Electric, Honeywell Aerospace, Parker Hannifin, MTU Maintenance, Hamilton Standard and Eurocopter to set up operations in the country to serve both the domestic and regional markets.

Shipbuilding and Ship Repairing

The shipbuilding and ship repairing industry in Malaysia is one of the core sectors in the marine transportation industry. The industry includes the manufacture of ships, boats, speed boats, patrol vessels, barges, leisure crafts, yachts, hydrofoils, hovercrafts and shiprepairing activities. Other activities include construction of ocean-going vessels, offshore steel structures and fabrication of container cranes.

The industry has developed specialised skills and technological capabilities in engineering design, metallurgy, corrosion control, machining, welding and fabrication. It also provides spin-off to other service sectors such as telecommunications, insurance, banking and finance, storage, bulk breaking of goods and port services.

There are more than 70 shipyards in Malaysia, most of which are small ones and building mostly wooden and aluminium hulled boats/crafts. Most of the yards are located in Sabah and Sarawak. Generally, shipyards in Malaysia are not only engaged in shipbuilding and shiprepairing activities, but are also involved in the conversion of ships and heavy engineering.

The major shipyards are Malaysia Marine and Heavy Engineering (formerly known as Malaysia Shipyard and 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) with the installation of 70,000 DWT shiplift facility and can repair vessels of up to 400,000 DWT.

Generally, the demand for boats and ships in Malaysia is based on replacement of ships (scrapped due to age or damage), demand for new ships on a jobbing basis, development of the oil and gas industry and requirements of the military and police.

Exports of ships, boats (including hovercrafts) and floating structures in 2007 (January to November) amounted to RM940.5 million compared with RM3.4 billion in 2006. Imports of these products totalled RM5 billion for the period January-November 2007, compared with RM3 billion in 2006.

Projects Approved in 2007

In 2007, a total of 10 new projects were approved with total investments of RM346.7 million. One foreign-owned project was approved for marine diesel engine rebuilding, shipbuilding and ship repairing activities. Nine Malaysian-owned projects were approved to undertake shipbuilding, ship repairing and the manufacture of pleasure craft and fabricated products with total investments of RM228.3 million.

The global shipping and shipbuilding industry is currently enjoying a strong upturn. The World Marine Propulsion Report 2006-2010 stated that there is a surge of orders for vessels and full order books for yards. The strong growth in the sector is attributed to several factors, which include rising demand for shipping services due to booming world trade, International Maritime Organisations (IMOs) ruling to phase out ships with single hulls, and the very strong growth of the Chinese economy. Despite promising prospects for the industry due to the bullish outlook in the global shipbuilding sector and increasing demand for shipping services locally and regionally, Malaysian yards have not been able to truly capitalise on the sector's potential.

The Government, in realising the potential growth in this sub-sector, has identified the area of focus, in the IMP3 as follows:

- Production of small vessels for recreation and sports, including leisure crafts;
- Increase in ship repairing and maintenance activities;
- Production of vessels of 30,000 DWT and below for coastal shipping;
- Fabrication of off-shore structures;and
- Production of tugs and pusher craft for exports.

The states of Sabah and Sarawak, with the presence of a long shoreline, are attractive locations for the development of the shipbuilding and ship repairing activities.

Of the 10 projects approved in 2007, six projects were for Sabah and Sarawak, proposing to undertake the building of offshore support vessels including crew boats, tugs, barges, patrol boats, fishery vessels as well as off shore platforms for oil and gas.

The potential growth areas in the shipbuilding and ship repairing industries as identified in the IMP3 include:

- The manufacture of marine equipment, hardware components and engineering and precision equipment such as propellers, shafts, magnetic compasses, maritime cables and other related products; and
- The development of related facilities such as marine bays, tourism and changing lifestyles will create more demand for leisure crafts. The increase in economic activities is expected to enhance coastal shipping and port facilities.

MACHINERY AND EQUIPMENT

The machinery and equipment (M&E) sector has gradually progressed from the general fabrication and machining works in the early years of industrial development to the manufacture of high-end specific M&E, automation equipment, material handling equipment and heavy M&E in recent years to support the electrical and electronics (E&E), automotive, petrochemical, oil and gas, construction and power generation industries.

Malaysia's capability in this industry is increasingly being recognised worldwide in terms of quality of production, employment of high end technology, design and development, innovation and delivery.

To ensure that the sector continues to assume a pivotal role in facilitating Malaysia's move up the value chain of industrialisation, the Government has placed increasing emphasis on the promotion of high technology and high value-added M&E.

The Government, through the Third Industrial Master Plan (IMP3) has outlined long term objectives for the machinery and equipment (M&E) sector; to make Malaysia :

- The regional production hub for high technology and specialised M&E;

- The main distribution centre in the region for all types of M&E; and

- The centre for maintenance related services, refurbishment, reconditioning and upgrading of high technology and specialised M&E.

With increasing competition from lower cost producing countries, the industry is expected to move away from the manufacture of low-end machinery and equipment. It will strengthen its design, development and innovation capabilities in the production of high technology machinery and equipment, and specialised industry specific M&E.

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

- Specialised machinery and equipment for specific industry;
- Power generating machinery and equipment;
- Metalworking machinery; and
- General industrial machinery and equipment, 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. Companies in this sub-sector undertake R&D, engineering design, innovation and system integration, while most parts and components are outsourced. There are about 207 companies producing a wide range of specialised M&E for the manufacturing and agriculture sectors.

In this sub-sector, there are 26 large companies in operation producing specialised M&E for the E&E industry. Types of M&E produced are mostly for the back-end semiconductor processing which includes surface mounting machines, vision inspection systems, tape and reel machines, automatic moulding systems, laser marking machines, die bonders, auto dispensing machines and other flexible manufacturing systems with full automation, incorporating advanced handling systems and intelligent robots.

Recently, Malaysia has also attracted foreign investments for the front end semiconductor processing M&E which includes semiconductor front-end wafer inspection machines and wafer handlers, wafer assembly equipment, MEMS manufacturing equipment, services and technologies for wafer level packaging, and sawing machines for silicon wafer and parts.

Malaysia is the leading manufacturer of automation equipment for the E&E industry in the South East Asian region. Major local companies such as Genetec, Vitrox, Kobay Technology, Pentamaster and Upeca are primarily design houses for industrial automation processes, conceptualising and building specialised automation equipment to meet their clients' various needs. Over the years these companies have built their reputation and capabilities to be recognised internationally and have become contributors to the global supply chain. Among their customers are Applied Materials, Carsem, Fairchild Semiconductor, Dell, Agilent Technologies and NEC Semiconductor. Apart from improving and developing new automation processes for the semiconductor and hard disk drive industry, these companies have also invested substantially in venturing into the production of specialised M&E for other industries such as medical and automotive industries.

In the oil and gas industry, the growth prospects for Malaysia's oil and gas related M&E manufacturers remain good especially in deepwater and ultra-deepwater areas. The recent shift in oil and gas exploration to deepwater areas in the Asia Pacific region has created opportunities for the manufacture of specialised sub-sea extraction and production equipment (capable of operating in water depths of 200 metres and above), fabrication and other related services such as maintenance, oilfield development and monitoring, inspection and testing.

Several Malaysian owned companies such as Kencana HL Engineering Sdn. Bhd., KNM Process Systems Sdn. Bhd and Scomi Group of Companies are also internationally recognised for their capabilities in the design and fabrication of offshore oil drilling platform requirements such as jackets, production modules, platform decks, accommodation modules, line-pipe and spool and related onshore activities such as petroleum refineries, petrochemical plants, storage facilities and offshore activities such as oilfield maintenance, development & monitoring, inspection and testing.

Malaysia is emerging as a focus area for multinational oil companies for oil exploration and production, attracting increasing interest from global supporting M&E companies to choose Malaysia as their next investment location in this region. This augurs well with Malaysia's aim to be the regional hub for oil and gas M&E manufacture, fabrication and services such as maintenance, oilfield development and monitoring, inspection and testing. Among the global manufacturers with a presence in Malaysia are FMC, Aker Kvaerner, Halliburton & Cooper Cameron.

In agricultural plantation M&E, there are 15 companies producing tractors, rotoslashers, rotovators, padi separators, aquaculture equipment, diggers, fertiliser spinners, sprayers and feedmill machinery. In addition there are about 46 companies in operation producing M&E for the agriculture products and processing sectors in particular for the food and beverage, rubber and palm oil processing, and livestock rearing and processing.

The emphasis to revitalise the agricultural sector, which will involve large-scale commercial farming, wider application of modern technology and production of high quality and value-added products will create greater potential for the related M&E industry. Leading companies include Howard Alatpertanian Sdn. Bhd., Tractors Manufacturing & Assembly Sdn. Bhd. and Changlin Machinery (M) Sdn. Bhd.

The livestock rearing and processing M&E include modern animal confinement facilities and processing equipment, such as feeding, ventilation & heating equipment, feed delivery systems, egg cleaning, sorting & grading equipment, mincers, separators, grinders, band saw and cutters. Leading companies in Malaysia are GSI Asia Sdn. Bhd., Rotomas Sdn. Bhd., Nabel Asia Sdn. Bhd. and BD Agriculture Sdn. Bhd.

Exports for the specialised M&E sub-sector totalled RM5.2 billion in 2007 (January – November) while imports totalled RM11.5 billion. The high imports indicate significant market opportunities for local manufacturers.

The specialised M&E for the E&E industry is the largest export segment in this sub-sector. These products were mainly exported to the USA, People's Republic of China and Japan.

The specialised M&E for the oil and gas industry experienced significant growth since 2005. The main products exported were oil drilling platforms and modules which accounted for almost two-thirds of all the oil and gas M&E exports. These products were mainly exported to Singapore, Viet Nam and Indonesia.

The power generating M&E sub-sector comprises manufacturers of boilers, condensers, electric generating sets, turbines and engines. Currently, there are 25 local manufacturers producing power generation machinery and equipment serving both the domestic and export markets. There are 15 manufacturers of industrial boilers and seven companies producing industrial generator sets for use in refineries, oil and gas exploration platforms, petrochemical plants and other commercial operations. In addition, there are three companies which undertake the reconditioning of gas turbines.

Malaysia is a leading manufacturer of industrial boilers in the South East Asian region catering for various industries such as oil and gas, oleochemical, petrochemical, palm oil, rubber, wood, textile, food and beverage and service related facilities such as hospitals and hotels.

Leading companies in the power generating M&E sub-sector in operation 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.

Exports for this sub-sector totalled RM2.9 billion in 2007 (January –November) compared with RM3.3 billion for the whole of 2006. Imports on the other hand totalled RM9.6 billion in 2007 (January –November) compared with RM8.8 billion for the whole of 2006.

The metalworking machinery sub-sector comprises metal cutting machine tools and metal forming/shaping machine tools. This sub-sector involves 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.

Six companies are currently undertaking the manufacturing of metalworking machinery for the automotive, E&E as well as other engineering supporting sectors. 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.

Exports for this sub-sector totalled RM1.5 billion in 2007 (January –November) compared with RM1.4 billion for the whole of 2006. Most of the machine tools exported were metal forming/shaping machine tools such as hydraulic and power presses, sheet metalworking machines and press brakes. These products were mainly exported to Singapore, Thailand and People's Republic of China. Imports on the other hand totalled RM3.5 billion in 2007 (January –November) compared with RM4.1 billion in 2006.

The general industrial M&E sub-sector covers a broad category of products which include industrial air conditioning plants and equipment, material handling equipment, pressure vessels and heat exchangers.

In the material handling category, Malaysia has the capability to produce a variety of material handling products ranging from unit materials handling systems, bulk material handling solutions, logistic, sortation and warehousing systems.

Malaysia's material handling technology has advanced far beyond the applications of simple engineering principles. Currently, Malaysian companies are able to develop total integrated turnkey solutions for material handling which comprise intelligent conveyor technology, advanced lifting technology, software automation control, high-tech vision inspection technology, radio frequency identification technology (RFID), efficient warehouse management system and complete IT infrastructure services. Leading companies include Cheng Hua Engineering Works Sdn. Bhd., Pentamaster Equipment Manufacturing Sdn. Bhd. and MAE Handling System Sdn. Bhd.

In the lifting equipment category, 13 companies are producing tower cranes, port cranes, overhead travelling cranes and other ancillary equipment, both for the domestic and export markets. Internationally, Malaysia is recognised as a major supplier of high speed heavy lifting tower cranes and pedestal cranes for the oil and gas industry. Leading companies include Favelle Favco Cranes

(M) Sdn. Bhd., TSG Indusbeam Sdn. Bhd., Impsa Asia Sdn. Bhd., UMW Engineering Sdn. Bhd. and MHE Dematic (M) Sdn. Bhd.

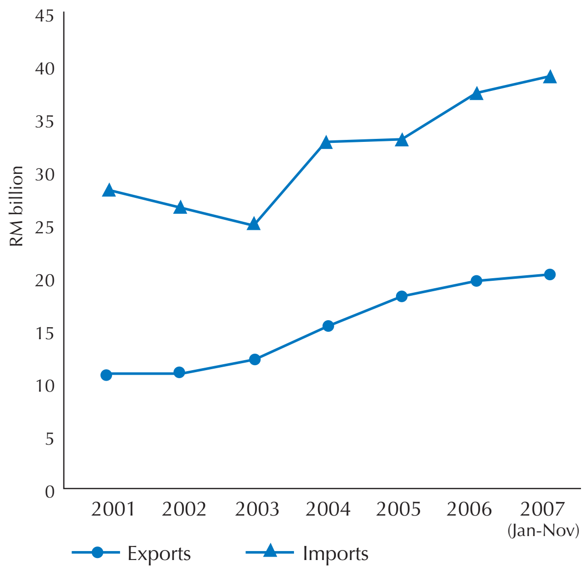
Currently, there are more than 85 manufacturers of other general industrial machinery and equipment, such as pressure vessels, heat exchangers, bulk storage containers, process columns and towers.

Malaysia is the leading manufacturer in the South East Asian region for pressure vessels, process equipment and modules for chemical, petrochemical, and oil and gas industries. Leading Malaysian companies in this sub-sector which have attained international recognition include Petra Fabricators Sdn. Bhd., Torsco Sdn. Bhd, MKE Engineering Sdn. Bhd., Chip Ngai Engineering Works Sdn. Bhd., Tepat Teknik Sdn. Bhd. and Ikatan Engineering Sdn. Bhd.

Exports for the general industrial M&E sub-sector totalled RM10.8 billion in 2007 (January –November) compared with RM10.1 billion for the whole of 2006. Imports on the other hand totalled RM14.4 billion in 2007 (January –November) compared with RM13.7 billion for the whole of 2006.

In 2007 (January-November), Malaysia's imports of M&E amounted to RM39.0 billion compared with RM37.4 billion for the whole of 2006. The trend of Malaysia's imports of M&E have generally been increasing since 2004. Malaysia continues to rely heavily on imports of high-end and highly automated M&E for

Graph 31
Trade Performance of the Machinery and Equipment Industry, 2001-November 2007

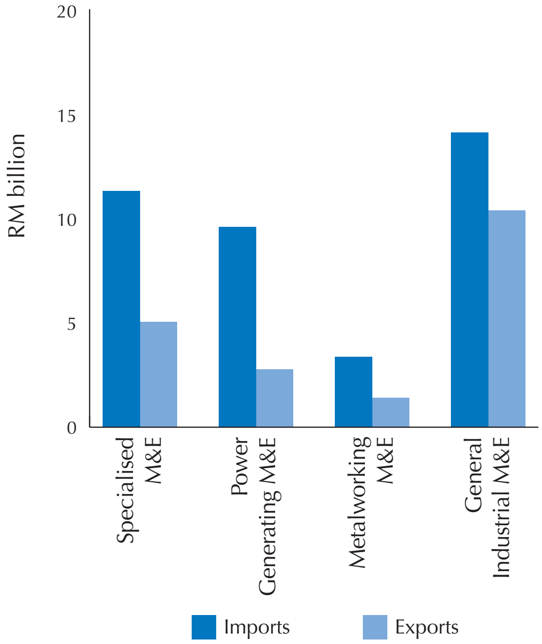


Source: Department of Statistics

the E&E and automotive industries as well as a wide range of general industrial M&E not produced locally.

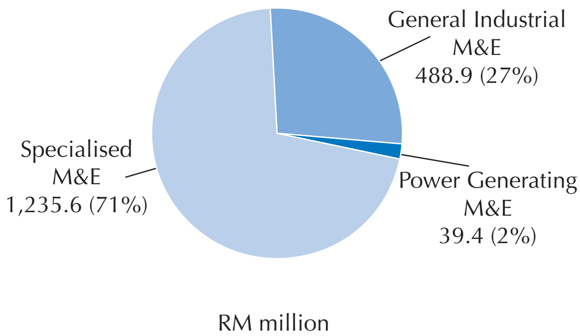
During the IMP3, exports are targeted to increase at an average annual rate of 6.7 per cent to reach RM26.9 billion in 2010. In 2007 (January – November), Malaysia's exports of M&E amounted to RM20.4 billion compared with RM19.8 billion in 2006. Exports of M&E show a healthy growth rate of 12.8 per cent and the trend is expected to continue as Malaysian manufacturers are increasingly moving up the value chain and looking towards export as another avenue for growth. In general, Malaysia tends to import medium to high-end M&E, while exporting medium-end M&E.

Graph 32
Imports and Exports of Machinery and Equipment by Sub-Sector, 2007 (January-November)



Source: Department of Statistics

Graph 33
Investments in Projects Approved in the Machinery and Equipment Industry by Sub-Sector, 2007



Projects Approved in 2007

In 2007, a total of 97 projects (RM1.8 billion) were approved in the M&E manufacturing industry compared with 102 projects (RM1.3 billion) in 2006. Of the 97 projects approved, 76 projects (RM1.6 billion) were new projects and 21 projects (RM127.9 million) were expansion/diversification projects. Foreign investments amounted to RM1.2 billion (69.1%) while domestic investments totalled RM544.8 million (30.9%).

Projects approved in 2007 are expected to generate additional employment opportunities for 4,421 persons with the managerial, technical and supervisory categories representing 32.7 per cent (1,446 persons).

Specialised M&E

In the specialised machinery sub-sector, a total of 39 projects (RM1.2 billion) were approved in 2007. These comprised 31 new projects (RM1.1 billion) and eight expansion/diversification projects (RM72.2 million). Foreign investments amounted to RM991.5 million (80.2%) while domestic investments totalled RM244.1 million (19.8%).

Projects approved in the specialised M&E category comprised:

- 13 projects for the manufacture of M&E for the E&E industry. These were for the manufacture of laser equipment, wafer assembly equipment, MEMS manufacturing equipment, SMT printing and test equipment, semiconductor wafer inspection machines and processing test equipment, disk drive process and test equipment, automated equipment and sub-assembly module for semiconductor, automated test handlers and parts thereof for the semiconductor industry, industrial high vacuum machines, media process equipment for hard disk industry, testing equipment for electrical & mechanical devices, test handling machine modules & parts thereof for IC and LED semiconductor industry, sawing machines and parts (for silicon wafer) and automated RF testing system;

- 12 projects for the manufacture of M&E for the agro-based industry. These were for the manufacture of M&E for the rubber gloves industry such as glove stripping machines and glove recycling machines; M&E for the palm oil mills such as empty bunch presses, fibre dryers, kernel recovery and fresh fruit bunches splitter machines; biodiesel reactor system and latex stimulators;

- Seven projects for the manufacture of M&E for the oil and gas industry. These were for the manufacture of flexible pipes, modules and parts for oil and gas production & extraction equipment such as christmas trees, valves and actuators and oil well completion products; and

- Seven projects for the manufacture of M&E for the automotive industry, plastic injection moulding machines, M&E for the quarry industry, food processing equipment, M&E for the food packaging industry and M&E for the medical industry.

Significant projects approved included:

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

- Meerkat Technologies Sdn. Bhd. (RM73.3 million) – a new joint venture project to manufacture SMT printing and test equipment, semiconductor front-end wafer inspection machines and wafer handlers, semiconductor back-end processing test equipment and disk drive HGA process and test equipment;

- Pac Tech Asia Sdn. Bhd. (RM57.9 million) – a new foreign-owned project to manufacture laser equipment, wafer assembly equipment, MEMS manufacturing equipment and services for wafer level packaging;

- Pentamaster Equipment Manufacturing Sdn. Bhd. (RM13.9 million) – a new Malaysian-owned project to manufacture automated equipment and sub-assembly modules for semiconductor, medical and pharmaceutical and oil and gas industries; and

- Polytool Integration Sdn. Bhd. (RM3.1 million) – a new Malaysian-owned project to manufacture silicon wafer sawing machines and parts, vision and inspection machines/system and parts, fluid/epoxy dispensing machines and parts and test handling machines and parts.

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

- Asiaflex Products Sdn. Bhd. (RM692.8 million) – a new foreign-owned project to manufacture flexible pipes for offshore oil and gas production;

- Halliburton Manufacturing Technology (M) Sdn. Bhd. (RM115 million) – a new foreign-owned project to manufacture oil well completion products such as permanent packers, retrievable packers, landing nipples, sliding door, sub-surface flow control equipment;

- Continental Alloys & Services (M) Sdn. Bhd. (RM53.2 million) – a new foreign-owned project to manufacture precision machined parts for the oil and gas industry;

- MIR Valve Sdn. Bhd. (RM50 million) – a new joint venture project to manufacture valves and actuators for oil & gas industry; and

- OMNI Oil Technologies (Asia) Sdn. Bhd. (RM8.2 million) - a new majority foreign-owned project to manufacture underground machinery & equipment for drilling oil and gas wells.

The implementation of the above projects will strengthen Malaysia's capabilities to support the oil and gas industry in Malaysia and the region.

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

- West East Biofuels Sdn. Bhd. (RM17 million) - a joint venture expansion/ diversification project to manufacture biodiesel reactor system; and

- MSBB Engineering Sdn. Bhd. (RM15.1 million) – a new Malaysian-owned project to manufacture palm oil mill machinery and parts thereof.

(iv) Specialised M&E for Automotive Industry

- Cheng Hua Engineering Works Sdn. Bhd. (RM17 million) – a Malaysian-owned expansion/diversification project to manufacture integrated factory automation system & modules for the automotive industry.

Power Generating M&E

In the power generating M&E sub-sector, a new joint venture project, was approved in 2007 to manufacture gas production equipment with an investment of RM39.4 million.

General Industrial M&E

In the general industrial machinery and equipment, components and parts sub-sector, 57 projects (RM488.9 million) were approved in 2007. A total of 44 projects with investments of RM433.2 million were new projects while 13 projects (RM55.7 million) were expansion/diversification projects. Domestic investments amounted to RM281.4 million (57.6%) while foreign investments totalled RM207.5 million (42.4%).

Projects approved in the general industrial M&E, M&E modules and industrial parts and reconditioning of M&E category comprised:

- 38 projects for the manufacture of general M&E such as actuators, valves, heavy oil homogenizer system, aerosol fire suppression system, ultrasonic cleaning machines, material handling equipment, waste water treatment machinery and industrial fans. These projects involved investments of RM295.8 million;

- 10 projects for the manufacture of M&E modules and components such as modules and sub-assemblies for test handling system for semiconductor industry, blades for gas and steam turbines and printing cylinders. These projects involved investments of RM176.4 million; and

- Nine projects for the maintenance, upgrading and reconditioning of M&E. These projects involved investments of RM16.7 million.

Significant projects approved included:

- Galaxy Energy Technologies Sdn. Bhd. (RM 92 million) – a new foreign-owned project to manufacture blades for gas and steam turbines for the oil, gas, petrochemical, refining and power generation industries;

- Tanjung Offshore Services Sdn. Bhd. (RM61.8 million) - a new Malaysian-owned project to manufacture control system, fire and gas system and emergency shutdown system;

- HUB Technologies (M) Sdn Bhd (RM36.2 million) – a new Malaysian-owned project to manufacture aerosol fire suspension system and parts;

- Dynac Sdn. Bhd. (RM30 million) – a new Malaysian-owned project to manufacture air cooled heat exchangers and cable tray/ladder;

- Soon Lien Fatt Flanging & Rolling Sdn. Bhd. (RM12.7 millon) – a joint venture expansion/diversification project to manufacture dish head for pressure vessels, boilers and heat exchangers and industrial/laboratory furnaces and incinerators;

- Transnorm System Sdn. Bhd. (RM 11.4 million) – a new foreign-owned project to manufacture conveyor systems & parts thereof;

- Fisher Manufacturing (Malaysia) Sdn. Bhd. (RM8.2 million) – a foreign-owned expansion/diversification project to manufacture laboratory equipment, parts and accessories such as pump systems, environmental control equipment and temperature control equipment;

- Yakin Melia Sdn. Bhd. (RM 2.6 million) – a new Malaysian-owned project to manufacture waste water/sewerage treatment machinery and components; and

- GBC Scientific Equipment (M) Sdn. Bhd. (RM 2.4 million) – a foreign-owned expansion/diversification project to manufacture spectrophotometers and accessories.

The global production for the M&E industry is expected to increase 3 to 3.5 per cent per annum and the growth prospects for this industry remain favorable. The main factors influencing this industry globally are advancement of technology and the emergence of new manufacturing centres such as South East Asia, People's Republic of China and Taiwan. However, Germany, Japan and the United States remain as the world leaders in the M&E industry.

Malaysia has the potential to be a major regional producer of M&E. Under the IMP3, investments for the industry for the period of 2006-2010 have been targeted at RM8.7 billion, or an average annual investment of RM1.7 billion. Overall, investments in the M&E manufacturing sector continued to reflect an increasing trend over the last three years, with a total investment of RM1.8 billion in 2007, exceeding the IMP3 annual target.

The specialised high technology M&E was of particular interest where investments had increased from RM732.1 million in 2006 to RM1.3 billion in 2007.

Malaysia's capabilities in R&D, design and development (D&D), system integration and the fabrication of quality parts, components and modules, are major factors that attract companies to invest in Malaysia. Strong intellectual property protection laws are also an added factor influencing foreign manufacturers of M&E to locate their operations in Malaysia in preference to some other fast emerging Asian economies.

The current trend in this industry is geared towards outsourcing; whereby the manufacturing of parts and components, and modules which are more capital-intensive are outsourced. This is necessary to reduce cost and to tap expertise to achieve greater efficiency and productivity. This enables companies to focus on quality of production and leverage upon their strengths in core activities, such as R&D, D&D, software development, system integration, assembly, testing and calibration.

Increases in market demand and global competition will necessitate further outsourcing of assembly, testing and calibration operations by original equipment manufacturer (OEM) companies.

As outlined in the IMP3, the future development and promotion activity will focus on metalworking machine tools, material handling equipment, robotic and factory automation equipment, specialised/process machinery or equipment for specific industries, packaging machinery and fuel cell power generators for stationary domestic applications.

ENGINEERING SUPPORTING INDUSTRY

Malaysia's engineering supporting industry provides vital support for the industrial development of the country, in view of its linkages to various economic sectors, such as manufacturing, construction, transportation, mining and agriculture.

Malaysia is accepted internationally as an ideal location for outsourcing requirements in view of its capabilities and quality production in a diverse range of activities namely mould and die, metal casting, machining, metal stamping, surface engineering, and metal fabrication.

The industry has developed in tandem with the direction of industrial development in the country and is now diversifying and moving towards providing value-added contract manufacturing and assembly solutions to OEM's around the world.

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 OEM partners developing and producing modular components, machine structures, precision engineering parts, sheet metal fabrication and 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 and laboratory equipment and aerospace industries.

In the current dynamic environment of sophisticated lifestyles and innovative technologies, there are constant changes in product models and designs, continuous reduction in product sizes, competitive market pricing and shorter product lifecycles. Hence, the need for improved manufacturing processes and modifying established production processes becomes critical.

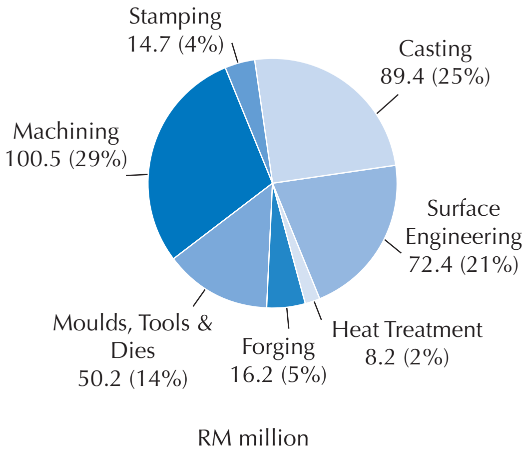
To accommodate dynamic operating environments and face aggressive global competition, OEM companies need to focus on their core strengths and rely heavily on the engineering supporting industry as their key suppliers to provide complete solutions and to support their business strategies, whether on product quality, variety, availability or cost.

Thus, it is fundamentally and strategically important for Malaysia to nurture and develop the engineering supporting industry. The industry is expected to expand further by strengthening its services, capability and quality of production, to be accepted as OEM partners and become a significant contributor to the global outsourcing market.

Projects Approved 2007

A total of 82 projects were approved in the engineering supporting industry in 2007 involving investments of RM351.6 million compared with 105 projects (RM1.14 billion) in 2006. Of these, 66 were new projects (RM254.8 million) and 16 were expansion/diversification projects (RM96.8 million). Domestic investments amounted to RM184.2 million (52.4%) and foreign investments totalled RM167.4 million (47.6%). Projects approved in 2007 are expected to generate additional employment opportunities for 3,349 persons with the managerial, technical and supervisory categories accounting for 25.5 per cent (853 persons).

Graph 34
Investments in Projects Approved in the Engineering Supporting Industry by Sub-Sector, 2007



In the mould and die industry, 25 projects (RM50.2 million) were approved in 2007. These comprised 19 new projects (RM34.3 million) and six expansion/ diversification projects (RM15.9 million). Domestic investments amounted to RM35.8 million (71.4%) while foreign investments totalled RM14.4 million (28.6%).

Significant projects approved to manufacture moulds, tools & dies included:

- GMI Mould Industries Sdn. Bhd. – a new joint venture project with an investment of RM4.2 million;

- 2M Precision Sdn. Bhd. – a new Malaysian-owned project with an investment of RM4.2 million;

- Alpha Precision Toolings Sdn. Bhd. – a new joint venture project with an investment of RM4.0 million; and

- PMC Mould Industries Sdn. Bhd. – a new Malaysian-owned project with an investment of RM3.9 million.

In the machining industry, 30 projects (RM100.5 million) were approved in 2007. These comprised 29 new projects (RM99.0 million) and an expansion/ diversification project (RM1.5 million). Domestic investments totalled RM93.4 million (92.9%), while foreign investments amounted to RM7.2 million (7.1%).

Significant projects approved to manufacture machined parts included:

- Valve Actuation & Precision Engineering Sdn. Bhd. - a new Malaysian-owned project with an investment of RM11.8 million;

- W.O.G. Systems Sdn. Bhd. - a new Malaysian-owned with an investment of RM9.5 million;

- Multi Precision Industries Sdn. Bhd. – a new Malaysian-owned project with an investment of RM5.9 million; and

- Prototyping Technology Sdn. Bhd. – a new Malaysian-owned project with an investment of RM4.8 million.

In the metal stamping industry, seven

projects (RM14.7 million) were approved in 2007. These comprised four new projects (RM10.8 million) and three expansion/diversification projects (RM3.9 million). Domestic investments amounted to RM4.9million (33.2%) while foreign investments totalled RM9.8 million (66.8%).

Significant projects approved to manufacture metal stamped parts included:

- Meru Stampform Sdn. Bhd. - a new majority foreign-owned project with an investment of RM8 million;
- Pacestar Industries Sdn. Bhd. - a joint venture expansion/diversification project with an investment of RM2.7 million;
- Miyazu (Malaysia) Sdn. Bhd. – a new joint venture project with an investment of RM1.2 million; and
- Win Hong Precision Metal Sdn. Bhd. – a new Malaysian-owned project with an investment of RM1 million.

In the surface engineering industry, 12 projects (RM72.4 million) were approved in 2007. These comprised eight new projects (RM40.4 million) and four expansion/diversification projects (RM32 million). Domestic investments amounted to RM20.9 million (28.9%) while foreign investments totalled RM51.5 million (71.1%).

Significant projects approved included:

- Syntronixs Asia Sdn. Bhd. (RM25 million) – a new joint venture project undertaking electroplating activities;
- Ionbond (Malaysia) Sdn. Bhd. (RM4.6 million) – a new foreign-owned project to undertake physical vapour deposition coating; and
- Dipsol (M) Sdn. Bhd. (RM4.2 million) – a foreign-owned expansion/diversification project to undertake electro deposition coating.

In the metal casting industry, five projects (RM89.4 million) were approved in 2007. These comprised four new projects (RM49.4 million) and an expansion/diversification project (RM40 million). Domestic investments amounted to RM8.1 million (9.1%) while foreign investments totalled RM81.3 million (90.9%).

The projects approved included:

- Asahi Kosei Sdn. Bhd. (RM40 million) - a foreign-owned expansion/diversification project to manufacture aluminium diecast products for the E&E and automotive industries and sub-assembly of aluminium diecast products; and
- Loha Materials Technology Sdn. Bhd. (RM3.2 million) - a joint venture project to manufacture investment castings.

In the heat treatment industry, one project (RM12.8 million) was approved in 2007. The project approved is a new Malaysian-owned project, Hitech Heat Treatment Services Sdn. Bhd., with an investment of RM8.2 million.

In the forging industry, two projects (RM16.2 million) were approved in 2007. The projects approved were:

- Cold Parts Mfg. Sdn. Bhd. (RM12.7 million) – a new Malaysian-owned project to manufacture cold forged parts for the automotive industry; and
- Billion Fortune Sdn. Bhd. (RM3.5 million) - a joint venture expansion/diversification project to manufacture forged parts for the E&E and the automotive industry.

Investments in the machining, heat treatment and forging sub-sectors have increased compared with 2006. However, overall investments for the engineering supporting industry in 2007 have declined compared with 2006.

In efforts to reduce the supply chain management costs, OEMs are increasingly outsourcing all their requirements to key suppliers or a single supplier. The trend to reduce the supplier base has resulted in a decrease in overall demand for specific individual parts and components, and services.

It is no longer attractive for companies to invest in a specialised sub-sector or activity due to diminishing demand for specific individual parts or services. As a result, engineering supporting companies are forced to realign themselves or merge to become key suppliers and total solution providers.

The current global manufacturing trend is geared towards outsourcing of activities and components to countries where the benefits are proven. Therefore, there will be an ongoing process of shifting of production capacities to the most economic or strategic location.

To benefit from this, the engineering supporting industries will need to enhance and modify their production capabilities to cater for the growing demand from the global outsourcing market.

In response to this, Malaysia is actively encouraging the engineering supporting companies to position themselves to become total solution providers or form consortiums of smaller specialty suppliers and pool their resources to offer integrated services, from product conception to serial production and manage entire processes including logistics, packaging, testing and certification.

The current trend in new and expansion projects in the engineering supporting industry, both from foreign and local companies is towards projects offering total solutions.

Malaysia will intensify the development and promotion of the engineering supporting industries and support services as total solution providers. As outlined in the IMP3, the industry will continue to strenghten 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 automotive, electronics, aerospace and medical equipment and devices to achieve the country's vision to be a global outsourcing centre.

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 can be categorised into two main sub-sectors, namely:

- 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 plates and fabricated products.

There are currently 440 companies in operation with total investments of RM23.6 billion and employment of 44,600 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, and tinplates);

- Aluminium sheets/foils;

- Aluminium finstock;

- Aluminium ingots (recycled);

- Aluminium rods and aluminium extruded profiles;

- Copper rods/wires;

- Copper strips;

- Copper tubes/extrusions; and

- Tin.

Sales of iron and steel products amounted to RM21 billion in 2007 (January-November), compared with RM21.5 billion in 2006. Sales of non-ferrous metal products amounted to RM5.4 billion in 2007 (January-November) compared with RM6.8 billion in 2006.

Imports of iron and steel products amounted to RM18.7 billion in 2007 (January-November) compared with RM16.9 billion in 2006. Imports of non-ferrous metal products amounted to RM17.1 bIllion in 2007 (January-November) compared with RM15.7 billion in 2006.

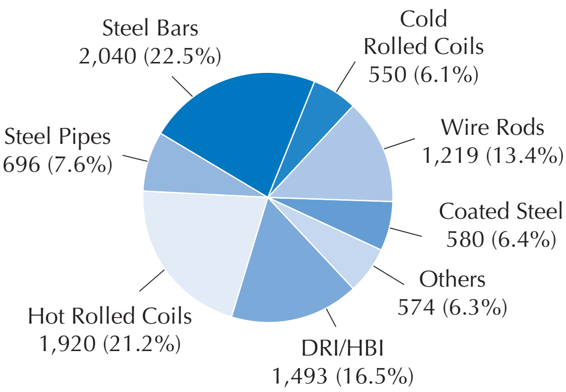
Exports of iron and steel products, amounted to RM9.6 billion in 2007 (January-November) compared with RM9.3 billion in 2006. Exports of non-ferrous metal products amounted to

RM7.5 billion in 2007 (January-November) compared with RM6.8 billion in 2006.

The industry is dominated by iron and steel products like long products (steel bars and wire rods) and flat products (hot rolled coils, cold rolled coils, coated steel coils and steel pipes). The main raw materials for steel making are steel scrap, DRI and HBI.

Flat products accounted for 52.5 per cent (4.1 million tonnes) of the steel consumption, and long products accounted for 47.5 per cent (3.7 million tonnes). Steel bars and wire rods together constituted 41.5 per cent, followed by hot rolled coils (22.6%), cold rolled coils (10.3%), coated steel coils (9.5%), steel sections (6.1%), and steel plates (5.3%).

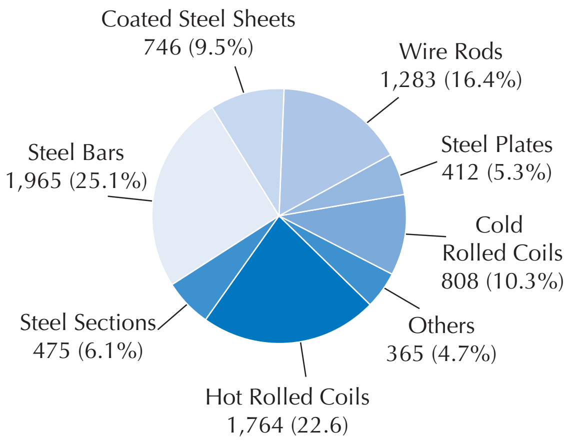
Graph 35
Production of Major Iron and Steel Products, 2007



'000 tonnes

Source: Malaysian Iron and Steel Industry Federation

Graph 36
Profile of Iron and Steel Products in Malaysia (Consumption), 2006



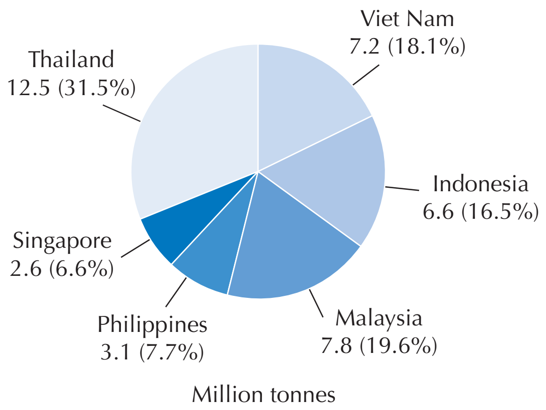
'000 tonnes

Source: Malaysian Iron and Steel Industry Federation

Malaysia's steel consumption in 2006 totalled 7.8 million tonnes, an increase of 5.3 per cent from 2005. This is a positive result of the implementation of the Ninth Malaysia Plan projects and the overall 6 per cent economic growth in 2006. For 2007, the Malaysian steel industry has projected a further 5 per cent steel consumption growth to reach 8.2 million tonnes.

ASEAN's steel consumption totalled 39.8 million tonnes in 2006, with the largest portion accounted for by Thailand at 12.5 million tonnes (31.5%), followed by Malaysia at 7.8 million tonnes (19.6%), Viet Nam at 7.2 million tonnes (18.1%), Indonesia 6.6 million tonnes (16.5%), Philippines at 3.1 million tonnes (7.7%) and Singapore at 2.6 million tonnes (6.6%).

Graph 37
ASEAN Steel Consumption by Major Country, 2006



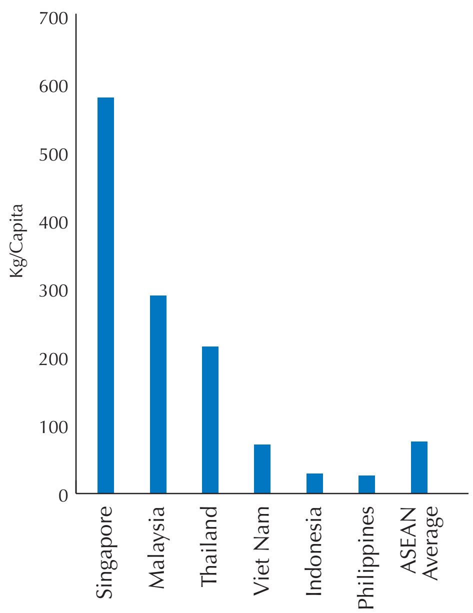
Source: Malaysian Iron and Steel Industry Federation

By 2010, ASEAN's steel consumption is projected to reach 50 million tonnes from the present 39.8 million tonnes.

Singapore has the largest per capita steel consumption of 584 kg among ASEAN countries, followed by Malaysia at 294 kg/capita, Thailand at 218 kg/capita, Viet Nam at 75 kg/capita, Indonesia at 31 kg/capita and the Philippines at 30 kg/capita. The ASEAN average per capita steel consumption is 79 kg.

The global iron and steel industry had seen strong growth since 2001 when the world crude steel production increased from 850 million tonnes in 2001 to reach one billion tonnes in 2004. Since then the world crude steel production continued to record a healthy growth. Up till October 2007, the world crude steel production had reached 1.1 billion tonnes. The projected world crude steel production for the whole of 2007 was 1.3 billion tonnes. In tandem with this rising trend, hot rolled coil price increased from a low of US$250/tonne in 2001 to a historical high of US$800/tonne in 2004. The hot rolled coil price in the fourth quarter of 2007 averaged US$590/tonne.

Graph 38
ASEAN Steel Consumption Per Capita, 2006



Source: Malaysian Iron and Steel Industry Federation

The Malaysian iron and steel industry is largely steel scrap-based and dependent on the supply and pricing of steel scrap. Due to the increasing demand of the global steel industry in the past few years, steel scrap price had surged from a low of US$100/tonne in 2001 to a peak of US$350/tonne in 2004. Steel scrap price averaged US$320/tonne in 2007. This, coupled with the rising energy cost had contributed to the higher production cost of the local steel industry and the increasing scarcity of scrap supply.

Due to the local steel industry's scrap-based technology and its resultant inability to produce higher grade hot rolled coils (HRC) and cold rolled coils (CRC) for supply to especially the automotive and E&E industries, 624,000 MT of HRC and 808,000 MT of CRC were imported in 2006. Significantly though, 780,000 MT of the local lower grade HRC were exported in 2006, catering to the rising overseas steel demand and prices.

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 steel fabricated products especially for the export markets.

Some notable projects implemented in 2007 were:

- A new RM97 million electro-galvanised steel coil project by MEGS Industries Sdn. Bhd.;
- A new RM55.7 million electro-galvanised steel coil project by E-Galv Steel Industry Sdn. Bhd.;
- A RM161 million expansion project by Alpine Pipe Manufacturing Sdn. Bhd. to manufacture steel pipes and hollow sections. This company has since acquired certification by American Petroleum Institute (API) in 2007 which qualifies the company's products for supply to the stringent oil and gas industry.

Projects Approved in 2007

In 2007, a total of 52 projects were approved in the basic metal products industry with investments of RM12.2 billion compared with 30 projects in 2006 with investments of RM2.7 billion. A total of 36 of the projects were new projects with investments of RM9.9 billion and 16 were expansion/diversification projects with investments of RM2.3 billion. Of the investments in the projects approved, RM7.2 billion or 59 per cent were domestic investments while RM5 billion were foreign investments.

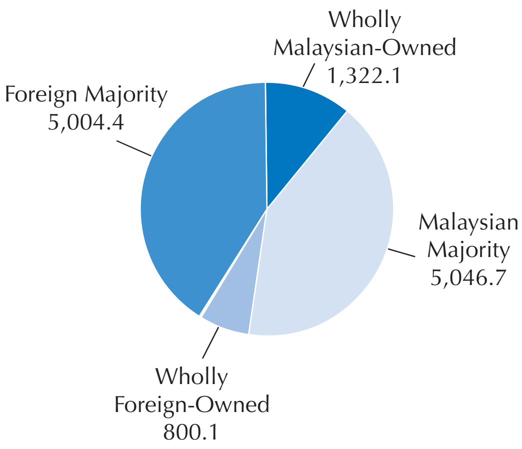
Overall, the RM12.2 billion investments in basic metal products in 2007 had greatly exceeded the IMP3 investment target of RM1.9 billion per year.

Of the 52 projects approved:

- 37 were for the manufacture of basic iron and steel products with investments of RM12 billion; and
- 15 were for the manufacture of non-ferrous metal products with investments of RM214.1 million.

In terms of ownership, 34 projects were either wholly Malaysian-owned or majority Malaysian-owned. Investments in these projects totalled RM6.4 billion. The remaining 18 projects were wholly or majority foreign-owned with investments of RM5.8 billion.

Graph 39
Investments in Projects Approved in the Basic Metal Products Industry by Ownership, 2007



Major projects approved included:

- A new RM 4.5 billion majority foreign-owned integrated steel project by Eastern Steel Sdn. Bhd. to manufacture pig iron, flat iron, billets, blooms, hot rolled coils, plates, cold rolled coils, and hot rolled bars;
- A new RM3.4 billion majority Malaysian-owned integrated steel project by Lion Group to manufacture liquid hot metal, pig iron, iron ore pellet, furnace slag, furnace gas, coke, coke breeze, crude tar, ammonia, sulphur, benzol, coke oven gas, slabs, plates, hot and cold rolled coils, ductile iron pipes, welded pipes, galvanised coils and sheets;
- A new RM1.2 billion majority Malaysian-owned project by Fresh Rewards Sdn. Bhd. to manufacture pig iron;
- A new RM830 million wholly Malaysian-owned integrated steel project by Ann Joo Integrated Steel Sdn. Bhd. to manufacture liquid hot metal, pig iron, steel slabs, blast furnace gas and blast furnace slag;
- A new RM550 million wholly foreign-owned project by HG Metal Manufacturing Sdn. Bhd. to manufacture hot rolled steel plates;
- A RM400 million expansion project by Ornasteel Enterprise Corporation (M) Sdn. Bhd. to manufacture hot rolled pickled and oiled steel coils and hot rolled galvanised steel coils;
- A new RM101 million majority Malaysian-owned project by SAS Steel Galvanisers Sdn. Bhd. to manufacture hot rolled dipped galvanised steel coil/sheets/strips; and
- A new RM100 million majority Malaysian-owned project by Yick Hoe Metal Industries Sdn. Bhd. to manufacture hot rolled stainless plates.

The construction downturn in recent years had affected the steel industry through contraction in demand for products like steel bars and rods. The resultant excess installed capacities, coupled with very competitive international steel prices, rising raw material and energy prices as well as exports by People's Republic of China have aggravated the industry's problems. However, implementation of Ninth Malaysia Plan projects and the favourable economic outlook have mitigated the situation. As a result, the iron and steel industry's outlook is expected to improve. Notwithstanding this, the industry would need to take cognizance of its capability to export and compete internationally.

Given the limited scope for expansion of the domestic market, the Malaysian steel industry would need to explore new markets in ASEAN, East Asia and Oceania. In line with this, new product areas such as seamless steel pipes, high pressure reinforced hose wires, structural hollow sections, steel tyre cords, fine steel wire, oil and gas pipes, cold formed heavy gauge sections and stainless steel coils could have export potential. The rising raw materials and energy costs will continue to pose challenges to the industry's efficiency and competitiveness.

In addition, the need for technology upgrading is also a major challenge facing the industry. In tandem with this, the recent interests shown by industry players in proposing new multi-billion dollar fully integrated blast furnace projects in Malaysia underlines the industry's endeavour to produce better quality steel products such as hot rolled coils and cold rolled coils to cater to the needs of the higher end applications in the automotive and E&E industries. These investment proposals have also given rise to potential demand and further investment opportunities in upstream areas like iron ore pellets. This trend reflects the steel industry's confidence and positive outlook vis-à-vis the future market potentials of ASEAN and East Asia regions.

The International Iron And Steel Institute, Belgium forecasts another strong year for the steel industry with world steel demand rising from 1.1 billion tonnes in 2006 to 1.2 billion tonnes in 2007, an increase of 6.8 per cent. The BRIC (Brazil, Russia, India and China) countries which accounted for 41 per cent of global steel demand are expected to register an overall demand growth of 12.8 per cent in 2007. Individually, Russia is forecasted to have the fastest demand growth of 25 per cent, followed by Brazil at 15.7 per cent, India at 13.7 per cent and People's Republic of China at 11.4 per cent. In 2006, People's Republic of China ranked number one in terms of steel demand at 357.4 million tonnes, accounting for 31.9 per cent of world steel demand.

Significantly, 70 per cent of the world's trade in iron ore,is controlled by three major companies namely Companhia Vale do Rio Doce of Brazil, and Rio Tinto and BHP Billiton of Australia. With rising oil/energy prices, coupled with BRIC countries' increasing steel demand, any further consolidation among the already dominant iron ore producing companies are also expected to have strong impact on the supply situation and prices of raw and finished steel materials.

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 and 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.

Malaysian companies have developed world-class capabilities in a diverse range of metal fabrication activites. A leading Malaysian owned company, Eversendai Corporation Sdn. Bhd. is a specialist structural steel contractor. The company undertakes structural design, fabrication and erection works for high-rise buildings, heavy industrial plants, stadiums, steel bridges, roof structures and other infrastructure. Eversendai had secured projects in Singapore, Indonesia, the Philippines, Hong Kong, Saudi Arabia, Bahrain, Oman, Abu Dhabi and Dubai.

Another Malaysian company, Nam Fatt Corporation Berhad, is involved in construction and property and leisure development. With 31 subsidiaries and four associated companies Nam Fatt has international presence through their worldwide offices in Singapore, Brunei, Indonesia, Thailand, Viet Nam, People's Republic of China, Japan, Turkmenistan, Sudan and the Middle East.

Other leading companies in this industry include KNM Group Berhad, Kencana HL Engineering Sdn. Bhd, Torsco Berhad, Ikatan Engineering Sdn. Bhd, Malaysia Marine and Heavy Engineering (formerly known as Malaysia Shipyard and Engineering Sdn. Bhd.), Petra Fabricators Sdn. Bhd. and Sime Sembawang Sdn. Bhd.

Projects Approved in 2007

In 2007, a total of 19 projects were approved for the manufacture of fabricated metal products with total investments of RM305.9 million compared with 18 projects (RM180.9 million) in 2006. Domestic investments amounted to RM234.2 million (76.5%), while foreign investments totalled RM71.7 million (23.5%). Of the 19 projects approved, 16 were new projects (RM269.6 million) and three (RM36.3 million) were expansion/ diversification projects. Projects approved in 2007 are expected to generate additional employment opportunities for 1,096 persons.

Significant projects approved for the manufacture of fabricated metal products include:

- Muhibbah Steel Industries Sdn. Bhd. (RM114.9 million) – a new majority

Malaysian-owned project to manufacture platforms and jackets;

- Nagatrend Engineering Sdn. Bhd. (RM50.8 million) – a new Malaysian-owned project to manufacture seamless high pressure gas cylinders;

- PESB Electronics Sdn. Bhd. (RM36.9 million) – a new Malaysian-owned project to manufacture steel structures such as tranmission towers;

- Halton Manufacturing Sdn. Bhd. (RM13.3 million) – a new joint-venture project to manufacture kitchen hoods; and

- Off Shore – CPI Supply Sdn. Bhd. (RM12.3 million) – a new Malaysian-owned project to manufacture skids for the oil and gas, petrochemical and chemical industries.

The current prospects for this industry are mainly in the sourcing of jobs outside Malaysia, especially in South East Asia, the Middle East and Africa. Several local fabricators have gained international recognition in this industry. There are also opportunities in cross border investments for the Malaysian companies to export their technology and project management skills to developing economies.

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 accessories.

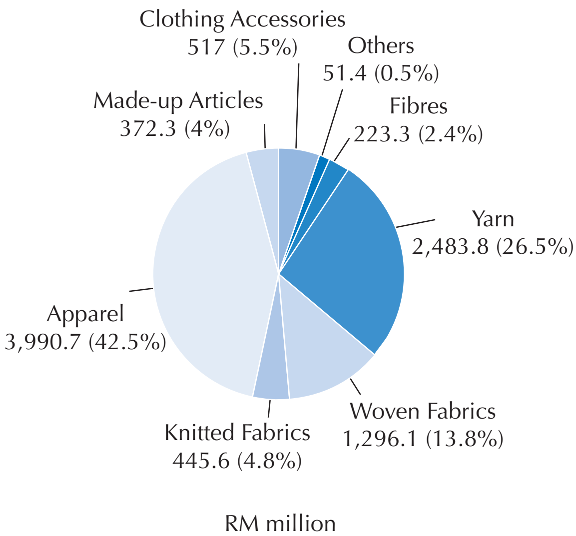
Currently, there are 637 licensed companies in operation with investments of RM7.9 billion producing a wide range of textiles and textile products and activities from fibres, yarn and fabrics to made-up garments including dyeing, printing and finishing of yarn and fabrics. In addition, it is estimated 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 Penfabric (fully integrated textile products), CNLT (Yarn), Ramatex (knitted fabrics), Arab-Malaysian (Woven Fabrics) and Canteran Apparel (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. By using processes such as CAD/CAM, Malaysian manufacturers are able to meet clients' requirement for prompt delivery.

For the period January – November 2007, the textiles and textile products industry was the ninth largest export earner, contributing approximately two per cent to the total exports of manufactured goods. Exports of textiles and textile products for the period January – November 2007 were RM9.4 billion compared with RM10.6 billion for the whole of 2006.

Graph 40
Exports of Textiles and Textile Products by Product Category, 2007 (January-November)

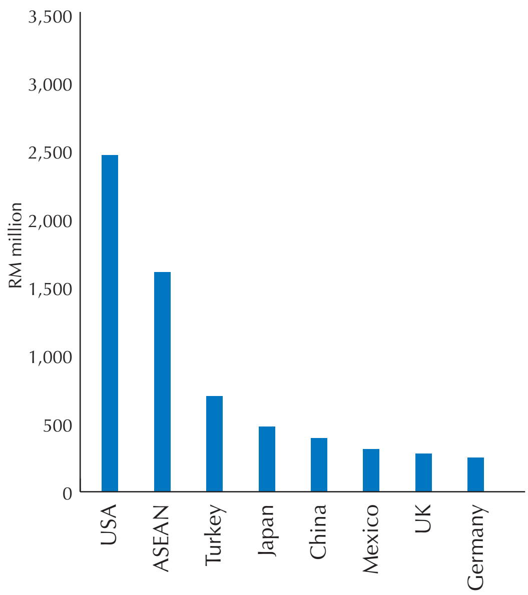


Source: Department of Statistics

The main export items were apparels, yarn and woven fabrics. Malaysian apparel manufacturers continue to maintain an excellent reputation for quality and capability in the production of up-market brands such as Nike, Adidas, Christine Dior, Yves St. Laurent, Ralph Lauren and Benetton.

The USA was still Malaysia's largest export destination accounting for 26.2 per cent of the total exports of the textiles and textile products. Other major export destinations were ASEAN countries (17.1%), Turkey (7.6%), Japan (5.3%), and People's Republic of China (4.3%).

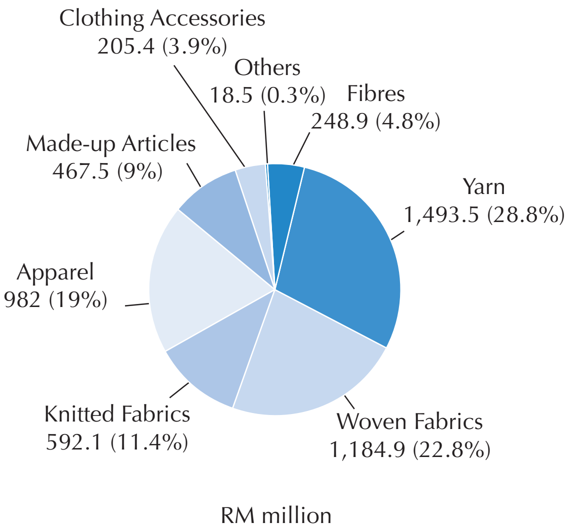
Graph 41
Exports of Textiles and Textile Products by Major Export Destination, 2007 (January-November)



Import of textiles and textile products for the period of January - November 2007 amounted to RM5.2 billion compared with RM5.4 billion for the whole of 2006. Imports were mainly from the People's Republic of China (36.1%), ASEAN (23.4%), Taiwan (9%), and Hong Kong (5.7%). The main import items were yarn and woven fabrics which were used for the production of fabrics and made-up garments.

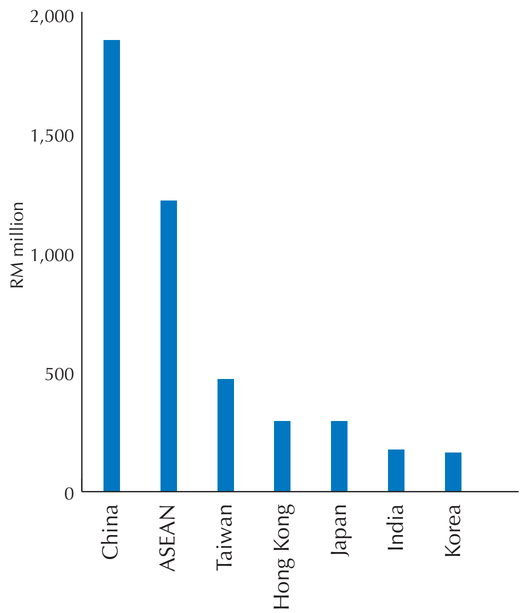
For the period January – November 2007, sales value of the textiles and textile products industry amounted to RM7.1 billion, of which 61 per cent or

Graph 42
Imports of Textiles and Textile Products by Product Category, 2007 (January-November)



Source: Department of Statistics

Graph 43
Imports of Textiles and Textile Products by Major Source, 2007 (January-November)



Source: Department of Statistics

RM4.3 billion was contributed by primary textiles. As at November 2007, the industry employed 67,375 workers, of which 65.6 per cent or 44,597 workers were employed in the made-up garments sub-sector.

Effective from 1 January 2007, most of the ASEAN textiles and textile products tariffs have been reduced to zero duty under the ASEAN Harmonised Tariff Nomenclature (AHTN) and Common Effective Preferential Tariff (CEPT). As a result of this, exports to ASEAN countries which amounted to RM1.6 billion in 2007 (January – November) exceeded the RM1.58 billion recorded in 2006.

Projects Approved in 2007

A total of 22 projects were approved in the textiles and textile products industry in 2007 involving investments of RM1.4 billion compared with 30 projects with investments of RM821.3 million in 2006. Of these, 13 were new projects (RM1.32 billion) and nine were expansion/ diversification projects (RM81 million). Domestic investments amounted to RM100.1 million while foreign investments totalled RM1.3 billion.

Of the 22 projects approved, eight projects (RM1.3 billion) were for the production of primary textiles and 14 projects (RM89.8 million) were for made-up garments. The approved projects are expected to generate a total of 9,488 employment opportunities.

A total of 13 projects were Malaysian-owned, mainly to manufacture made-up garments. The other projects were for the production of polypropylene woven fabrics and to undertake the activity of bleaching, dyeing and printing of fabrics.

In the primary textiles sub-sector, of the eight projects approved, six were new projects (RM1.2 billion) and two were expansion/diversification projects (RM51.3 million). Domestic investments amounted to RM59.8 million (5%) while foreign investments totalled RM1.2 billion (95%).

The major projects approved included:

- Acquisition of Hualon Corporation (M) Sdn. Bhd. by Reliance Industries Limited, India with an investment of RM1.2 billion to manufacture polyester resin, fibres, yarn and fabrics and to undertake the activity of finishing of fabrics. Reliance Industries is the largest private sector company in India and featured in 'Fortune Global 500'. In the textiles industry, the company is the largest polyester fibres and yarn producer in the world. For the project in Malaysia, Reliance Industries will utilise the latest technical know-how in the production of integrated textiles products. The company's investment in textiles industry is expected to boost Malaysian exports of textiles and textile products;

- A Malaysian-Taiwanese joint-venture project with investments of RM50 million to manufacture polyester/polyethylene terephthalate (PET) staple fibres of which 90 per cent of its production will be exported to Europe, Japan and People's Republic of China;

- An expansion project by a Singaporean company with investments of RM45 million for the finishing of fabrics and the manufacture of knitted fabrics. The company will be producing fabrics with special features such as anti-bacteria, UV protection, quick-dry and silky-touch which are used for the production of high-end made-up garments; and

- A new project by a wholly Malaysian-owned company with investments of RM24 million to manufacture polypropylene woven fabrics and polypropylene woven bags largely to cater for the domestic market.

In the made-up garments sub-sector, 14 projects were approved with investments of RM89.8 million in 2007. Of these, seven were new projects (RM60.2 million) and the other seven were expansion/diversification projects (RM29.6 million). Domestic investments amounted to RM40.3 million (45%), while foreign investments totalled RM49.5 million (55%).

Among the major projects approved were:

- A new project by a foreign-owned company, with investments of RM25.5 million for the manufacture of fur garments. The company is one of the largest mink fur garment producers in

Europe which is currently producing high-quality winter clothing designed for the premium market. Besides producing their own brand, the company is also a contract manufacturer for Escada and other world renowned brands. The entire production of this proposed project will be exported to Europe and Middle East; and

- A new project by a Malaysian-owned company, with investments of RM17.1 million, for the production of made-up garments. The company is a contract manufacturer for up-market brands such as Ralph Lauren, Reebok and Benetton. The company proposed to export a significant amount of its production to the USA and Middle East.

The total investments approved in 2007 have achieved the annual investment target under the first five years of the Third Industrial Master Plan (IMP3), which is RM800 million per annum for the period 2006 – 2010. The continued investment interest by investors is an indication that Malaysia, which is known for its ability to produce high quality products and meeting delivery deadlines, is still capable of sustaining its market share in the industry.

The Malaysian textiles industry is facing stiff competition from low cost producing countries such as People's Republic of China, India, Viet Nam, Cambodia and Africa. With increasing competition from these countries and to sustain the competitiveness in the global market, the industry players must continue to strive for cost competitiveness by producing high value-added products, enhancing product quality, emphasising on new designs and product differentiation as well as prompt response to the market requirements.

Efforts will be intensified to promote investment in the targeted growth areas which include industrial and home textiles; functional fabrics; high-end garments; ethnic fabrics; and key support facilities and services. Initiatives will also be taken to encourage Malaysian textile producers to invest in the latest technology/automation to improve efficiency and product quality.

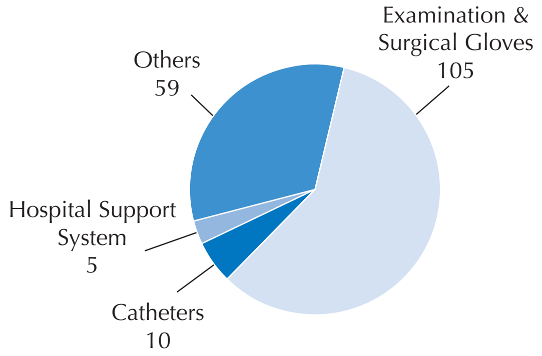
However, for the production of low-end made-up garments which is labour intensive, Malaysian textile producers are expected to relocate their operations to developing countries to take advantage of the lower cost of production and abundant labour supply. By investing in the lower cost producing countries, Malaysian textile manufacturers would be able to maintain and expand their market share.

MEDICAL DEVICES INDUSTRY

The medical devices industry encompasses products used in healthcare for diagnosis, prevention, monitoring or treatment of disease, injury or handicap such as medical, surgical and dental equipment, consumables and orthopaedic appliances.

The global market for medical devices is expected to grow at a rate of about 10 per cent as demand for better healthcare facilities and services increases. The medical devices sector covers over 8,000 types of products and equipment ranging from examination gloves, implantable devices, orthopaedic devices and dialysers to diagnostic imaging equipment and minimal invasive surgery equipment. In Malaysia, demand for medical devices is increasing due to population growth, rising living standards, longer life expectancy, growing affluence and increasing consumer awareness.

Graph 44
Number of Medical Device Companies In Operation by Product Category, 2007



The medical devices/equipment currently manufactured are orthopaedic products, surgical instruments, needles, sutures, medical tubes and bags, medical electrodes, endoscopes, dialysis solution, procedural/urological kits, blood transfusion sets, and diagnostic equipment. Hospital support systems such as medical gas, anaesthesia sets and fixed operation theatre, hospital beds and examination tables and equipment as well as disposable surgical gowns, drapes and packs, surgical and medical caps, and masks are also being manufactured.

Currently, there are 179 medical device manufacturers in the country with the majority of the Malaysian-owned companies concentrated in the production of surgical and examination gloves. The major foreign-owned companies other than producing gloves are also involved in the manufacture of higher value products such as catheters, safety intravenous cannula and needles, orthopaedic products, medical electrodes, dialysers and contact lenses. The major foreign companies with manufacturing facilities in the country include B. Braun Melsungun AG, Ansell Ltd., CR Bard Inc., Rusch Inc., Tyco Healthcare International Ltd., Ambu Inc., and Japan Medical Products. The leading Malaysian-owned companies include Top Glove, WRP Asia Pacific, Dispo-med, Supermax and Terang Nusa.

The foreign-owned companies that have established manufacturing activities in Malaysia continued to expand their operations. For example, Germany-based B Braun Melsungen AG, a global supplier of healthcare products, has further invested in its Penang facility for the production of its intravenous catheters (IVCs) in anticipation of increasing sales. The company, which had earlier allocated RM540 million for the IVC business in Malaysia for the period 2005-2010, has to-date invested some RM200 million. The products, which are mainly exported to the US and Europe, are also increasingly being used in hospitals in Malaysia and People's Republic of China.

Malaysia continued to be the world's leading producer and exporter of catheters and surgical and examination gloves, supplying 80 per cent of the world market for catheters and 60 per cent for rubber gloves, including medical gloves. The leading Malaysian-owned company, Top Glove produces 29 billion pieces of gloves a year, which is about 24 per cent share of the global market. The other major medical gloves producers are Supermax, WRP Asia Pacific and TG Medical.

Demand for medical gloves has been growing due to increasing awareness for barrier protection against viral transmission and other harmful infections which can lead to diseases such as AIDS, Bird Flu and Hepatitis B. As the world's leader in medical gloves, Malaysia is committed to supplying gloves of internationally high standard for safety and reliability. Hence the Malaysian Rubber Board and the Malaysian Rubber Gloves Manufacturers Association (MARGMA) have established the Standard Malaysian Glove (SMG) programme. The SMG programme was developed in consultation with regulatory and standard setting bodies such as the U.S. Food and Drug Administration (FDA) and other relevant authorities. The programme established standards not only for barrier performance, but also for protein and powder content, elements believed to cause allergic reactions in individuals sensitive to latex proteins.

Exports of medical devices continued to register strong growth with rising global demand for better healthcare and medical device products. For the period January to November 2007, the industry exported medical devices valued at RM7.3 billion, compared with RM7.2 billion for the whole of 2006. The bulk of the products exported were medical gloves and sheath contraceptives valued at RM5.4 billion, accounting for about 75 per cent of the total exports. Other major exports of medical devices and products included catheters, sutures, syringes and needles (RM705.7 million), ophthalmic lenses including contact lenses (RM268.8 million), medical and surgical x-ray apparatus (RM188.9 million), electromedical equipment (RM107.1 million), medical furniture (RM34.1 million) and dental and ophthalmic instruments and appliances (RM26.2 million), The leading export destinations were USA, European Union (EU) and Japan.

Imports of medical device products for the period January-November 2007 amounted to RM1.8 billion compared with RM1.9 billion for the whole of 2006. The major products imported were medical/surgical or laboratory sterilisers, instruments and appliances used in medical/veterinary sciences, orthopaedic products, hearing aids, pacemakers and other implanted products amounting to RM796.8 million. These products accounted for 44 per cent of the total imports of medical device products.

Projects Approved in 2007

A total of 25 projects with investments amounting to RM526.9 million were approved in 2007, compared with 29 projects (RM1.1 billion) approved in 2006. Of the total, 19 were new projects (RM409.3 million) and six were expansion/diversification projects (RM 117.6 million). Foreign investments amounted to RM311.8 million (59%) while domestic investments totalled RM215.1 million (41%). This reflected the increased awareness amongst foreign investors on the potential of this sector.

Of the 25 projects approved, 14 were Malaysian-owned projects (RM296.6 million), comprising 10 new projects (RM209.8 million) and four expansion/ diversification projects (RM86.8 million). Of the 14 Malaysian-owned projects, six projects (RM102.2 million) were for the production of surgical and examination gloves and condoms. The other Malaysian-owned projects (RM194.4 million) or 65.5 per cent of Malaysian investment were approved for the production of disposable dialysis filters, patient service panels, ceiling suspension units, medical gas and vacuum terminal units, oxygen therapy devices and suction therapy devices, toilet seat posterior support, intravenous catheters, laryngoscope blades and medical spiral wires.

A total of 11 projects (RM230.3 million) approved were foreign-owned. The projects approved were for the manufacture of medical sterilising cases, medical instruments and orthopaedic implants, dialysis monitoring alarm units and dialysis monitoring sensors, medical facemasks, bloodline sets, barrier contraceptives (female condoms) and surgical, examination, clean room and industrial gloves.

Among the significant projects approved were:

- Symmetry Medical Malaysia Sdn. Bhd., a RM56 million project to manufacture medical sterilising cases, medical instruments and orthopaedic implants in Penang. The company will also set up a design and development centre to act as Symmetry Medical's Asia Hub and will be the first centre of excellence for research and development and design in the Asia Pacific Region and the Middle East Region;

- HWG Venture Sdn. Bhd., a wholly Malaysian-owned company with an investment of RM131 million to produce disposable dialysis filters (dialyzers) at Perak High-Tech Industry Park, Ipoh. The company proposes to use polysulfone fibre as the raw material as it is biocompatible. The company proposes to export 50 per cent of its production mainly to People's Republic of China and Germany;

- Scandinavian Wireless Electronics Sdn. Bhd., a RM40 million project is a pioneer in Malaysia to produce dialysis monitoring alarm units and dialysis monitoring sensors in Senai, Johor. The company started production in November, 2007 and plans to export all of its production to Europe; and

- Safe Life (Malaysia) Sdn. Bhd., a foreign-owned company proposes to manufacture medical facemasks in Perak. With total investments of RM33.2 million, the company would be conducting its own R&D focusing on designing of facemasks. The product will be exported to the USA and Canada.

The medical devices sector is one of the priority sectors identified for promotion and further development, given the growing demand for medical products. There is a strong presence of established supporting industries ranging from sterilisation services, sterile medical packaging, precision engineering and tool and die making to contract moulding and assembly and machinery fabrication in Malaysia. The availability of the supporting industries makes Malaysia a potential location for the manufacture of medical devices. Major companies providing supporting services that have established and expanded their operations in Malaysia include SterilGamma, Isotron, Pentamaster, Frencken and Wazone.

Regulations on the production and importation of medical devices have been introduced by the Ministry of Health to further enhance Malaysia's position as a medical device hub and to improve local manufacturers' ability to compete in the global market. Full enforcement of the regulations is expected to be implemented by March 2008.

The medical device industry has remained a vibrant sector with increasing exports in 2007. The industry is expected to continue to register an average annual growth of 8 per cent over the next few years.

In the IMP3, investment for medical devices is targeted at RM800 million per year for the period 2006-2010. In 2007, investments in the medical device industry (including biodiagnostic kits) amounted to RM550.4 million. However, the types of products approved to be manufactured have diversified in line with the first strategic thrust of the IMP3. More efforts will be made to encourage Malaysian companies to become global suppliers of parts and components for major medical devices companies abroad. Continued efforts will also be made to target companies globally to attract them to invest in Malaysia.

Some of the specific areas for further investments in the medical devices sector would be the manufacture of surgical appliances, orthopaedic devices, dialysis equipment, electrocardiography equipment, blood flow measurement equipment, cardiovascular products and medical imaging equipment.

AGRICULTURE AND FOOD PROCESSING

The agriculture sector (including forestry and fishing) contributed 7.7 per cent of GDP in 2007. Oil palm remained the mainstay, contributing 29.4 per cent of the sector's value-added, while fishing accounted for 16.1 per cent. Other agriculture crops, forestry and rubber contributed 54.5 per cent.

The Third National Agricultural Policy (NAP3) aims to achieve a balanced development between the agriculture and manufacturing sectors and to intensify linkages with other sectors in the economy. To revitalise the agriculture sector as the third engine of growth in the economy, two new strategic approaches were introduced i.e. product-based approach and agroforestry approach. In order to increase the contribution of this sector to the country's economic growth, continuous efforts have been undertaken by the Government to:

- Integrate livestock farming with the plantation sector;
- Emphasise on the production of safe and quality vegetables;
- Enhance food security; and
- Increase productivity through automation in production.

The focus of the IMP3 on new growth areas such as convenience food, functional foods, food ingredients and *halal* foods, coupled with the vision of NAP3 would enhance the food and *halal* food industry.

In the Ninth Malaysia Plan, the agriculture and food processing industry is expected to grow at 5.2 per cent per annum. Various initiatives and programmes have been undertaken by the Government to expand the food processing industry in the country. The Government has allocated RM11.8 billion for agriculture development in the Ninth Malaysia Plan.

The food processing industry in Malaysia is very much reliant on imported raw materials for production of certain food products. The Government has taken concrete measures to improve and increase agricultural production. Other major initiatives by the Government include the development of the Northern Corridor Economic Region (NCER) and East Coast Economic Region (ECER) which are expected to further boost the agriculture sector.

Agriculture has been earmarked as one of the key drivers of economic growth in the NCER and emphasis is also placed on this sector in the ECER. To revitalise the country's agriculture sector, the development plan proposes 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.

A proposed high-yield seed production centre in Perlis and herbal farms in Hulu Perak will improve the agricultural activity further. These initiatives will further support the development of upstream and downstream activities in this sector.

Malaysia continues to remain a net importer of food. For the period of January-November 2007, total food imports amounted to RM21.3 billion, compared with RM20 billion in 2006. Major food imports were cereals (RM4.5 billion), cocoa beans (RM2.6 billion), dairy products and bird's eggs (RM2.2 billion), sugar, molasses, honey (RM1.6

billion), vegetables (RM1.4 billion), and fresh, chilled and frozen fish (RM1.1 billion). Raw materials such as cereals and dairy products will continue to be imported for the production of animal feed, dairy and wheat-based products.

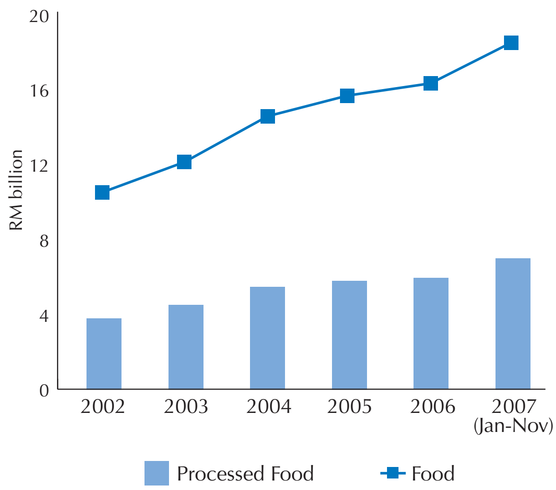
Total food exports amounted to RM12.5 billion in 2007 (January-November) compared with RM11.5 billion in 2006. Malaysia exported food products to more than 200 countries and the main products were cocoa and cocoa preparations, prepared cereals and flour preparations, fresh, chilled and frozen crustaceans and molluscs.

Despite the shortage of raw materials and reliance on the imports of major raw materials, exports of processed food amounted to RM7.8 billion in 2007 (January-November), compared with RM7.3 billion in 2006. Exports were mainly cocoa and cocoa preparations (RM2.3 billion), prepared cereals and flour preparations (RM916.7 million), dairy products (RM717.2 million); and sugar and sugar confectionery (RM611.2 million). For the period of January-November 2007, the top ten major export markets for Malaysia's processed food were Singapore, Indonesia, the USA, Japan, Thailand, Australia, the Netherlands, Hong Kong, the Philippines and People's Republic of China.

Agriculture

The agriculture sector covers 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.

Graph 45
The Contribution of Exports of Processed Food to Total Food Exports, 2002-2007



Source: Department of Statistics

Within the livestock sub-sector, poultry farming is the largest contributor, accounting for about 75 per cent of the total ex-farm value in this sub-sector. Poultry farming has also achieved considerable improvement with wider adoption of closed-house system which is more environmental-friendly and has contributed to:

- Better environmental control;
- Higher productivity; and
- Low risk to diseases.

Although Malaysia is self sufficient in poultry, pork and eggs, about 80 per cent of the country's supply of beef and mutton is still being imported.

In the fisheries sub-sector, aquaculture is the fastest growing segment with an annual production of more than 200,000 metric tonnes. The main focus for aquaculture is in high value species such as humpback seabass and tiger prawns. Malaysia's total exports of fish and other seafood for the period of January-November 2007 amounted to RM2.3 billion. Of this, fresh, chilled and frozen fish, crustacean and molluscs were the major exports valued at RM1.7 billion.

In the fruits sub-sector, there are more than 40 types of fruits cultivated in Malaysia, most of which are grown on a small scale basis. Commercial farming of fruits is limited to pineapples, starfruits, watermelons and citrus fruits. Most of the fruits produced are primarily for domestic consumption while a very small portion is exported.

In the vegetables sub-sector, most of the supply is for the domestic market while a small proportion is for export to Singapore. An increasing number of farms have adopted hydroponics and aeroponics methods in vegetable farming to facilitate the cultivation of higher value temperate vegetables for the domestic market.

In the Ninth Malaysia Plan, the production of fruits and vegetables is targeted to reach 2.6 million tonnes and 1.1 million tonnes, respectively by 2010.

The development of new sources of growth in the agriculture sector such as tuna fishing, ornamental fish and plants, floriculture, herbs and seaweed is encouraged through extension services, basic infrastructure, marketing facilities and promotion of downstream activities.

Projects Approved in 2007

A total of 30 projects, with investments of RM1,736.6 million were approved with incentives, all of which were domestic investments. Of the total, 27 were new (RM1,734.1 million), while three were expansion/diversification projects (RM2.5 million).

The approved projects include deep-sea fishing, livestock rearing, aquaculture and cultivation of fruits and vegetables. The largest investment approved in the agriculture sector was in the fisheries sub-sector which amounted to RM1,639.7 million. The main activities were deep-sea fishing followed by rearing of tiger prawns.

In the livestock sub-sector, a total of 10 projects were approved with investments totalling RM70 million for cattle and goat rearing and poultry farming.

Among the approved projects were:

- Konsortium Perikanan Nasional Berhad with an investment of

RM1,628.4 million for deep-sea fishing activity mainly for the domestic market;

- QL Agroventures Sdn. Bhd., a Malaysian-owned company with an investment of RM33.2 million for broiler and layer farming activities for the domestic market; and

- Eng Peng Cold Storage Sdn. Bhd., a Malaysian-owned company, with an investment of RM22.9 million for an integrated project in poultry farming and production of processed poultry products. More than 70 per cent of the poultry is for its own consumption and 90 per cent of the processed poultry products are for the domestic market.

Food Processing

According to the Annual Survey of Manufacturing Industries, 2005 by the Department of Statistics, there are currently more than 2,000 establishments involved in the food processing industry, which is dominated by SMEs. Presently, the industry employs more than 90,000 workers and has an annual gross output of about RM24 billion.

The sales value for the food processing industry amounted to RM16 billion for the period January-November 2007 compared with RM13.8 billion in 2006.

In the fisheries product sub-sector, processed seafood products such as frozen and canned fish, crustacean and molluscs, surimi and surimi products remained as the main contributors to exports. 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. Manufacturers exporting to the EU and the USA are also required to comply with stringent safety standards besides being HACCP certified.

The current trend in the meat processing sub-sector is for the convenience meat products in frozen form. Preferred food products are smoked pepperoni, pastrami, salami, patties, meat sandwiches and other commonly produced meat products such as sausages, burgers, frankfurters and frozen meat products. According to industry sources, the most popular processed meat products exported are chilled poultry meat, frozen poultry meat and frozen boneless beef products. Among the major export destinations are Japan, Singapore, Hong Kong, Brunei and UAE.

In the fruit processing sub-sector, pineapples, bananas, guavas, passion fruits and jackfruits are mainly for further processing into dried fruits or canned into juices and flavouring. In recent years, there has been an increasing number of projects approved to cultivate dragon fruits for fresh consumption, as well as for value-added activities. Demand for health and natural food products with minimally processed fruits/vegetables, natural juices and natural food flavours/colouring is increasing. This is due to the awareness among consumers on the importance of health benefits of fruits and vegetables.

Currently, Malaysia is the world's fifth largest producer of pepper. Malaysia is also the largest cocoa grinder in Asia and ranked fourth in the world. During the Ninth Malaysia Plan, utilisation of agricultural commodities such as pepper and cocoa for processing into value-added products is expected to increase further and contribute to about 12.3 per cent and 20 per cent by 2010, respectively.

In the IMP3, convenience foods, functional food, food ingredients and *halal* food products have been identified as new growth areas. These sectors represent the fastest growing segments within the food processing industry.

Busier lifestyle and rising disposable incomes have led to the growing popularity of convenience foods. Globally, growth is in ready-to-eat meals, particularly refrigerated complete meals, which requires 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. The increasing consumer awareness and focus on nutrition and health has created a demand for 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 the food manufacturers, natural food additives and flavours have the potential for further growth.

Malaysia aims to be a reference centre for trade and investment promotion of *halal* products and services. The Malaysia International *Halal* Showcase (MIHAS) and the World *Halal* Forum (WHF) held annually provide opportunities for strategic alliances. The international exhibitions such as the Malaysian Agriculture, Horticulture and Agro-tourism (MAHA) also showcase Malaysia's agricultural products that will broaden the market potentials in the domestic food industry.

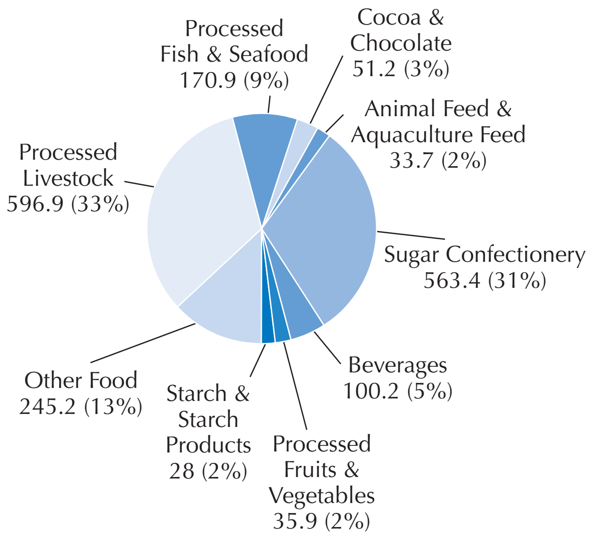
The *halal* industry in Malaysia provides immense opportunities for Malaysian manufacturers. The concept of *halal* is associated with food products which are of high quality in terms of cleanliness, sanitation and compliance with religious requirements.

Projects Approved in 2007

A total of 67 projects with investments of RM1.8 billion were approved for the food processing sector (including beverages) in 2007. The projects approved were for processed livestock products, sugar, processed fish and seafood products, cocoa and chocolate products, processed fruits and vegetables starch and starch products, other food products such as convenience, functional/health food and food ingredients, coffee, cereals, beverages, animal feed and aquaculture feed.

In 2007, the food processing industry continued to attract substantial investments from domestic sources. Domestic investments amounted to RM1.6 billion (85.3%) while foreign investments totalled RM267.9 million (14.7%). Existing food manufacturing companies continued to expand and diversify their operations in 2007. Of the 67 projects approved, 48 were new projects (RM1.5 billion) and 19 were expansion/diversification projects (RM281.1 million).

Graph 46
Approved Investments in the Food Processing Sector, 2007



Investments were mainly in the following sub-sectors:

- Processed livestock products (RM596.9 million);
- Sugar confectionery (RM563.4 million);
- Processed fish and seafood products (RM170.9 million);
- Cocoa and chocolate products (RM51.2 million);
- Processed fruits and vegetable products (RM35.9 million);
- Beverages (RM100.2 million);
- Animal feed and aquaculture feed (RM33.7 million); and
- Starch and starch products (RM28 million).

Among the significant projects approved were:

- PML Dairies Sdn. Bhd., a wholly-owned company of Fraser and Neave Holdings Bhd (F&N), to produce dairy products with an investment of RM457 million;

- Premium Bioherbs Sdn. Bhd., with an investment of RM51 million, to produce herbal extracts from herbs such as Eurycoma longifolia, Labisia pumila, Orthosiphon stamineus and Pueraria mirifica. The company's products will be exported mainly to South Korea and Japan;

- Premium Sanitised Products Sdn. Bhd., a new project with an investment of RM31 million, for the production of fruit juice and fruit salad. The project will utilise local tropical fruits. This is the first company to export fruits salad and about 90 per cent of the products is targeted for Middle East countries;

- Orient Biotech Sdn. Bhd., with an investment of RM13.2 million to produce health supplements in the form of tablets, capsules, powder, liquid and sachets, and virgin coconut oil extracts. The health supplement will utilise raw materials such as spirulina and Eurycoma longifolia. About 60 per cent of the products are for the domestic market;

- Rewards Vision Sdn. Bhd., a Malaysian-owned company, to manufacture sodium caseinate and modified milk powder with an initial investment of RM6.8 million. Sodium caseinate is used by companies in the food industry as an emulsifier in meat-based products and non-dairy creamer while modified milk powder is used in the production of cakes, bakeries, ice cream and biscuits. Sodium caseinate is an essential ingredient for all spray dried products which contains high level of oil or fat content and it acts as an oil encapsulator. More than 80 per cent of these products will be exported to Viet Nam, Brunei, Thailand, the Philippines and Indonesia;

- Super Food Specialists (M) Sdn. Bhd, an existing foreign-owned company with an investment of RM15.7 million., to expand its production of coffee products. More than 80 per cent of the products will be exported to Singapore, Myanmar, Thailand, People's Republic of China and the Philippines; and

- Ecolite Biotech Manufacturing Sdn. Bhd., a Malaysian-owned company, with an investment of RM13.3 million for the production of fish essence and cough syrup. About 45 per cent of the products will be exported to Taiwan and Indonesia.

Investments approved in the food processing industry in 2007 reflect the industry's trend towards the production of high value-added health food products and a significantly high participation from domestic investors compared with 2006.

The IMP3 target for investments for the food processing industry for 2006-2010 is RM6.5 billion. In 2007, the approved investments (excluding edible oils and fats, animal feed, beverages and tobacco) surpassed the targeted investments of RM1.3 billion per year.

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 globally recognised for *halal*-based food products and this reputation can pave the way for Malaysia's manufacturers to make further inroads in the global *halal* industry which is estimated at US$547 billion a year.

The agriculture and food processing industry is expected to grow further in 2008. The implementation of various initiatives in the Third Industrial Master Plan and Ninth Malaysia Plan is expected to contribute towards the further development of the food processing industry in Malaysia.

OIL PALM PRODUCTS

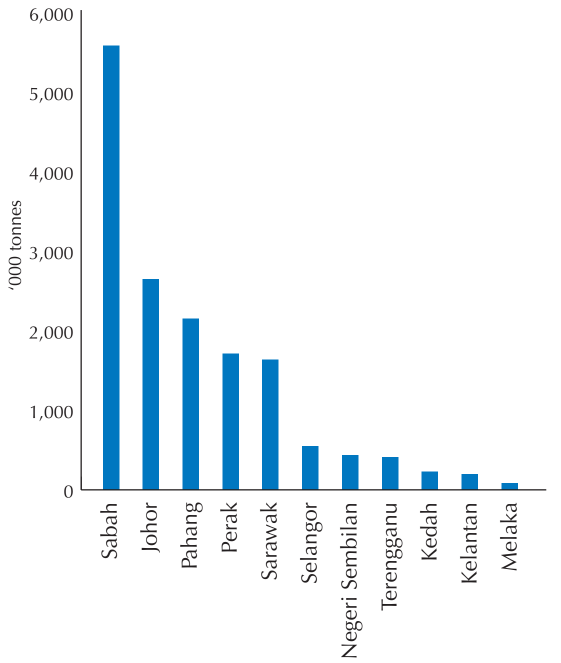
The oil palm products sector comprises palm oil, palm kernel oil, oleochemicals, biodiesel, energy generation and products from palm biomass.

Palm oil is one of the 17 major oils and fats produced in the world, and ranks first in terms of volume produced as well as export. Malaysia and Indonesia account for more than 85 per cent of the world palm oil output and about 93 percent of global exports of palm oil. Indonesia has overtaken Malaysia as the largest producer. Other producers of palm oil are Nigeria, Thailand and Colombia.

The production of crude palm oil (CPO) decreased slightly to 15.8 million tonnes in 2007 from 15.9 million tonnes in 2006, due to heavy rain and flooding in Johor, a major palm oil growing area which resulted in reduced harvest. Correspondingly, the production of crude palm kernel oil decreased from 2 million tonnes in 2006 to 1.9 million tonnes in 2007.

The main palm oil producing areas are Sabah (35%), Johor (16.5%), Pahang (13.6), Perak (10.8%) and Sarawak (10.3%). The production of crude palm oil in both Sabah and Sarawak is on the rise due to the increase in matured planted areas in these two states. Recognising the limitation for further expansion in oil palm cultivation in Malaysia, some plantation companies have addressed this problem by investing in oil palm plantations overseas such as in Indonesia, Papua New Guinea and Thailand. Major companies investing in this sector include Golden Hope Plantations, PBB Group, TH Plantations, KL-Kepong, Guthrie and Asiatic Development.

Graph 47
Production of Crude Palm Oil by State, 2007

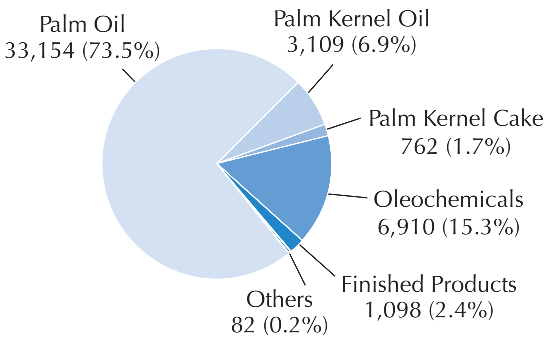


Source: Malaysian Palm Oil Board (MPOB)

Although Sabah is the largest producer of crude palm oil, the processing facilities in the state are limited to basic processing, comprising palm oil mills, palm kernel crushers and refineries. The development of Palm Oil Industrial Cluster (POIC) in Lahad Datu, Sabah has brought about some improvement. The first biodiesel plant in Sabah was completed in August 2007, followed by the second plant in October 2007. The ongoing construction of dedicated port facilities in the POIC will further encourage more companies to locate their projects in Sabah.

In 2007, total 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 decreased to 19.6 million tonnes from 20.1 million tonnes in 2006.

Graph 48
Exports of Oil Palm Products, 2007



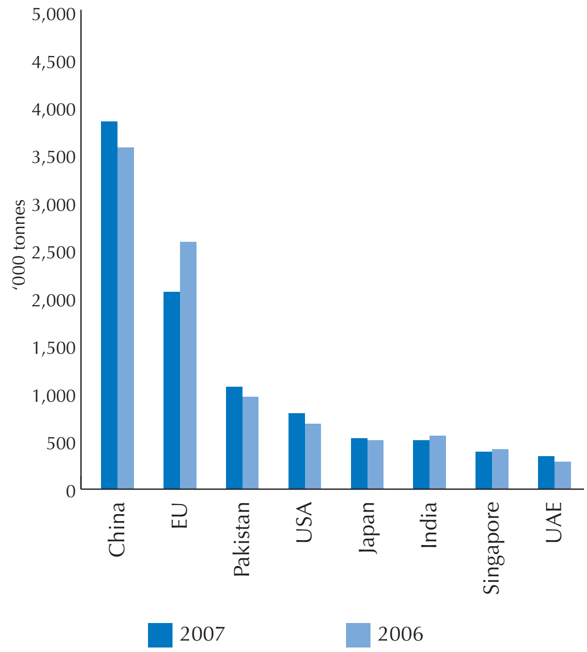
Source: Malaysian Palm Oil Board (MPOB)

However, the export value increased to RM45.1 billion as compared with RM 31.8 billion in 2006, due to the high price for crude palm oil (CPO) which averaged RM1,929.50 per tonne in January 2007 and increased by more than 50 per cent to an average price of RM2,933 per tonne in December 2007 (local delivered). The average price of CPO for Peninsular Malaysia was at RM3,222 (local delivered on 28 January 2008). This increase is in tandem with the increasing prices of other agricultural commodities around the world such as soyabean and corn, due to an increase in the demand for corn (for food and energy) and the reduced acreage for soyabean.

Malaysia exports a wide range of processed palm oil and palm kernel oil products. The exported products are mainly refined products such as refined, bleached, deodorised or RBD palm products (60.3% in volume), oleochemical and palm kernel oil products. In 2007, about 9.8 per cent of CPO was exported.

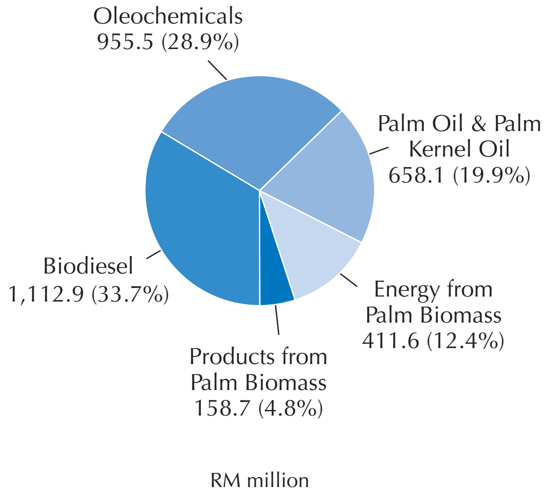
Major markets for Malaysian palm oil and palm oil products were People's Republic of China (27.9%), the EU (15%), Pakistan (7.7%), the USA (5.7%), Japan (3.8%) and India (3.7%). While exports to People's Republic of China, Pakistan, the USA and Japan showed an increasing trend, exports to the EU and India declined. Exports to the EU declined to 2.1 million tonnes in 2007 from 2.6 million tonnes in 2006 due to the increase in domestic vegetable oil production (rapeseed oil) and reduced intake of palm oil for biodiesel. The Netherlands, the largest importing country in the EU reduced its imports to 1.5 million tonnes in 2007 from 1.7 million tonnes in 2006.

Graph 49
Major Export Markets for Palm Oil Products, 2007 and 2006



Source: Malaysian Palm Oil Board (MPOB)

Graph 50
Investments in Projects Approved in the Oil Palm Products Industry by Sub-Sector, 2007



Projects Approved in 2007

In 2007, a total of 63 projects with investments of RM3.2 billion were approved for the production of oil palm products (118 projects with investments of 8.8 billion in 2006). These projects include those producing palm oil and palm kernel oil products, oleochemicals, biodiesel, energy generation and products from palm biomass. Domestic investments accounted for 67.8 per cent (RM2.2 billion) of the total investments. The biodiesel sub-sector remained as the sector with the highest investments of RM1.1 billion (34.7%), followed by oleochemicals and palm oil and palm kernel oil products with investments of RM955.5 million and RM658.1 million, respectively.

During the IMP3, this industry is expected to attract a total investment of RM26.1 billion for the period 2006-2020 or an annual investment of RM1.7 billion. The total investments approved for the first two year period (2006-2007) was RM12.0 billion, nearly half of the total projected investment for the IMP3 period. This was mainly due to the overwhelming interest in biodiesel projects.

The IMP3 also projected the export value of oil palm products (excluding crude palm oil) at RM40.5 billion by end of 2010 and RM78.8 billion by the end of 2020. The export value in 2007 at RM40.9 billion has already surpassed the projected value for 2010 and was more than half of the projected value for 2020.

Palm Oil and Palm Kernel Oil

Refining and crushing are the main activities in this sub-sector. Currently, there are 51 refineries with a total capacity of 19.1 million tonnes per year and 40 crushing plants (5.5 million tonnes capacity per year) in operation. In 2007, the refineries processed a total of 14.2 million tonnes of crude palm oil and 1.4 million tonnes of crude palm kernel oil while crushing plants processed 4.2 million tonnes of palm kernel. The main products produced are refined, bleached and deodorised (RBD) palm olein and stearin. About 70 per cent of RBD palm olein and 57 per cent of RBD palm stearin produced were exported while the rest were used as raw materials for downstream processing.

Projects Approved in 2007

In 2007, a total of 17 projects with investments of RM658.1 million were approved as compared with 14 projects with investments of RM814.5 million in 2006. Of these, seven were new (RM522.9 million) and 10 were for expansion (RM135.2 million). Domestic investments accounted for 81.2 per cent (RM534.6 million) of the total investments.

The approved projects included nine proposals for downstream activities such as production of non dairy creamer, margarine, shortening and hydrogenated products; four refineries; two crushing plants; one fractionation plant; and one project for the processing of industrial grade palm oil from recycling of refinery waste.

Refining and crushing activities have already reached maturity levels and are no longer promoted as a growth area in the IMP3. The growth areas in this sub-sector are nutritional foods and ingredients which normally do not involve substantial investments as compared with refining. Thus, this sub-sector is not expected to attract substantial investments in the near future.

Oleochemicals

Oleochemicals are the products derived directly from naturally occurring fats and oils from animal and vegetable sources. In Malaysia, oleochemicals are mainly derived from palm oil. Oleochemicals, comprising basic oleochemicals (fatty acids, fatty alcohol, methyl esters and glycerine) and oleochemical derivatives (fatty amines, soap noodles and metallic soaps) accounted for 11.3 per cent of the total quantity of oil palm products exported and 15.6 per cent of total export value in 2007. About 80 per cent of Malaysia's production of fatty acids and fatty alcohol are exported. Malaysia is the leading producer and exporter of basic oleochemicals in the world. The contribution of fatty acids and fatty alcohols to the global capacity is 26 per cent and 13 per cent respectively.

Currently there are 51 oleochemical companies in operation. Of these, 16 companies are involved in the production of basic oleochemicals and 30 other companies are producing oleochemical derivatives with five companies producing both basic oleochemicals and oleochemical derivatives. The industry comprises not only local manufacturers but also several joint-ventures with multinationals. The major global players operating in Malaysia are Croda, Procter and Gamble, Iffco and Kao while the major local companies are Acidchem International, Palm Oleochemicals, Natural Oloechemicals and Southern Acids.

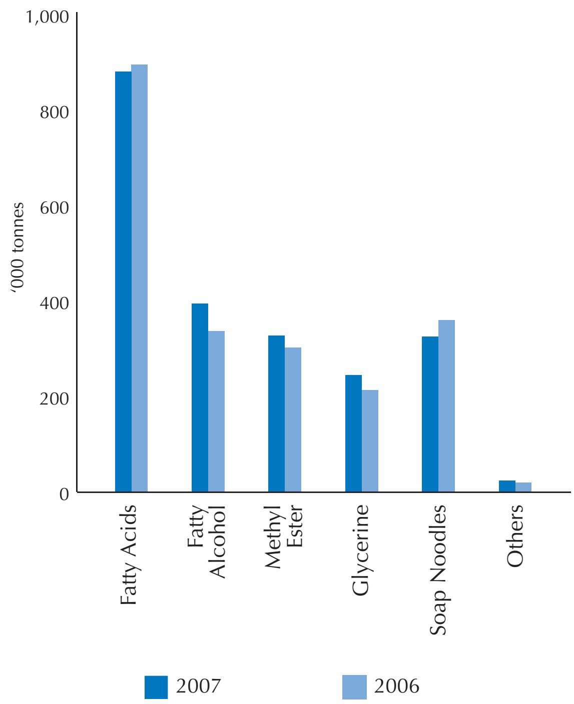
The industry has diversified from the production of basic oleochemicals to the production of oleochemical derivatives such as metallic stearates, fatty amines, fatty amides, consumer products such as cosmetics and personal care products, polyols and cleaning agents and biotechnology-based products such as tocotrienols, carotenoids and vitamin E concentrates. This is in line with the strategic thrust of the IMP3 for the oleochemical industry.

A total of 2.9 million tonnes of oleochemical products were produced in 2007 as compared with 2.1 million tonnes in 2006. The main raw materials used in the production of oleochemicals are crude and processed palm kernel oil, processed palm oil and crude palm oil. Of the 1.5 million tonnes of palm-based oils consumed in the production of oleochemicals, crude and processed palm kernel oil constituted 56.3 per cent (1.2 million tonnes) with the balance from processed palm oil (37%) and crude palm oil (6.5%).

In 2007, a total of 2.2 million tonnes of oleochemical products valued at RM6.9 billion were exported. The European Union, the USA and Japan remained the major markets for oleochemicals accounting for 51 per cent of total exports. The People's Republic of China is becoming a big market for oleochemicals accounting for 11 per cent of total exports.

R&D activities are important to further develop downstream products related to oleochemicals. Towards this end, as at December 2007, the Malaysian Palm Oil Board has developed and launched a total of 378 technologies and oil palm related products compared with 344 as at 2006. Of these, about 30 per cent have been commercialised and licensed to the industries. Some of the new technologies which have been commercialised are natural insect repellents, transparent soap, polyurethane for automotive components, palm based esterquats, fabric softeners and palm based polyurethane sheets.

Graph 51
Exports of Major Oleochemical Products, 2007 and 2006



Source: Malaysian Palm Oil Board (MPOB)

Projects Approved in 2007

In the olechemicals sub-sector, 18 projects were approved with a total investment of RM955.5 million in 2007 compared with two projects (RM45.4 million) in 2006. Of these, 11 were new projects (RM641.3 million) and seven were expansion/ diversification projects (RM314.2 million). Foreign investments amounted to RM595.3 million (62%) while domestic investments totalled RM 360.2 million (38%).

The projects approved were for the production of oleochemical derivatives and downstream products which include methyl ester sulphonates, fatty acid esters, industrial esters, vitamin E concentrates, carotene concentrates, sodium lauryl sulphate, ammonium lauryl sulphate, sodium methoxide, fuel additive, alkaline and metallic soap, soap noodles, palm-based tocotrienols, tocopherols, carotenoids, animal feed supplement, palm wax candles, palm based insecticides and fatty amides.

The projects approved reflected an increasing interest in the production of oleochemical derivatives due to increased demand for natural based products as consumers become increasingly concerned with the environmental impact of the products they buy.

Some of the major projects approved were:

- Lion Eco Chemicals Sdn. Bhd., with an investment of more than RM200 million to produce methyl ester sulfonates in Tanjung Langsat Industrial Complex, Pasir Gudang, Johor. Methyl ester sulphonates (MES) is used as a new key raw material in the production of detergents. Detergents produced from MES are highly biodegradable and are carbon neutral as they are produced from palm oil, hence reducing the carbon dioxide emission into the environment. About 10 per cent of its production will be supplied to its sister company, Southern Lion Sdn. Bhd. to produce detergents and the rest will be exported. Apart from the product, the plant itself is also environmentally friendly. It will be equipped with solar panels and a special system utilising rainfall as industrial water; and

- Oleon Sdn. Bhd. with an investment of RM139.1 million to produce industrial esters from fatty acids at Port Klang, Selangor. Oleon is one of the leading oleochemical companies in Europe with plants in Belgium, Germany and Norway. The industrial esters produced can be used as lubricants, lubricating additives and plasticisers. The company is expected to start production in the second half of 2008.

The approvals in the oleochemicals sector in 2007 have reflected the growing interest of local companies in capitalising on the availability of basic oleochemicals in Malaysia to move into the further downstream oleochemical and derivative products such as methyl ester sulphonates and industrial esters. This trend is expected to continue as the presence of these new companies would act as a catalyst to attract other foreign companies to Malaysia.

Global demand for oleochemicals is expected to increase in line with the continuing trend towards the use of natural or plant based products, biodegradable chemicals and growing affluence of global economies. This development will drive increasing demand for oleochemical products, especially for plasticizers, polyacrylate resins, insect repellents, active ingredients for washing and cleaning products, dietary supplements and specialty soap.

Biodiesel

The global demand for biodiesel is expected to increase with rising pressure on countries to seek alternative energy resources due to the higher fossil fuel prices and depleting resources worldwide. Many countries worldwide are planning to introduce the compulsory use of biodiesel in their respective countries. The European Union (EU) has set a target of 5.75 per cent biodiesel to blend with petroleum based diesel by 2010. This would give rise to imports of about 4 to 5 million tonnes of biodiesel per year in the EU countries. Based on the plans announced by these countries, the demand for biodiesel will triple to 30 million tonnes by 2010. It is expected that by 2020, biodiesel would account for 20 per cent of world diesel consumption. Based on today's world diesel consumption, this will amount to 150 million tonnes of biodiesel.

In Malaysia, the National Biofuel Policy was launched by Y.A.B. Prime Minister on 21 March 2006. The policy is aimed at reducing the country's dependence on fossil fuels, promoting the demand for palm oil as well as stabilising its prices at a remunerative level. This was followed by the Malaysian Biofuel Industry Act 2006, which provides for the mandatory use of biofuel and licensing of activities relating to production, storage and trade.

To date, 91 projects have been approved to produce biodiesel from palm oil products with a total approved capacity of 9.9 million tonnes per year. However, the sharp increase of crude palm oil (CPO) prices of 67.5 per cent to RM2,530 per metric tonne in 2007 from RM1,510 per metric tonne in 2006, has resulted in many projects being put on hold, thus slowing down the implementation of these projects. Besides the high price of palm oil, other factors contributing to the slowdown were delays at the planning stage due to various reasons such as difficulties in getting a long term contract on the supply of raw materials i.e palm oil, and stringent requirements in obtaining bank loans.

Currently, there are six biodiesel plants in operation with a total capacity of 499,000 metric tonnes and another 10 plants are expected to commence production in 2008. Exports of biodiesel for the period January to November 2007 were 86,700 tonnes valued at RM229 million. The major export destinations were the USA, EU, Puerto Rico, Singapore, Australia and Japan.

Projects Approved in 2007

In 2007, due to the temporary halt in the issuance of manufacturing licence for new biodiesel projects (effective from 29 June 2006), only six biodiesel projects using palm oil were approved. In addition, five other biodiesel projects using jatropha oil as its feedstock were approved with a total capacity of 925,000 metric tonnes. This is due to the fact that biodiesel manufacturers are seeking alternative sources of feedstock to overcome the high prices of palm oil. The 11 biodiesel projects approved were mainly by domestic investors with investments amounting to RM1.3 billion (86%) while foreign investments totalled RM246.2 million (14%).

Sabah continued to be the largest recipient of projects approved for biodiesel production i.e. three projects, followed by Johor (2), and Perak (1). Of the projects approved in Sabah, two will be located in the Palm Oil Industrial Cluster (POIC) in Lahad Datu, the first dedicated palm oil industrial cluster in the country with an area of 5,000 acres. To date, a total of 29 projects were approved in Sabah with two projects under trial production.

Johor has also attracted a considerable amount of interest in this sector with 14 of the total 91 projects proposed to be located in Johor. Two of these companies have invested in biofuel plants in the Biofuel Hub in Johor which covers the area within the Pasir Gudang Industrial Estate and Tanjung Langsat Industrial Complex. Apart from Johor, 13 approved biodiesel projects would be located in Selangor and 11 projects will be located in Pahang, which would form the base for turning Kuantan, particularly Gebeng, into a hub for a palm oil industrial cluster as proposed under the Master Plan of the East Coast Economic Region.

The year 2007 also witnessed the shift by biodiesel manufacturers to seek alternative feedstock such as jatropha oil to produce biodiesel. However, the success of the projects would largely depend on the availability of this feedstock which would be sourced from the Philippines, Indonesia and India apart from Malaysia where there are increasing efforts to grow jatropha.

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. Oil palm fronds and oil palm trunks are derived from the plantation activities while the empty fruit bunches, palm oil mill effluent, sludge and palm kernel shells are derived from the processing activities.

Based on the industry estimate of 100,000 hectares replanted yearly, there will be about 13.6 million logs of oil palm trunk available. This is equivalent to 4 million cubic metres of plywood. The fresh fruit bunches processed by palm oil mills can produce 21 per cent empty fruit bunches, 12 per cent mesocarp fibres, five per cent dry shells and five per cent decanter solids. These can be processed into value-added products such as panel products, moulded packaging, composite products and are also a suitable substitute for wood-based industries and the production of pulp and paper.

To date, 73 projects with total investments of RM816.8 million were approved for processing of palm biomass into value-added products. Oil palm trunks can be used to produce panel products such as plywood and veneer; empty fruit bunches (EFB) to produce fibre; mulching mats and moulded products; palm kernel shells for activated carbon; oil palm fronds for animal feed; and sludge for organic fertiliser. Currently, there are 20 companies producing panel/composite products, moulded products, mulching mat, activated carbon, palm fibre, organic fertiliser and animal feed.

Palm biomass is also recognised as a reliable source of materials for renewable energy. Under the Ninth Malaysia Plan, the Government has targeted 350 MW of the electricity generated to come from renewable energy sources. Currently, 11 companies are utilising palm biomass to generate energy.

Projects Approved in 2007

In the palm biomass products sector, 12 projects with investments of RM158.7 million were approved in 2007, compared with 13 projects with investments of RM211.7 million in 2006. Domestic investments amounted to RM120.1 million or 75 per cent of the total investments in this sub-sector. The approved projects included the production of moulded products, plywood and veneer, flooring boards and laminated block boards, pellets and briquette charcoal and fibres.

Some of the approved projects were:

- Ecobuilt Packaging (M) Sdn. Bhd., a Malaysian company, to produce moulded products (packaging/trays) from empty fruit bunches. The company will export all its production to the United Kingdom. The company is expected to start commercial production in 2008;

- Polypalm Wood Products Sdn. Bhd., a Malaysian company, to produce flooring boards from palm biomass. The project is proposed to be located in Penang and about 90 per cent of its products will be exported to the USA, Japan, Canada and People's Republic of China; and

- Optimum Ability Sdn. Bhd., a Malaysian company, to produce plywood and veneer from oil palm trunks. The factory is located in Johor and is expected to start production in March 2008. About 70 per cent of the production will be exported to the USA, EU and the Middle East.

Within the first two years of the IMP3 period, the oil palm products industry has shown considerable progress and recorded very impressive achievements, particularly in meeting the targets in investment and exports. The total investments of RM3.2 billion in 2007 have surpassed the annual target of RM1.7 billion as projected in the IMP3 while the export value of RM40.9 billion has also exceeded the projection for the end of 2010 (RM40.5 billion). Most of the projects approved in 2007 propose to produce value-added and downstream products which are in line with the strategies outlined in the IMP3.

The year 2007 witnessed several expansion activities overseas by Malaysian companies both in the downstream and upstream sectors. These activities included efforts by IOI Corporation and Felda to expand into downstream processing in the developed countries. Other expansion activities were mainly in the plantation sector, mainly in Indonesia.

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 and toilet preparations.

Pharmaceuticals

The pharmaceutical industry encompasses a wide range of products from prescription medicines and over-the-counter (OTC) products of various dosage forms to herbal preparations and health/food supplements including traditional medicines. Local pharmaceutical companies comprise mainly small and medium-sized companies engaged in the production of generic drugs and traditional medicine products. As at 31 December 2007, a total of 235 pharmaceutical companies were licensed by the Drug Control Authority, Ministry of Health. Out of the total, 175 companies are involved in producing traditional medicines and 60 companies are manufacturing modern medicines.

Among the major local companies are Pharmaniaga Manufacturing Bhd., Hovid Berhad, CCM Duopharma Biotech Sdn. Bhd., Xepa-Soul Pattinson Sdn. Bhd. and Kotra Pharma (M) Sdn. Bhd. These companies manufacture generic drugs, particularly antibiotics and painkillers, health supplements and injectables and also undertake contract manufacturing for foreign companies. Foreign-owned companies with a manufacturing presence in the country include Y.S.P. Industries (M) Sdn. Bhd. (Taiwan), Sterling Drug (M) Sdn. Bhd. (the manufacturing arm of GlaxoSmithKline), Ranbaxy (M) Sdn. Bhd. (India), and SM Chemicals Sdn. Bhd.

Due to the limited domestic market, Malaysian pharmaceutical manufacturers are also focusing on penetrating overseas markets in the ASEAN Region and the African continent. The domestic market registered a growth rate of 13 per cent, as demand for pharmaceuticals increased from RM3.0 billion in 2006 to an estimated RM3.4 billion in 2007. For the period January to November 2007, sales value of locally manufactured pharmaceuticals including medicinal chemicals and botanical products amounted to RM1.2 billion representing an increase of 15 per cent, compared with RM1.04 billion for the whole of 2006.

The annual double-digit growth of the Malaysian pharmaceutical industry over the recent years has been driven by the introduction of generic versions of branded drugs such as loratadine, omeprazole, ranitidine, ceftriaxone and simvastation. In 2007, major domestic pharmaceutical companies such as Pharmaniaga, Kotra Pharma and CCM Duopharma Biotech continued to invest substantially to develop newer versions of generic drugs.

Total exports of pharmaceuticals amounted to RM507.3 million in 2007 (January-November) compared with RM457 million for the whole of 2006. The products were exported to more than 30 countries including those in Africa and Central America. Major export destinations were Singapore, Viet Nam, Brunei, Hong Kong, Taiwan, India, Japan and Germany.

Malaysia is a large importer of pharmaceutical products with imports amounting to RM2.7 billion in 2007 (January-November), which accounted for 65 per cent of the domestic market. In 2006, imports of pharmaceutical products amounted to RM2.7 billion. Major types of drugs imported were mainly lifestyle drugs such as cardiovascular drugs, neuromuscular and metabolism drugs, antibiotics i.e penicillin, erythromycin and other antibiotics as well as vaccines for human and veterinary medicines. These are mainly branded and patented drugs which are not produced in the country.

Total employment in the pharmaceutical industry for the period January to November 2007 was 7,785 persons. As the pharmaceutical industry is a technology and research-intensive industry, most of the workers employed were skilled personnel such as pharmacists, chemists, biotechnologists, microbiologists, biologists and chemical engineers, especially at the supervisory and managerial level, in production, quality assurance and R&D activities.

In the modern medicines sector, a number of the domestic generic manufacturers have moved into the production of biopharmaceuticals such as anticoagulant-heparins. Five companies have been approved to manufacture other biopharmaceutical products such as human insulin, human vaccines (such as recombinant hepatitis B vaccines) and monoclonal antibodies.

Inno Biologics Sdn. Bhd. the first cGMP (current Good Manufacturing Practices) biomanufacturing facility in Malaysia, has been in operation since September, 2006. Inno Biologics Sdn. Bhd. is a contract manufacturing organisation (CMO) and specialises in the production of biopharmaceutical and monoclonal antibodies based on mammalian cell culture. Another company, Alpha Biologics Sdn. Bhd. which was approved for the production of monoclonal antibodies is expected to commence operation by August 2008. Projects for the production of human insulin and recombinant hepatitis B vaccines have yet to be implemented.

The local pharmaceutical companies have also continued to intensify their efforts to expand exports and and explore new export markets. The companies include:

- Kotra Pharma (Malaysia) Sdn. Bhd produces prescription drugs and over-the-counter drugs in various dosage forms which include tablets, capsules, cream/ointment/gel, liquid preparations and injectables and powder. The company plans to expand its production capacity by seven times over the next four years to ensure uninterrupted growth for the company in the next 10 years. Being well established in ASEAN countries, the company also plans to venture into new markets such as the African continent, Gulf Cooperation Council (GCC) countries and Balkan states, with the intention to eventually penetrate into the US and EU countries. Kotra is currently exporting 35 per cent of its products mainly to ASEAN countries.

- Y.S.P. Industries Sdn. Bhd. produces a wide range of pharmaceutical, over-the-counter (OTC), veterinary and aquatic products. As the company's exports have increased in 2007, the company has intensified its efforts to expand its distribution networks in the Philippines, Singapore, Viet Nam, Myanmar and Cambodia.

Domestic pharmaceutical companies continued to upgrade and expand their existing facilities to comply with the stringent GMP guidelines of the regulatory authority in Malaysia. The Chemical Company of Malaysia Berhad (CCM), plans to convert one of its present sites into a dedicated and segregated cephalosporin manufacturing facility for the group, in line with the regulatory requirement of the Ministry of Health as well as the ASEAN GMP guidelines.

Besides this, some of the domestic pharmaceutical companies have also been proactive in taking steps to collaborate with foreign companies to develop new drugs. In 2007, Pharmaniaga has been in discussions with various international companies in the areas of product development, formulations of drugs and active pharmaceutical ingredients.

Other developments include the initiatives to harmonise pharmaceutical regulations within the ASEAN Consultative Committee for Standards and Quality (ACCSQ). At the 4th Meeting on the ASEAN MRA Taskforce on GMP Inspection from 23 to 24 July 2007 in Kuala Lumpur, it was agreed that the ASEAN MRA on GMP Inspection is to be signed at the Senior Economic Officers Meeting (SEOM) in April 2008.

In terms of research and development, Malaysia has been at the forefront of initiatives to develop *halal* medicines. Recently, it was announced that Malaysia is planning to produce the world's first *halal* meningitis vaccines in the next two years. The vaccine will be produced by Universiti Sains Malaysia (USM) in collaboration with the Finlay Institute in Cuba. Meanwhile, the first vaccine to benefit from the new *halal* certification is Merck and Co's (US) cervical cancer vaccine, Gardasil.

The herbal industry comprises a wide range of products such as herbal remedies, flavours and fragrances, pharmaceuticals, nutraceuticals and cosmaceuticals. The herbal industry is a significant sub-sector in the pharmaceutical industry. According to the Malaysian Herbal Corporation sales in the herbal industry is expected to increase to RM8 billion by 2007 from the RM4.5 billion registered in 2000. Malaysia's lush forests are rich with various flora including herbal plants. It is estimated that the country's forests have over 1,200 types of species including herbal and medicinal plants that have commercial value.

The Malaysian Herbal Corporation (MHC), a wholly-owned subsidiary of the Malaysian Industry-Goverment Group for High Technology (MiGHT), is a dedicated agency to coordinate all stakeholders at the national level on the overall activities needed in promoting the Malaysian herbal industry. Its main function is to conduct and coordinate activities throughout the value chain to promote the healthy development of the herbal industry in Malaysia. Among the activities undertaken by MHC are:

- Providing a platform for industry-Government interaction with the formation of Malaysia Industry Consultative Group (MICG) in Herbal to encourage industry, Government and academia to identify further direction for the benefit of the industry;

- Matching supply and demand of herbal raw materials. To ensure constant and quality supply of raw materials, MHC is embarking on a herbal cultivation project via its Herbal Valley Programme through its subsidiary, Herbal Valley Corporation Sdn. Bhd.; and

- Consulting services covering the entire value chain of the herbal industry such as industry research, study and survey.

Presently, most of the raw materials for herbal medicines are imported mainly from Indonesia, India and People's Republic of China. However, large companies such as Golden Hope Plantations and United Plantations, and Government agencies like the Southern Kelantan Development Authority are moving into the cultivation of herbs such as *Tongkat Ali, Kacip Fatimah, pegaga, serai, mengkudu* and *Misai Kucing*. Such large-scale farming provides huge growth potential for herbal-based drugs.

The growth of the pharmaceutical industry in Malaysia has created opportunities for the further development of the clinical trial activities in Malaysia. Clinical trials in Malaysia are carried out mainly for Phase II studies (evaluation of effectiveness and short term safety of the drugs), Phase III studies (confirmation of the efficacy and safety warranted by the drug use) and Phase IV studies (post marketing surveillance to track long term use of the drugs and any serious side-effects).

Currently, clinical trial services are provided by hospitals and private companies. The companies providing clinical trial services are Infokinetics Research Sdn. Bhd., Clinresearch Sdn.

Bhd. and Organon Research Sdn. Bhd. Clinical trials also involve bioavailability studies that are conducted to determine the rate of absorption of a drug after its administration in a pharmaceutical dosage form and bioequivalent studies carried out to determine that the bioavailability of a generic drug is similar to the original drug. Currently, there are seven bioequivalence and bioavailability centres in Malaysia. The centres are:

- Three centres at University Sains Malaysia (Drug Research Center and School of Pharmaceutical Sciences in Penang and School of Medical Sciences, Kubang Kerian, Kelantan);
- Clinical Investigation Centre, University Hospital;
- Pharmacy Department, Universiti Kebangsaan Malaysia;
- Gleaneagles Clinical Research Centre (Penang) Sdn. Bhd.; and
- Infokinetics Research Sdn. Bhd.

Increasing efforts are being undertaken by the Government to develop the clinical trial services sector. The National Institute of Health of the Ministry of Health (MOH), has established a Clinical Research Centre (CRC) to conduct clinical trials, clinical epidemiology and economic research, and manage complex medical databases. The CRC will also promote, support and conduct quality and ethical research to improve patient outcome. With a network of 14 centres around the country, the CRC acts as a One-Stop-Centre by providing a single point of contact to access all MOH hospitals and clinics nationwide. These CRCs have linkages to more than 50 general and district hospitals, and more than 100 health clinics as potential sites for clinical trials. The network is expected to be widened to include more hospitals and clinics as well as the Institute for Natural Products, Vaccines and Biologicals (9Bio), which would be able to carry out clinical research on herbal medicinal products, vaccines and diagnostics.

Apart from clinical trials, CRC is also undertaking bioequivalence and bioavailability studies requested by the local pharmaceutical companies. According to the Malaysian Organisation of Pharmaceutical Industry, about RM56 million has been spent by its members to carry out clinical trials, bioequivalence and bioavailability studies in 2007.

The current demand by the global pharmaceutical companies to seek lower cost avenues to conduct clinical trials will be a boost to Malaysia. It is estimated that US$10 billion (RM34 billion) was spent on clinical trials worldwide in 2006 and this could be increased by two fold by 2009. Recognising this opportunity, CRC is actively promoting Malaysia to be the preferred location for pharmaceutical, biotechnology and contract research companies to conduct their clinical trials in the public hospitals. This is aimed at making Malaysia a regional hub for clinical trials.

A web-based service namely, National Medical Research Registry (NMRR) has been established by the National Institute of Health (NIH), to support the implementation of the NIH guideline on the conduct of research in the Ministry of Health Malaysia. The NMRR is specifically designed to enable:

- Online registration on research. This is in line with international practice which requires medical research, especially clinical trials, to be registered in publicly accessible research registers. This is to ensure transparency and to increase public trust in the conduct of medical research; as well as to inform physicians and prospective volunteers about ongoing research in which they may wish to enroll;

- Online submission to an appropriate authority for approval, as well as online review of the submitted research by relevant appointed reviewers. The online system ought to reduce the research review time as well as to enable investigators to track the status of their research online;

- Online submission of research publication to the NIH for approval; and

- Management of MOH to document the level of research activity in the MOH, and also to track the progress of the research it has approved and/or provided support such as funding.

The NMRR would allow the pharmaceutical industry to have quick and easy access to information on research undertaken in the country as well as provide a directory of the clinicians and researchers involved in research, both in the private and public hospitals.

Projects Approved in 2007

In 2007, ten projects (seven were new and three for expansion/diversification) were approved with investments of RM98.3 million compared with 13 projects (RM241.7 million) in 2006. Domestic investments amounted to RM88.8 million (90.3%) while foreign investments totalled RM9.5 million (9.7%). Five new projects were approved with investments of RM37.7 million for the production of health supplements and herbal formulations, herbal medicines, herbal plant extracts and preparation in the form of tablets, capsules, cream and liquid and capsules of ganoderma. Another five projects were for the production of injectables, pharmaceutical formulations, animal feed supplements and veterinary pharmaceuticals and intravenous solutions.

For the IMP3 period of 2006 – 2010, investments in the pharmaceutical industry have been targeted at RM300 million per annum. In 2007, total investments for the pharmaceutical sector including biopharmaceutical projects approved with BioNexus Status amounted to RM200.6 million of which RM131.6 (66%) million investments were by local companies mainly in the herbal and nutraceutical segment as well as new areas of investments such as tissue and stem cell engineering and contract research organisations. The investments in this sector were relatively lower as some major local companies such as Hovid and Pharmaniaga were focusing on expanding their operations overseas.

An increasing number of pharmaceutical companies worldwide that are moving into biological drugs are expected to outsource the manufacturing of these products in Asia due to the pricing pressure in the biotechnology market. Pfizer, for example, has announced that it has plans to outsource about 30 per cent of its manufacturing, much of it in Asia. Hence, the Malaysian pharmaceutical companies, which have adopted and enforced the Good Manufacturing Practice (GMP) standards of the European Pharmaceutical Inspection Cooperation Scheme (PICS) are well-positioned to meet this new demand for contract manufacturing.

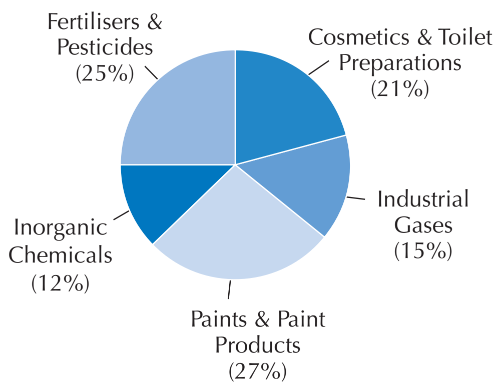
The growing potential of establishing Malaysia as a clinical trial hub should be further strengthened by the availability of good clinical infrastructure support, especially in the quality and speed of doing clinical research. The approval time for a proposal to conduct clinical trials has been reduced to six weeks from the previous three months. In addition, the Malaysian Government's support in the form of a RM90 million allocation for clinical research under the Ninth Malaysia Plan augurs well for the development of this sector.

Chemical Products

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

Currently, there are 165 companies in operation producing a wide range of chemical products which include fertilisers and pesticides, inorganic chemicals, paints and paint products, industrial gases and cosmetics and toilet preparations. Some of the major foreign-owned companies in this sub-sector are Air Products STB Sdn. Bhd., OMG Fidelity (M) Sdn. Bhd., ICI Paints (M) Sdn. Bhd., Malaysian Oxygen Berhad, and Johnson & Johnson Sdn Bhd. Among the major local companies are CCM Agriculture Sdn. Bhd., Ancom Crop Care Sdn. Bhd., Eng Kah Enterprise Sdn. Bhd. and See Sen Chemical Bhd.

Graph 52
Chemical Companies in Operation by Sub-Sector, 2007



Exports of chemical products for the period January to November 2007 amounted to RM10.4 billion compared with RM13.7 billion for the whole of 2006. The major products exported were ammonia and urea (RM1.2 billion), pigments, paint and varnishes (RM 665.7 billion) and, pesticides and herbicides (RM561.6 million). There was a marked increase in the exports of pesticides and herbicides; and ammonia and urea.

Projects Approved in 2007

A total of 26 projects with investments of RM1.1 billion were approved in 2007 compared with 43 projects (RM650.9 million) in 2006. Of the total, 19 were new projects (RM570.1 million) while the other seven were expansion/ diversification projects (RM526.1 million). Domestic investments amounted to RM588.7 million (54%) while foreign investments totalled RM507.5 million (46%). Malaysian-owned projects accounted for 15 projects, comprising 13 new projects (RM212.9 million) and two expansion/diversification projects (RM424.2 million).

The marked increase in investments in 2007 as compared with 2006 was due mainly to investments in the production of fertilisers and industrial gases. Eight projects were approved for the production of fertilisers (RM578.4 million) and three projects for the production of industrial gases (RM79.7 million). The other 15 projects (RM438.1 million) were approved for a wide range of chemical products including rare earth oxides and carbonates, air fragrances, liquid fabric care, detergent products, protective coatings, paints and varnishes, personal care products, bonding agents, repair mortar, skin care products, hair care products, perfume, powder detergent, thermoplastic road marking paints, copper oxide and nickle oxide.

The high percentage of approvals for production of fertilisers (31%) in 2007 is consistent with higher external demand brought about by increased agricultural activities in neighbouring ASEAN countries and also domestic usage by the agricultural sector. One of the projects approved was Petronas Fertilizer (Kedah) Sdn. Bhd., a Malaysian-owned company, which is undertaking the engineering design to expand its integrated ammonia/urea plant at Gurun, Kedah to increase the production of urea by 30 per cent.

Malaysia has been continuously receiving investments for industrial gases. In 2007, three expansion projects were approved for Kulim Industrial Gases, MOX Gases and Air Products. The development of the industrial gases sub-sector is supported by the overall growth of manufacturing activities such as food processing, steel manufacturing, chemical processing and water and sewage treatment.

The further development of the processed food sub-sector such as *Halal*-food and convenience foods has contributed to an increasing demand for the use of nitrogen gas and carbon dioxide as expendable refrigerants in the chilled and frozen food sub-sectors. Demand for hydrogen gas used in the hydrogenation of oils and fats to produce oleochemical products has also increased. There is potential for speciality gases like nitrous oxide and high purity oxygen for use in the expanding health services sector.

For the cosmetics sub-sector, a common set of regulations i.e. the ASEAN Harmonised Cosmetic Regulatory Scheme (AHCRS) has been put in place to remove technical barriers to exports by harmonising regulatory and technical requirements. This agreement will be effective on 1

January 2008. Under the agreement, a product registration approval in any of the 10 ASEAN countries would be mutually recognised by the other signatory countries. This will enable local manufacturers to have more market opportunities and gain entry into the ASEAN markets.

BIOTECHNOLOGY INDUSTRY

Biotechnology is a multidisciplinary field, expected to have significant implications on almost every aspect of our lives. Its applications include pharmaceuticals, agriculture, the environment, healthcare, waste management, forensics, conservation and various industrial applications.

The global biotechnology industry is currently estimated to be worth US$54 billion (RM187.5 billion) with the Asian biotech market valued at US$31 billion (RM107.6 billion) with a growth rate of 12 to 13 per cent. The world's 5,000 biotechnology firms are forecasted to make over US$1 trillion (RM3.5 trillion) in revenue by 2015.

Malaysia aims to become a regional biotechnology hub to get a slice of the lucrative market. The Malaysian Government is actively promoting biotechnology as one of the country's new growth areas, to boost the economy and create highly skilled jobs. The sector is expected to contribute 5 per cent to the gross national product by 2020.

Following the announcement of incentives for BioNexus Status Companies in September 2006, a total of 42 biotechnology companies have been awarded the BioNexus Status with proposed total investments of RM925.6 million. Of the 42 companies, 18 companies are involved in healthcare, 15 in agriculture, seven in industrial biotechnology and two in bioinformatics. Biotechnology companies awarded the Status are eligible for various fiscal incentives which include:

- 100 per cent income tax exemption for 10 years from the first year the company derives profit or Investment Tax Allowance of 100 per cent on the qualifying capital expenditure incurred within a period of five years;
- tax exemption on dividends distributed by the company, and;
- concessionary tax rate of 20 per cent on income from qualifying activities for another 10 years upon the expiry of the tax exemption period.

BioNexus Status companies are also eligible to apply for the following Commercialisation Grants from BiotechCorp:

- Seed Funding of up to RM2.5 million;
- R&D Matching Grant of up to RM1.0 million; and
- International Business Development Matching Grant of up to RM1.25 million.

To date, BiotechCorp has disbursed RM10 million (10%) to the BioNexus status companies.

To further accelerate the development of the biotechnology industry, the Government has formed the Malaysian Life Science Capital Fund (MLSCF) in 2006. MLSCF is a life sciences venture fund specialising in early stage investments in the areas of agriculture, industrial and healthcare biotechnology. This fund is co-managed by the Malaysian Technology Development Corporation Sdn Bhd (MTDC) and Burrill & Co. and currently has US$150 million (RM521 million) in committed capital. To date, MLSCF has invested US$21 million (RM72.9 million; 14 per cent) in seven biotech companies. These companies bring unique value to biofuels, bioprocessing and health care markets.

MLSCF plans to invest in four to five companies a year in Malaysia and has already received business proposals from 35 local companies. Besides that, MLSCF is also engaged in identifying technologies and developing business models for value creation from the global life science market and building a strong portfolio of Malaysian companies.

BiotechCorp has invested RM5 million in its global bioentrepreneurship programme with the California Institute for Quantitative Biomedical Research (QB3) to train bioentrepreneurs and biotechnology companies towards developing the country's human capital and cultivating successful ventures. QB3 is an association of University of California Berkeley, University of California Santa Cruz and University of California San Francisco. BiotechCorp entered into an agreement with QB3 in December 2006 to collaborate on research projects and to equip Malaysian scientists with the latest multidisciplinary tools towards excelling in biotechnology entrepreneurship. The partnership covered three aspects i.e. research and postgraduate training, post-doctoral training and bio-entrepreneurship programme.

BiotechCorp has also launched a mentoring/executive-in-residence (EIR) programme on 9 October 2007 to guide and coach entrepreneurs on managing business ventures in the biotechnology industry. These efforts are in line with the first phase out of the three phases outlined in the National Biotechnology Policy, i.e. capacity building for the period 2005 to 2010.

In addition, BiotechCorp also has a programme, namely technology acquisition programme in which it acquires platform technologies and places them in public research institutes while giving access to local companies to utilise and develop the technologies further. On 30 November 2007, BiotechCorp announced its first technology acquisition by acquiring a worldwide licence to a nanotechnology platform. A deal was made with Nanobiotix of France which has developed nanotechnology particles for cancer therapy.

Malaysia has been continuously participating for four consecutive years in the annual BIO conventions in the USA. The participation enables the delegates comprising local companies, representatives from Ministries, State and local Governments, Government agencies as well as universities and research institutes to gain knowledge, mainly on the latest findings and developments in the sector.

For the first time during BIO 2007 held in Boston on 7 -11 May 2007, eleven (11) memorandums of understanding (MoUs) were signed mainly for investment purposes, collaborations and technology transfer. Among the notable ones were the MoUs signed between:

- BiotechCorp and India's Manipal Education and Medical Group (MEMG), a conglomerate of education and healthcare institutions;

- the Federal Land Development Authority (Felda) and Twin Rivers Technologies, which is one of the largest and fastest growing oleochemical producers in North America; and

- Inno Biologics and Boehringer Ingelheim, one of the leading Contract Manufacturing Organisations (CMO) in Germany for access to Boehringer Ingelheim's comprehensive manufacturing technology platform for cell culture products.

Projects Approved in 2007

In 2007, a total of 35 companies were awarded the BioNexus Status with proposed total investments of RM565.2 million. Domestic investments amounted to RM487.0 million (86%) while foreign investments totalled RM78.2 million (14%). The foreign investments were mainly from India, Singapore, British Virgin Island and the USA. Among the type of products/activities approved were:

- Plant propagation through tissue culture;
- Animal breeding and reproduction technology;
- Biofertiliser and soil enhancer;
- Medical diagnostics and devices;
- Microbials and probiotics;
- Tissue and stem cell engineering;
- Contract research organisation; and
- Bioinformatics.

Among the significant projects approved were:

- Stempeutics Research Malaysia Sdn Bhd, a company focusing on the research and development of regenerative medicine using human stem cell technology, with a proposed investment of RM6.2 million. Stempeutics Malaysia is part of the Manipal Education and Medical Group of India;

- Malaysian Agri Hi-Tech Sdn Bhd, a company involved in R&D and commercialisation of microbial-based products for application in the agricultural sector and environmental care with an approved investment of RM7.8 million;

- Profound Vaccine Sdn Bhd, a company involved in the production and commercialisation of a spray-based intranasal vaccine against Pneumonia Pasteurellosis disease in sheep and goats (small ruminants) with an investment of RM2.8 million. The technology was developed by Universiti Putra Malaysia and Universiti Malaysia Terengganu (then known as Kolej Universiti Sains dan Teknologi Malaysia, KUSTEM); and

- GENERTI Biosystems Sdn Bhd, a company involved in design, development, fabrication and validation of molecular diagnostic kits for the screening and diagnosis of human genetic diseases that are expressed in blood with a proposed investment of RM10 million.

PETROLEUM PRODUCTS INCLUDING PETROCHEMICALS

The petroleum and petrochemical industry comprises petroleum products, natural gas and petrochemicals. To date, the industry has emerged as one of the leading manufacturing sub-sectors with total investments of RM56.9 billion. Domestic investments amounted to RM35.6 billion (62.6%) with Petronas as the major investor in the industry. Foreign investments were mainly from the USA and Japan with investments from these two countries accounting for 37.4 per cent of the total investments.

In 2007, output of refined petroleum products increased by 5.2 per cent compared with the previous year. Sales of refined petroleum products sub-sector increased by 1.9 per cent to RM71 billion.

During the period January to November 2007, Malaysia's total exports of petroleum products, natural gas and petrochemical reached RM63.8 billion, an increase of 6.6 per cent, compared with 2006. The main export markets were the People's Republic of China, ASEAN, the USA and Japan. Total imports for the same period in 2007 rose by 0.3 percent to RM38.9 billion over the previous year.

Petronas started the construction of its lubricant base oil plant in September 2006 with an additional investment of RM536 million. The plant, the first of its kind in Malaysia, is located within the Petronas Refinery Complex in Melaka. The plant is expected to be operational by the middle of 2008 with a capacity of 6,500 barrels per day or about 300,000 metric tonnes per annum (mtpa) of Group III base oil. The plant will use high-wax feedstock from Petronas refineries in Melaka and Kertih, Terengganu. The Group III base oil is a major component in the manufacture of top-tier energy conserving automotive and industrial lubricants.

The petroleum products sub-sector includes refinery products such as naphtha, liquefied petroleum gas, gasoline, kerosene, fuel oils, gas oils, jet oils, diesel, bitumen and lubricating oils. There are currently five refineries and a gas-to-liquid plant in operation with a total production capacity of 635,000 barrels of crude oil per day. Total investments in these projects amounted to RM6.9 billion of which 87 per cent is from domestic sources. The major investors were Petronas, Shell, Esso and Conoco.

Malaysia is currently the third largest producer of liquefied natural gas (LNG) in the world after Algeria and Indonesia. The Bintulu complex in Sarawak consists of three LNG plants with the supply of natural gas from the Central Luconia area which is in offshore Sarawak. The Bintulu Complex is the world's largest LNG production facility at a single location with a combined capacity of about 23 million mtpa. The entire production of LNG by MLNG Satu, Dua and Tiga is exported, mainly to Japan, South Korea and Taiwan. The Bintulu complex also produces 450,000 mtpa of liquefied petroleum gas, mainly for the export market.

There are 22 companies producing various types of lubricating oils. The domestic demand for lubricants is estimated to range between 250,000 to 300,000 mtpa. Petronas, Shell, and BP supply 70 per cent of domestic demand. Other companies involved in this sub-sector are mainly the SMEs. Total investments in this sub-sector amounted to RM1.1 billion of which 63 per cent is domestic investments. Base oil for the production of lubricating oils will be available in the country by the middle of 2008.

The developments in the Malaysian petrochemical industry are related to the identification and exploration of new sources of feedstock supply and plant expansion. Petronas has implemented its three-phase Peninsular Gas Utilisation (PGU) project which provides the necessary infrastructure for the development of the petrochemical industry. The system also comprises six gas processing plants (GPPs) with a combined capacity of 2,000 million standard cubic feet of gas per day, producing methane (sales gas), ethane, propane, butane and condensate. Methane (sales gas) is used for power generation, while ethane, propane, butane and condensate are feedstocks for the petrochemical industry.

Malaysia has entered into partnerships with other ASEAN members to complement its existing gas reserves and to ensure further security of gas supply. Petronas, through an agreement with PT Pertamina, the Indonesian state-owned oil and gas utility, has obtained 250 million standard cubic feet per day with a total volume of 1.5 trillion standard cubic feet over a 20 year period from the West Natuna field in Indonesia. A total of 390 million standard cubic feet per day of gas is also sourced from the Malaysia-Thailand Joint Development Area.

The availability of hydrocarbon feedstocks from oil and gas has led to the development of the petrochemical industry. The two ethane crackers in Kertih, Terengganu provide feedstock for the polyethylene plants, acetic acid plant and the ethylene derivatives complex. The aromatic plant in Kertih, Terengganu for the production of paraxylene and benzene uses condensate as the feedstock.

The propane dehydrogenation plant in Gebeng, which uses propane from the GPPs provides feedstock to the polypropylene and MTBE plants and also to the BASF Petronas integrated polypropylene derivatives complex for the production of acrylics, oxo alcohols, butanediol, polyacrylates, plasticizers and tetrahydrofurane.

Presently, there are 41 companies in operation with a combined capacity of 12.8 million metric tonnes per annum with a total investment of RM32 billion. The main domestic investor in the petrochemical industry is Petronas. The USA is the largest source of foreign investment contributing 40 per cent of the total foreign investments in the petrochemical industry, followed by Germany (22.8%) and Japan (14%). The major investors are Dow Chemicals, BP Amoco, Shell Gas B.V., BASF, Eastman Chemicals, Toray, Mitsubishi, Idemitsu, Polyplastics, Kaneka, Dairen and Titan Petchem.

Titan Petchem has completed the construction of a 100,000 mtpa butadiene plant and 115,000 mtpa propylene plant in Pasir Gudang, Johor with an additional investment of RM547 million. The propylene expansion project involves the establishment of a plant based on methathesis olefins conversion technology. It is expected to increase the propylene capacity by 135,000 mtpa. This plant is expected to be operational by early 2008.

Over the last decade, Malaysia has established integrated petrochemical zones which provide centralised utilities, efficient storage services and comprehensive transportation network that helps reduce capital and operational costs for petrochemical plants. The development of these zones with clusters of petrochemical plants has resulted in a value chain that ensures the progressive development of downstream petrochemical activities. Three major

Table 5
Products Manufactured in the Three Petrochemical Zones

Zone	Core Products	Derivatives and Products
Kertih, Terengganu	Ethylene, propylene, para-xylene, benzene and syngas	Ammonia, acetic acid, polyethylene (PE), ethanolamines, ethoxylates, glycol ethers, butanol, butyl acetate, ethylene oxide (EO), ethylene glycol (EG), vinyl chloride monomer (VCM) and polyvinyl chloride (PVC)
Gebeng, Pahang	Propylene and syngas	Polypropylene (PP), acrylic acid and esters, butyl acetate, oxo-alcohol, pthalic anyhydride and plasticizers, butanediol, tetrahydrofurane, gamma-butyrolactone, polyester copolymers (PETG), purified terephthalic acid (PTA), dispersion polyvinyl chloride (DPVC), methyl methacrylate coplymers, methyl tertiary butyl ether (MTBE) and polyacetals, polybutylene terephthalate (PBT)
Pasir Gudang - Tanjung Langsat, Johor	Ethylene, propylene, benzene, toluene, xylene and butadiene	Polyethylene (PE), Polypropylene (PP), ethyl benzene (EB), styrene monomer (SM), polystyrene (PS), expandable polystyrene (EPS), ethylene vinyl acetate (EVA) and epoxy resin

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 feedstock for downstream products.

Petronas has also made significant contributions to the development of infrastructure, utilities and services dedicated for the industry. This has created a conducive environment for the petroleum and petrochemical industry particularly in Kertih, Terengganu and Gebeng, Pahang.

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

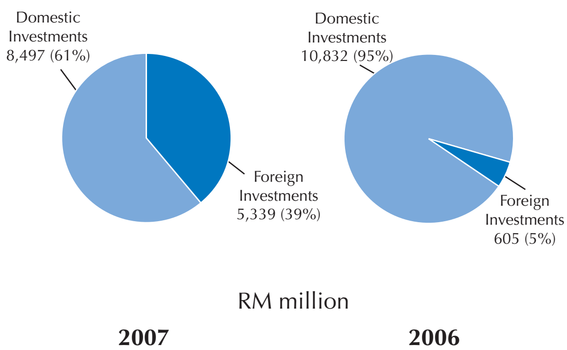
Domestic production of polymers and plastic resins has assisted in the development of the plastic industry. At least 60 per cent of the domestic consumption of plastic resins is sourced locally. The plastic industry is one of the important sectors catering mainly to the demand from the household, E&E, automotive, and construction industries. The polymer/plastic resin compounders, converters and fabricators provide the downstream linkages to the petrochemical industry.

The development of specialty chemicals for use in other industries such as food, pharmaceutical, E&E, automotive and machinery industries would enhance the value-added contribution of the petrochemical industry and also develop synergies with the oleochemical industry.

Projects Approved in 2007

In 2007, a total of 17 projects were approved with total investments of RM13.8 billion compared with 10 projects with total investments of RM11.4 billion in 2006. Of these, 12 were new projects involving investments of RM752 million and five were expansion/diversification projects with investments of RM13.1 billion. Domestic investments amounted to RM8.5 billion while foreign investments were valued at RM5.3 billion. The approved projects are expected to generate employment for 1,050 persons. The high level of investment is due to the expansion by two crude oil refining plants.

Graph 53
Investments in Projects Approved in the Petroleum Products including Petrochemical Industry, 2007 and 2006



The major projects approved were:

- An expansion/diversification project by SKS Refinery Sdn. Bhd. in Bukit Kayu Hitam, Kedah with an additional investment of RM9.9 billion for the expansion of production capacity of LPG, gasoline, kerosene and diesel and production of additional products, namely coke and sulphur. This project will be using imported crude and the entire production will be exported;

- An expansion project by a Malaysian–owned company with an additional investment of RM2.4 billion at its existing plant in Tangga Batu, Melaka, to expand its refinery and production of liquefied petroleum gas, chemical naphtha, gasoline, dual purpose kerosene/jet fuel, diesel, fuel oil, sulphur, lube base stock, asphalt and coke;

- A new project by Spolchemie (M) Sdn. Bhd. with an investment of RM192.5 million to produce epichlorohydrin in Kertih, Terengganu. This project which involves investment from the Netherlands will further increase the linkages between the petrochemical industry and the oleochemical industry. This project will be the first world-scale project to commercially produce epichlorohydrin using glycerine from palm oil. Epichlorohydrin is used in the production of epoxy resin. This project will be one of the pioneers in the usage of palm oil from renewable sources for the production of engineering plastics;

- A new project by a foreign-owned company with an investment of RM301.6 million to produce synthetic latex (XNBR and XSBR) with a production capacity of more than 100,000 mtpa. The project will also involve the setting up of a R&D facility in Pasir Gudang, Johor;

- An expansion project by a foreign-owned company with an additional investment of RM688 million for the production of a new grade of *Low Volatile Organic Content* (VOC) Polyacetal Resins/Compounds with a capacity of 60,000 mtpa in Gebeng, Pahang. The technology for this project will be sourced from Japan; and

- A new project by a Malaysian-owned company with an investment of RM52 million to produce urea formaldehydye, melamine formaldehyde and phenol formaldehyde in Bintulu, Sarawak.

The global development of the petrochemical industry is undergoing significant changes. The Middle East countries have the advantage of having readily accessible feedstocks at competitive prices. India and People's Republic of China, with their vibrant domestic market demand, continue to attract major players.

According to a report by Nexant, global supply of petrochemical feedstocks such as ethylene and propylene is expected to grow until 2012. Global ethylene capacity is expected to grow from 121 million mtpa in 2006 to 168 million mtpa in 2012. Propylene capacity is expected to grow from 78 million mtpa in 2006 to 109 million mtpa in 2012.

The Malaysian petrochemical industry is currently benefiting from a favourable cycle and remains a key contributor to the nation's manufacturing sector. The IMP3 has highlighted the need for additional feedstocks in order for the petrochemical industry to be developed in Malaysia. These additional feedstocks will provide a base for broadening the range of petrochemical products. The promoted areas within the industry include alpha-olefin, fatty alcohol, adipic acid/caprolactam, methyl methacrylate, and toluene diamine.

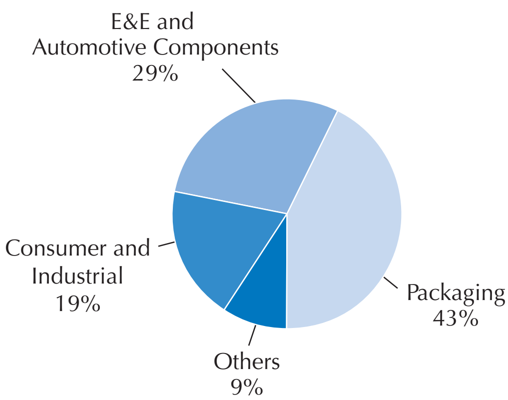
Petrochemical manufacturers based in Malaysia will benefit from the ASEAN Free Trade Agreement (AFTA) which will provide access to a larger ASEAN and Asia-Pacific market. In addition, market access for petrochemical products will be further facilitated through the various regional and bilateral Free Trade Agreements (FTAs). The FTAs are expected to strengthen economic and industrial cooperation, in addition to creating favourable conditions for bilateral trade and investment. The agreements that have been concluded are Japan–Malaysia Economic Cooperation Partnership (December, 2005), ASEAN-China FTA (November 2005), ASEAN-Korea FTA (August 2006) and Malaysia-Pakistan Closer Economic Partnership Agreement (November 2007). Other similar agreements are being discussed with Australia, New Zealand, the USA, India and Chile.

Strong regional demand, especially from China, together with a tight global demand-supply situation and export constraints from the Middle East, have led to an upturn in petrochemical markets and prices. Rising global oil prices have resulted in unstable feedstock prices and this has led to fluctuating prices and demand for petrochemical products in the domestic market. While 2007 could be considered a successful year for investment in the petroleum products including petrochemical industry, there are still challenges ahead. In view of increasing global competition and market fluctuations, Malaysia needs to continue to improve its business environment in order to sustain the high level of investments in the petrochemical industry.

PLASTIC PRODUCTS

The plastic products industry can be divided into four sub-sectors, namely plastic packaging, E&E and automotive components, consumer and industrial, and others. The plastic packaging sub-

Graph 54
Sub-Sectors of Plastic Products, 2007

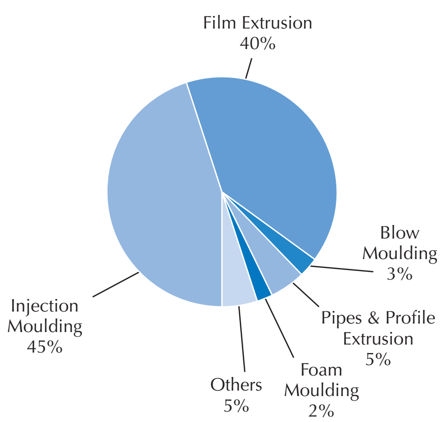


Source: Malaysian Plastics Manufacturers Association sector, both flexible and rigid (including bags, films, bottles and containers), remains the largest sub-sector in the plastic industry.

The main production processes used in the plastic products industry are injection moulding, film extrusion, blow moulding, pipes and profiles extrusion, foam moulding and others.

According to the Malaysian Plastics Manufacturers Association (MPMA), the plastic products industry recorded a total sales turnover of RM16 billion in 2007, an increase of 3 per cent compared with the RM15.6 billion achieved in 2006. This was mainly due to the increase in demand for E&E goods from the EU and the increase in the production of plastic packaging. Presently, there are more than 1,550 plastic products manufacturers in the country with a total of about 99,100 employees. Of these, about 930 (60%) are SMIs and 840 (54%) of the companies are majority Malaysian-owned.

Graph 55
Profile of the Plastic Products Industry by Manufacturing Process, 2007



Source: Malaysian Plastics Manufacturers Association

Exports of plastic products amounted to RM7.7 billion for the period January-November 2007 compared with RM7.9 billion in 2006. The main products exported were plastic bags, bottles and containers (40%), films and sheets (36%) and other plastic articles excluding household wares (24%). Export destinations included EU, People's Republic of China, Hong Kong, Singapore, Japan and Thailand. The bulk of the increase in exports was from plastic bags for the EU market. However, the export of plastic bags to the EU market is not expected to improve further as some producers from People's Republic of China are still able to compete in the EU market despite the imposition of anti-dumping duties of about 5 per cent on plastic bags from People's Republic of China. In addition, environmental issues will reduce the demand for plastic bags in the EU.

Imports of plastic products amounted to RM5.5 billion for the period January-November 2007 compared with RM6.5 billion in 2006. Major sources of imports were Japan, People's Republic of China, Singapore and the USA. The main items imported were articles of plastic (44 %) and plates, sheets, films and foils (38%).

Malaysia's petrochemical sector has also contributed significantly to the development of local downstream plastic processing activities. Malaysia provides a steady supply of feedstock materials for the plastic industry with world-scale petrochemical (resin) plants producing the following products:

- Low density polyethylene (LDPE);
- Linear low density polyethylene (LLDPE);
- High density polyethylene (HDPE);
- Polypropylene (PP);
- Polyvinylchloride (PVC);
- Polystyrene (PS);
- Expandable polystyrene (EPS);
- General purpose polystyrene (GPPS);
- High impact polystyrene (HIPS);
- Polyvinylchloride (PVC);
- Acrylonitrile butadiene styrene (ABS);
- Polyacetyl (PA);
- Polyester copolymers;
- Styrene acrylonitrile (SAN); and
- Polybutylene terephthalate (PBT).

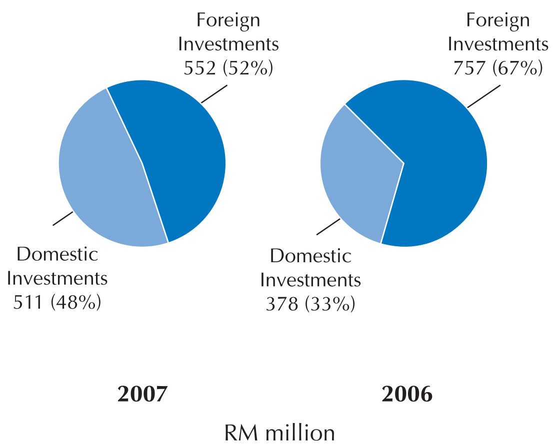
However, other engineering plastics such as polyamides (nylons) and polycarbonates (PC) continue to be imported. The engineering plastics are mainly used for the production of parts and components for the electrical and electronics industries, automotive parts and medical equipment. In flexible packaging, more bio-, photo- or chemical-degradable plastics are being introduced as the industry becomes more conscious of the need to be environment-friendly.

Total resin consumption was estimated at 1.9 million tonnes in 2007 compared with 1.85 million tonnes in 2006. The increase in resin prices had maintained the strong interest in recycling activities. This was also in line with the greater environmental awareness shown by both the plastic products manufacturers and consumers.

Projects Approved in 2007

A total of 91 projects with investments of RM1.1 billion were approved in 2007, of which 49 were new projects with investments of RM699.3 million, while 42 were expansion/diversification projects with investments of RM363.6 million. Foreign investments amounted to RM552.2 million representing 52 per cent of total investments, while the balance of RM510.7 million were domestic investments. Of the total, 38 projects (42%) were Malaysian-owned. Projects approved in 2007 are expected to generate employment opportunities for 4,101 persons. The industry has moved away from labour-intensive to more capital-intensive operations as reflected by the capital investment per employee (CIPE) ratio which increased from RM149,266 per employee in 2006 to RM259,164 per employee in 2007.

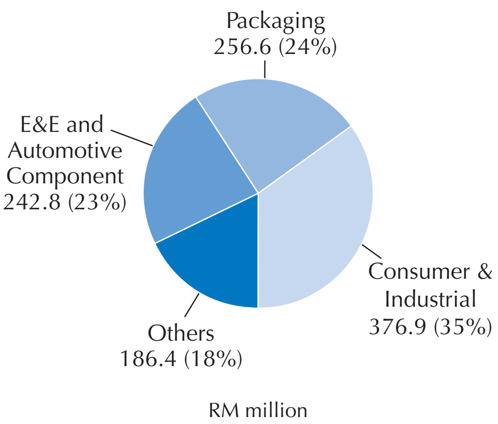
Graph 56
Investments in Projects Approved in the Plastic Products Industry, 2007 and 2006



The consumer and industrial sub-sector was the leading sub-sector in 2007 with 31 projects approved with investments of RM376.9 million. Of these, 19 were new projects (RM257.7 million) and 12 were for expansion/diversification projects (RM119.2 million).

A total of 20 projects were approved in the plastic packaging sub-sector (RM256.6 million). Of these, 10 were new projects (RM209.7 million) while the remaining 10 projects were for expansion/ diversification (RM46.9 million). The majority of these projects were for the manufacture of flexible films, sheets and bags, and blow moulding bottles and containers.

Graph 57
Investments in Projects Approved in the Plastic Products Industryby Sub-Sector, 2007



For the E&E and automotive component sub-sector, the total investment was RM242.8 million (23 projects). Of these, 8 were new projects (RM68 million) and 15 projects were for expansion/ diversification (RM174.8 million). The major projects approved involved existing foreign-owned companies with additional investments of RM129.4 million to expand their production.

Major projects approved were:

- An expansion/diversification project by Meiban Technologies (Malaysia) Sdn. Bhd., an existing company from Singapore, with an additional investment of RM109.8 million to manufacture plastic injection moulded components and sub-assemblies at two new locations in Johor;

- Varia Permai Sdn. Bhd., a Malaysian-owned company with an investment of RM72 million to produce plastic foam sheets and bags. The products are entirely for export mainly to the USA and Japan;

- Visko Industries Sdn. Bhd., a new joint-venture project with an investment of RM68.9 million for the manufacture of self adhesive tapes. About 90 per cent of the production will be exported mainly to ASEAN countries, India and Pakistan while the remaining 10 per cent will be for the domestic market;

- A new project by a foreign company from Canada with an investment of RM52.7 million to manufacture polyethylene geomembrane. Geomembrane is used to control fluid migration in man-made projects;

- A new project by Specialized Technology Resources Inc. to manufacture solar cells encapsulant which is used in the production of solar panel/solar cells. The project involves an investment of RM38.1 million; and

- An expansion/diversification project by an existing company with an additional investment of RM22.1 million to manufacture polycarbonate films and sheets for use in LCD panels.

The trend of investment for the plastic products sector is towards higher value-added and technical parts and products for the E&E industries including LCD films and for engineering uses such as geomembrane as well as materials for the manufacture of solar cells.

With increasing competition from lower cost producing countries, the industry is expected to move up the value chain and strengthen its innovation capabilities in the production of high technology and specialised plastic products. The contribution by the plastic packaging sub-sector is expected to decrease as it faces increasing competition in the export market from lower cost countries like People's Republic of China. Environmental issues in the export market are expected to encourage the use of recyclable as well as degradable materials in the packaging industry. Thus, the Malaysian plastic packaging producers would have to switch to these materials in order to meet the changing market demand.

The Malaysian automotive plastic parts industry is expected to grow in the near future. This is based on positive automotive sales and the introduction of new models by the local car producers.

The plastic products industry has a broad and rapidly growing range of industrial and consumer applications. Nevertheless, the industry faces a number of major potential challenges:

- Resin prices are expected to record further increases in 2008. Operating margins have been severely eroded and will affect the viability of the operations;

- External demand may slow down as the economies of the USA and Europe are expected to slow down in 2008. However, the growth in Asia is expected to stay strong while the Malaysian economy is expected to improve further in 2008;

- More local companies will invest or move their operations overseas to remain competitive. Cross border investments will provide new growth opportunities for Malaysian companies;

- Restriction on use of plastic packaging and encouraging trend in recycling/ reuse due to increased public concern regarding the environment; and

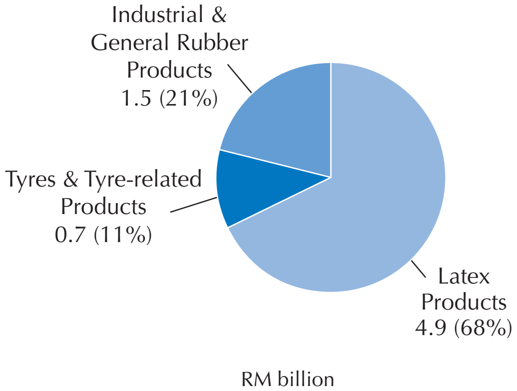
- The ability to improve technology and skill requirements while maintaining cost competitiveness.

RUBBER PRODUCTS

The major sub-sectors under the rubber products industry are latex products, tyres and tyre-related products and industrial and general rubber products. Currently, there are 510 manufacturers in operation in this industry, employing more than 68,700 persons.

In 2007, the production of natural rubber was estimated at 1.2 million tonnes, with the smallholding sector contributing 95 per cent to total production while the estate sector contributed the remaining 5 per cent. About 573,164 tonnes of natural rubber were imported for domestic consumption in 2007, mainly from ASEAN Countries (97%). The main type of rubber imported was latex concentrate which accounted for 61 per cent of total imports. The rubber products industry also consumed 120,826 tonnes (22%) of synthetic rubber.

Graph 58
Exports of Rubber Products by Sub-Sector, January-November 2007

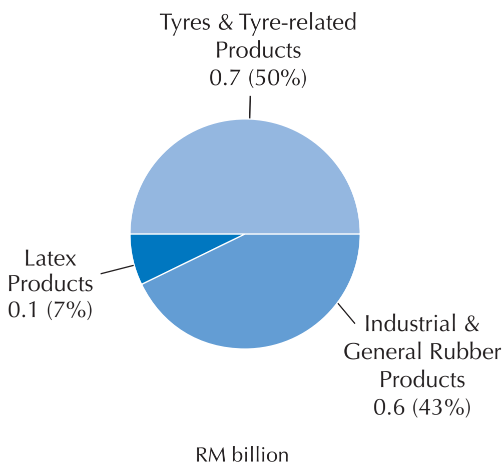


Source: Department of Statistics

The rubber products industry contributed 1.7 per cent of Malaysia's total export earnings. The total revenue from the export of rubber products amounted to RM7.1 billion in January-November 2007, which is 48 per cent of the total turnover of the rubber products industry. The export of rubber products registered a growth of 11 per cent for January – November 2007. The major export destinations were Europe (RM3.1 billion), the USA (RM2.2 billion) and ASEAN (RM0.8 billion).

Imports of rubber products for January–November 2007 amounted to RM1.5 billion compared with RM1.6 billion for 2006. Imports of major rubber products comprised tyre and tyre-related products (50%), industrial and general rubber products (43%) and latex products (7%).

Graph 59
Imports of Rubber Products by Sub-Sector, January-November 2007



Source: Department of Statistics

The largest sub-sector in the rubber products industry is the latex products sub-sector. Currently, there are 163 companies in operation in this sub-sector. Malaysia is one of the major producers and exporters of catheters, latex thread and medical gloves. The latex products sub-sector was the largest contributor to the export earnings of rubber products amounting to RM4.9 billion million (68%) for the period January – November 2007.

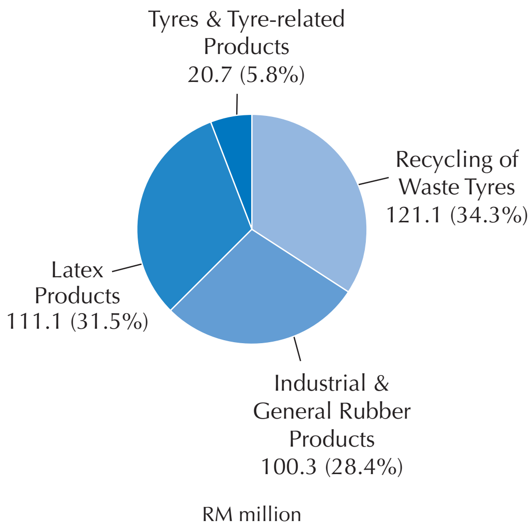
In the industrial and general rubber products sub-sector, there are 194 companies currently in operation. This sub-sector is producing a wide range of rubber products such as mountings, belting, hoses, tubing, seals and sheeting for the automotive, E&E, M&E and construction industries. For the period January – November 2007, the exports earnings for this sub-sector amounted to RM1.5 billion.

There are currently 126 companies in the tyres and tyre-related products sub-sector comprising nine tyre producers while the remaining companies produce retreads, tyre treads for retreading, valves and other accessories. There are three major tyre producers producing passenger car tyres, commercial vehicle tyres and earthmover tyres, and six manufacturing other types of tyres. Production of rubber tyres and tubes increased by 8.5 per cent in 2007 largely due to the increase in demand from the domestic and regional automotive sector. For the period January – November 2007, this sub-sector contributed RM781.8 milion to the country's total export earnings.

Projects Approved In 2007

In 2007, a total of 23 projects with investments of RM353.2 million were approved in the rubber products industry, compared with 23 projects with investments of RM562 million in 2006. Of the 23 projects, 17 were new projects (RM312.5 million) and six were expansion/diversification projects (RM40.7 million).

Graph 60
Investments in Projects Approved in the Rubber Products Industry by Sub-Sector, 2007



Projects approved in 2007 involved domestic investments of RM173.9 million (49%) and foreign investments of RM179.3 million (51%). A total of 12 projects approved (RM116.8 million) were Malaysian-owned companies while two projects (RM49 million) were joint-ventures with Malaysian majority.

Investments in 2007 were mainly in latex products (RM111.1 million), recycling of waste tyres into rubber crumb, steel tubes, fuel oil and fibres (RM121.1 million), industrial and general rubber products (RM100.3 million), and tyres and tyre-related products (RM20.7 million) industries.

A total of four projects were approved in the latex products sector, of which two were new projects (RM107.2 million) and two were expansion/diversification projects (RM3.9 million). Domestic investments amounted to RM0.8 million (4%), while foreign investments totalled RM110.3 million (96%).

Eight new projects with investments of RM121.1 million were approved to undertake the activity of recycling of waste tyres into rubber crumb, steel wire, fuel oil and fibre. Of these, RM117.5 million (97%) were domestic investments and RM3.6 million (3%) were foreign investments.

A total of 10 projects with investments of RM100.3 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 the automotive industry, industrial hoses, anti-vibration dampers, tubes and seals. Domestic investments were valued at RM49.5 million (49.4%), while foreign investments totalled RM50.8 million (50.6%). Seven were new projects (RM84.3 million), while three were expansion/diversification projects (RM16 million).

The major projects approved were:

- A new project by Dunlop Latex Foam (Malaysia) Sdn Bhd, a foreign owned company, to produce talalay latex foam products with a total investment of RM106.5 million. The company is one of only three companies in the world that manufacture latex foam products in accordance with the 'talalay' process which produces superior foam products. The project will be located in Shah Alam, Selangor;

- A new project by Euroma Rubber Industries Sdn. Bhd. to produce rubber compound with a total investment of RM 34.8 million. The company plans to export 100 per cent of its products. The project will be located in Kulim, Kedah;

- A new project by Nissohatsu Elastomer (M) Sdn. Bhd to produce engineering rubber products such as bridge bearings and floor joints, rubber compounds and rubber moulded products. Total investment in this project was RM6.5 million. The project will be located at Pasir Gudang, Johor and Klang, Selangor; and

- An expansion/diversification project by Continental Sime Tyre AS Sdn. Bhd. to produce calendered textile with an additional investment of RM20.7 million. This product is one of the components needed to produce tyres. The project will be located in Alor Setar, Kedah.

Malaysia's rubber products industry will continue to expand rapidly and provide an opportunity for the development of the synthetic rubber sector. Demand for nitrile gloves has been growing as it is an alternative for users who are sensitive to latex proteins. This will encourage greater production of nitrile rubber latex in the country.

R&D is important for the further development of the Malaysian rubber products industry. It results in improvements in the quality of rubber products as well as the competitiveness of Malaysian rubber products in the international market. Malaysia's investments in R&D on rubber products is spearheaded by the Malaysian Rubber Board. The Third Industrial Master Plan has highlighted that more efforts in R&D will need to be undertaken in new product development and downstream activities especially in the production of high value-added rubber products such as for engineering, construction and marine applications. A new area would include R&D in the extraction of biochemical products from latex using biotechnology.

Malaysia is currently the leading producer and exporter of latex products. There is a need to further strengthen and enhance Malaysia's position by undertaking promotional activities of Malaysian brand names for latex products. This will involve building and safeguarding Malaysia's image as a supplier of quality and reliable products. The Standard Malaysia Glove (SMG) should be promoted to increase its recognition and acceptance as a quality brand internationally. Manufacturers in the latex products sub-sector should be encouraged to obtain the product certification under the SMG scheme. Currently, there are 33 companies producing rubber gloves that have been certified under the SMG scheme.

Emerging economies like China and India pose a challenge to the Malaysian rubber products industry as they are low cost producers. Imports from China and India for the period January – November 2007 increased by 15 per cent and 36 per cent respectively. However, Malaysian rubber manufacturers have also benefited from the ASEAN-China Free Trade Agreement as they can gain market access to China. Exports from Malaysia to China, for the period January-November 2007 increased by 17 per cent compared with 2006. Malaysian rubber products manufacturers have to maintain the quality of their products, enhance productivity and promote wider application of ICT in their business to compete effectively in the global market.

WOOD AND WOOD PRODUCTS AND FURNITURE

The wood-based industry comprises two sub-categories namely primary and secondary wood processing. Primary wood processsing utilises logs as its raw material such as sawntimber and veneer.

Secondary wood processing turns primary products and other solid wastes such as small branches, off-cuts, edging or slabs, chippings and sawdust into downstream value-added products.

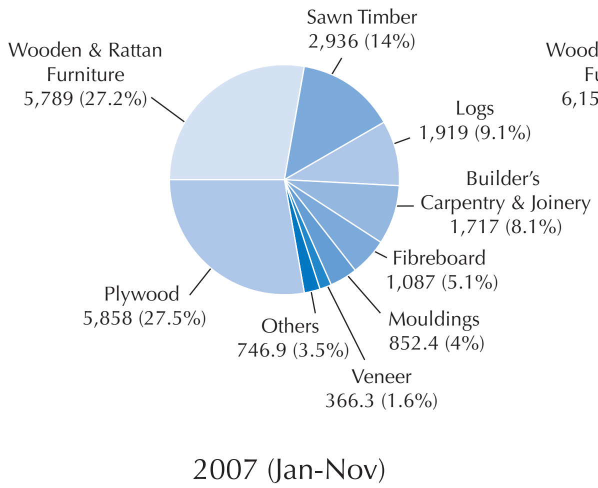
Over the years, the industry has developed from a primary processing industry to a more advanced and technology driven industry producing a significant number of downstream value-added products. Products manufactured include furniture, mouldings and builders' joinery and carpentry (BJC) as well as engineered wood products such as fibreboard/particleboard and chipboard.

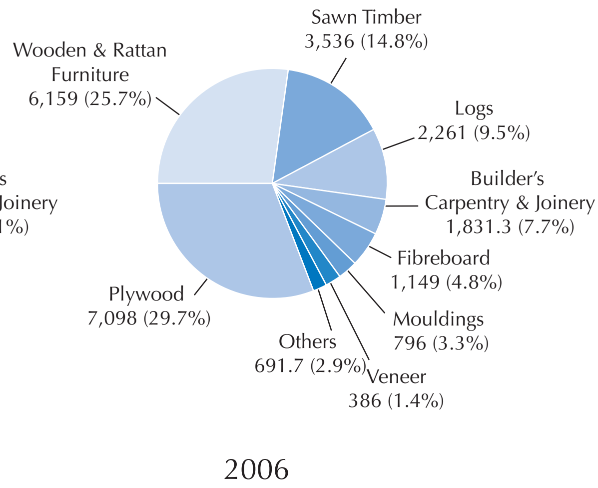
Exports of wood-based products amounted to RM21.3 billion in 2007 (January-November) compared with RM23.9 billion in 2006. The major products exported in 2007 were plywood (RM5.9 billion), wooden furniture (RM5.8 billion), sawntimber (RM2.9 billion), BJC (RM1.7 billion) and fibreboard (RM1.1 billion).

It is estimated that more than 80 per cent of the wood-based (including furniture) products companies are SMEs. The industry is predominantly Malaysian-owned and to date more than 4,100 wood processing mills are in operation.

In 2006, the furniture industry was the second largest exporter in the wood-based industry (after plywood) and maintained its ninth position among the world's top furniture exporting countries. This achievement has raised Malaysia's profile as one of the leaders in the global furniture industry. Malaysia has diversifed its export markets for furniture and currently exports to more than 160 countries. The USA, UK, Japan, Australia and Singapore remained the main export destinations due to the popularity of light coloured rubberwood among developed countries. Besides these traditional markets, Malaysian furniture has also gained access to the markets in New Zealand, South America, Middle East, Africa and Russia.

Graph 61
Exports of Major Timber Products, 2007 and 2006





RM million

Source: Department of Statistics

Currently, about 85 per cent of wooden furniture is made from rubberwood while the remaining 15 per cent is made from a combination of other wood and reconstituted panel products such as MDF and particleboard. Garden/outdoor furniture from tropical hardwood is mainly for the European and Australian markets. The solid tropical wood species used are known for their durability under different climatic conditions.

The production of sawntimber, veneer, plywood and other veneered panel products are concentrated in Sabah and Sarawak where the mills utilise tropical hardwood as their raw materials. The downstream processing mills such as mouldings, BJC, fibreboard, as well as furniture and furniture components are mainly located in Peninsular Malaysia. These mills mainly utilise rubber wood which are sourced from plantations.

Table 6
Number of Major Wood-based Processing Mills in Malaysia in 2006

	Pen. Malaysia	Sabah	Sarawak	Total
Total	**2,711**	**688**	**732**	**4,131**
Sawmills	455	174	193	822
Plywood/Veneer	33	67	48	148
Mouldings	68	139	27	234
Furniture, Joinery & Other Woodworkings	1,798	200	397	2,395
Laminated Board	34	n.a.	12	46
Particleboard / Chipboard	12	3	1	16
Medium Density Fibreboard (MDF)	9	1	3	14
Others*	302	103	51	456

* *Others including woodchips, parquet, prefabricated house, kiln drying (KD) and wood preservations*

Source: Ministry of Plantation Industries and Commodities

In 2005, the production of rubberwood sawntimber in Peninsular Malaysia increased to 251,790 cubic metres from 49,929 cubic metres in 1995. However, in 2006, the production declined to 63,743 cubic meters due to the shortage of supply of rubber trees for harvesting and limited areas for replanting activity. To ensure adequate supply of rubberwood for the wood-based industry and for further production of value-added products, the export of rubberwood sawntimber was banned effective 8 June 2005.

To encourage reforestration, the Forest Plantation Development Sdn. Bhd. (FPDSB) has to date, approved soft loans worth RM80.5 million to five companies to undertake forest plantation activity with a total area of 11,600 hectares. Among the species planted are rubberwood latex timber clone for Peninsular Malaysia and Acacia Mangium for Sarawak.

As part of the Ninth Malaysia Plan (2006-2010), the Government has begun to develop a Material City in Sungai Buloh, Selangor. The Material City will serve as a “one stop centre” for wood-based and furniture manufacturers to source raw materials and components. The objectives of developing the Material City are to strengthen the existing furniture industry, ensure that wood-based products remain competitive globally and to facilitate the supply and distribution activities of the wood-based industry. The other locations proposed for the Material City are in Sabah and Sawarak.

In the panel products sub-sector, plywood, fibreboard and particleboard/

chipboard remained significant contributors to the total exports earnings of timber products with total combined exports of RM7.3 billion (37.6% of total exports) for the period January to November 2007. Major export destinations were Japan, Republic of Korea and the USA.

The plywood sector maintained its position as the largest export earner, accounting for 30.2 per cent of total export earnings of timber-based products for the period January to November 2007. Exports of plywood amounted to RM5.9 billion in 2007 (January–November) compared with RM7.1 billion in 2006. The decline was due to the weakening of the construction and housing activities in the USA and Japan. In 2007, there were 148 plywood mills in operation, mainly in Sarawak and Sabah. The industry has undergone technology changes with some mills having upgraded their processing machinery capable of slicing smaller sizes of logs and are able to process a wide variety of log species.

Malaysia is the world's largest exporter of tropical plywood and the second largest exporter of plywood after the People's Republic of China. Japan remained as the largest export destination, accounting for more than half of Malaysia's exports (53.8%), followed by Republic of Korea and the USA. As a major tropical timber producing country, Malaysia faces stiff competition from other producers of softwoods and temperate hardwoods.

The panel products sub-sector has diversified into the production of high value-added reconstituted panel products such as particleboard/chipboard and medium density fibreboard (MDF) to maximise the utilisation of wood resources. The utilisation of sawlogs is expected to increase from 72.4 per cent in 2005 to 75.7 per cent by 2010. The reconstituted panels have been able to replace solid wood and plywood, particularly, for the manufacture of furniture.

Particleboard is the largest product category within the industrial wooden panels while MDF is the fastest growing product. Currently, there are 16 companies in operation and most of the products are for the export market, with UAE, Japan, Viet Nam and People's Republic of China as the main export destinations. Exports of reconstituted panel products amounted to RM1.4 billion in 2007 (January-November).

Exports of MDF totalled RM1.1 billion in 2007 (January-November) compared with from RM1.12 billion in 2006. Currently, Malaysia is the world's third largest exporter of MDF after Germany and France. The main markets for Malaysian MDF are UAE, Japan, Viet Nam, People's Republic of China and Indonesia. Currently, there are 14 MDF companies in the country, with nine located in Peninsular Malaysia, three in Sarawak and two in Sabah.

The non-structural products sub-sector has also diversified into structural engineered products such as glue laminated lumber (Glulam), oriented strand board (OSB), structural composite materials and laminated veneer lumber (LVL) to meet the demand for structural and industrial applications. These products will increase the utilisation of wood waste and serve as an alternative to plywood or solid sawntimber for the construction industry.

The production of logs is expected to decline at an average rate of 1.6 per cent per annum during the period 2006-2010, from 21.3 million metric tonnes to 19.5 million metric tonnes. In view of the diminishing supply of logs and the abundant supply of agricultural waste such as palm biomass (30 million tonnes per year), the industry has also diversified into the manufacture of high value-added reconstituted composite products such as fibre-reinforced polymer composites (FRPC). Besides palm biomass, FRPC can be produced from other sources of fibres including kenaf, bamboo and agricultural wastes (such as rice husk and coconut trunk). These products can be produced in the form of board/profile suitable for applications in industrial, construction, automotive and furniture industries.

Wood mouldings and BJC is another major sub-sector. BJC products include architectural mouldings (panelling, skirtings, crowns and chair rails), doors, windows and its accessories, wooden floorings and wooden railings. Exports of mouldings increased from RM796 million in 2006 to RM852 million in 2007 (January-November). Exports of BJC amounted to RM1.7 billion in 2007 (January-November) compared with RM1.8 billion in 2006. Major BJC products exported were wooden floorings and wooden doors (RM662 million) accounting for two third of total exports of BJC.

There are about 2,300 Malaysian furniture companies mainly located in the West Coast of Peninsular Malaysia such as in Johor, Melaka and Selangor. The Malaysian furniture industry is export-oriented and generates a high degree of foreign exchange earnings for the country. The rapid growth of the Malaysian furniture industry since 1990 can be attributed to the development of OEM (Original Equipment Manufacturing) market where local manufacturers serve as contract manufacturers to the overseas buyers with specific designs provided.

With the stiff competition from lower cost producers such as People's Republic of China and Viet Nam, Malaysian furniture companies need to diversify from being OEMs to own brand manufacturers (OBM). Furniture manufacturers will also need to produce innovative products with greater emphasis on designing, finishing and marketing of higher quality products for the niche market. Furniture manufacturers have to combine the use of various materials to create designs which are not only aesthetic but also functional.

In line with Malaysia's commitment towards sustainable forest management, the Malaysian Timber Certification Council (MTCC) continues to assume an important role in the national timber certification scheme. The scheme [Malaysian Criteria, Indicators, Activities and Standards of Performance for Forest Management Certification - MC&I (2002)] is based on the principles and criteria of the Forest Stewardship Council (FSC). With increasing demand for certified timber products from developed countries, there is a need to intensify efforts to increase the timber certification of Permanent Forest Reserves (PFR) in Malaysia.

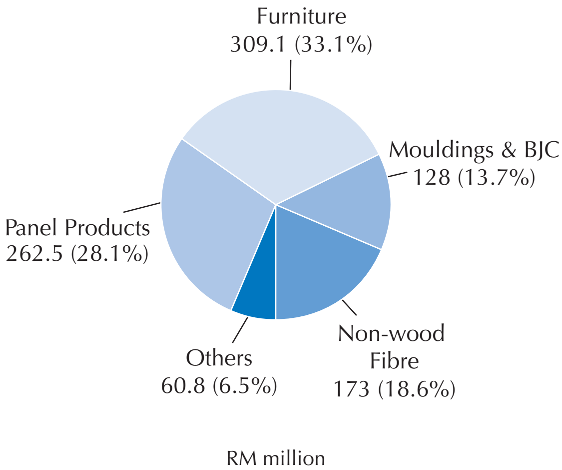
Currently, a total of 4.73 million hectares (or 32.8%) out of 14.4 million hectares of PFR have been certified by MTCC. As at 31 December 2007, a total of 113 timber companies have been awarded the MTCC Certificate for Chain-of-Custody (CoC). The CoC certification involves the verification by an independent third-party assessor, appointed by MTCC to verify that the wood products (including logs) purchased are derived from certified forests. The certified timber from the plantation will be supplied to the downstream processing industries, particularly reconstituted panel products and furniture manufacturing.

For the period January to November 2007, a total of 195,837 cubic metres of certified timber products (sawntimber, plywood, mouldings, finger jointed moulding and laminated timber) were exported mainly to the Netherlands, Belgium, Germany and United Kingdom. Greater efforts are required to increase the import and export of certified timber to achieve the 50 per cent target by 2010 as set by the Government.

Projects Approved in 2007

In 2007, a total of 93 projects were approved in the wood-based industry with total investments of RM933.4 million compared with 103 projects in 2006 with investments of RM1.4 billion. The proposed products include panel products, wooden furniture, mouldings and BJC, sawntimber, non-wood fibres and other timber products such as woodchips, pallets and briquettes. A total of 61 projects (65.6%) were new, while 32 projects (34.4%) were for expansion/diversification. Investments in new projects amounted to RM625.6 million (67%), while investments in expansion/diversification projects totalled RM307.8 million (33%). Domestic investments in 2007 amounted to RM539.1 million (57.8%), while foreign investments totalled RM394.3 million (42.2%).

Graph 62
Approved Investments In the Wood-based Industry by Sub-Sector, 2007



The highest investments were recorded in the panel products sub-sector with seven projects approved involving total investments of RM262.5 million, compared with RM661.5 million in 2006. Three were new projects with investments of RM246.3 million, while four were expansion/diversification projects with investments of RM16.2 million. Domestic investments amounted to RM52.3 million or 19.9 per cent of total investments and foreign investments totalled RM210.2 million.

In the wooden furniture sub-sector, 51 projects were approved with total investments of RM309.1 million, compared with RM410.9 million in 2006. Of the 51 projects approved, 33 were new projects with investments of RM82.3 million, while 18 were expansion/diversification projects with investments of RM226.8 million. Domestic investments amounted to RM208.6 million or 67.5 per cent of total investments and foreign investments totalled RM100.5 million. Most of the projects approved will be located in the West Coast of Peninsular Malaysia such as in Johor, Melaka and Selangor.

The decline in total investments in the wood-based industry in 2007 especially in panel products and furniture sub-sector, was because most companies had undertaken expansion/diversification activities in 2005 and 2006. In addition, the shortage of supply of raw materials affected investments in this industry.

A total of 11 projects were approved in the mouldings and BJC sub-sector with investments of RM128 million. Of these, seven were new projects with investments of RM73.3 million (57.2%), while four were expansion/ diversification projects with investments of RM54.7 million. Domestic investments amounted to RM95.5 million or 74.6 per cent of total investments. Most of the projects approved were for the manufacture of a combination of mouldings and other BJC products such as flooring boards, picture frames and doors and windows.

A total of 16 projects were approved in the non-wood fibre products sub-sector with total investments of RM173 million. These projects were for the manufacture of veneer, plywood, briquettes, fibre, pellets, laminated boards and flooring boards from oil palm biomass. Besides these materials, the wood-based industry has also explored the use of other alternative raw materials such as kenaf to complement the use of wood fibre.

Among the projects approved were:

- Bringful Resources Sdn. Bhd., a wholly foreign-owned company from Japan and UK with investments of RM210 million, to manufacture medium density fibreboard (MDF) in Sarawak. Eighty per cent of the production will be exported to Japan;

- Sriya Renewables Sdn. Bhd., a new joint-venture project with investments of RM43.9 million, to produce biomass pellets, biomass briquettes and bio-charcoal.The factory will be located in Perak and the products will be exported to the EU and the USA. The project will utilise local wood waste such as sawdust, off-cut and recycled wood; and

- Ekowood International Berhad, an expansion project to manufacture wooden engineering flooring board with an additional investment of RM22.4 million. The company proposed to expand its production of wooden engineering flooring boards at its existing location in Perak. All the products are for export to UK and the USA.

The Third Industrial Master Plan (IMP3) outlines the strategies to reinforce the industry strengths and competencies, simultaneously ensuring that the industry is on the right track towards sustainable growth. The total investments for the industry in the IMP3 period are targeted at RM25.4 billion or RM1.7 billion per year. Export earnings from downstream wood-based products, mainly comprising furniture and panel products is expected to continue to contribute substantively to the nation's foreign exchange earnings, with exports targeted to grow at an annual rate of 6.4 per cent to reach RM53 billion by 2020.

The outlook of the Malaysian timber industry remains promising despite the current softening of the global economy. The optimistic outlook is attributed to the continued buoyant demand for Malaysia's timber products in the EU, People's Republic of China, Japan and the Middle East, particularly in UAE.

The booming construction and real estate sectors in the Gulf Cooperation Council (GCC) countries, comprising the UAE, Saudi Arabia, Kuwait, Bahrain, Qatar and Oman, has resulted in strong demand for wood-based products and furniture. Total value of projects has reached an all-time high due to a GCC-wide construction undertaken by both the public and private sectors. In Bahrain alone, total active projects are estimated at US$27.4 billion (RM95.1 billion).

According to CSIL Milano - Furniture Industry Research Institute based in Italy, the global furniture industry is expected to expand further and the world furniture trade is estimated to grow by 8.2 per cent from US$97 billion in 2007 to US$105 billion in 2008.

In 2007, the wood-based industry continued to focus on downstream value-added processing. The industry has moved up the value chain into the secondary processing activities and has invested heavily in capital-intensive industries such as MDF and particleboard manufacturing. However, industrial linkages between the upstream industries such as sawntimber, veneer/plywood and other panel products with downstream industries will need to be strengthened.

Within the wood-based industries, the furniture sub-sector is expected to maintain its position as the second largest contributor to export earnings. Malaysia's export of furniture is expected to grow by 5-10 per cent annually until 2010 in tandem with the increase in global demand. In order to achieve higher export earnings, Malaysian furniture manufacturers need to move away from the low-end markets and penetrate the medium to high-end markets. The positive outlook for the furniture industry worldwide will continue to support the industry as most of the projects approved will be for the export market.

NON-METALLIC MINERAL PRODUCTS

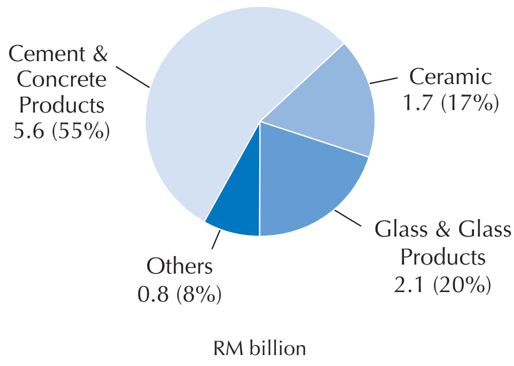
The non-metallic mineral products industry consists of glass, ceramic, cement and concrete and other products like quicklime, barite, marble and granite.

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. The main producers of the advanced ceramic products are Maruwa (M) Sdn. Bhd., Fuh Kai Advanced Ceramics Sdn. Bhd. and SMCI Globetronics Technology Sdn. Bhd.

To date, there are 274 companies in production in the non-metallic mineral products industry. Investments in this sector totalled RM20.7 billion, with domestic investments amounting to RM11.2 billion and foreign investments totalling RM9.5 billion.

Graph 63
Sales Value of Non-Metallic Mineral Products Industry by Sub-Sector, 2007 (January-November)

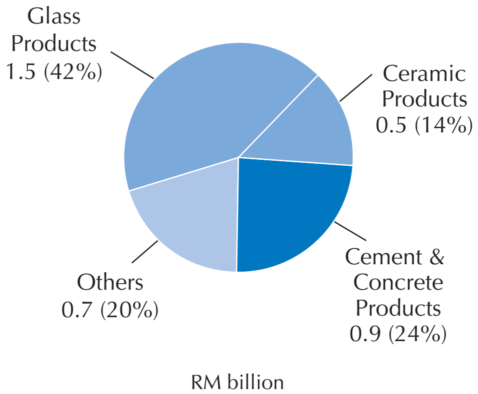


Source: Department of Statistics

Total sales of the non-metallic mineral products industry was RM10.2 billion in 2007 (January-November) compared with RM10.4 billion for the whole of 2006. The industry employed more than 42,000 persons. Sales value of the glass sub-sector in 2007 (January-November) was RM2.1 billion with employment of more than 7,000 persons. Total sales value of the ceramic products sub-sector was RM1.7 billion and the industry employed more than 19,000 persons. Sales value of cement and concrete products amounted to RM5.6 billion while employment totalled more than 13,000 persons.

Malaysia is a net exporter of non-metallic mineral products. In 2007 (January-November), exports in this sector totalled RM3.5 billion and imports totalled RM3.2 billion. Total exports in the glass and glass products sub-sector amounted to RM1.5 billion in 2007 (January-November) and imports totalled RM1.2 billion. Exports of ceramic products amounted to RM523 million in 2007 (January-November) and imports of ceramic products amounted to RM403 million.

Graph 64
Exports of Non-Metallic Products, 2007 (January-November)



Source: Department of Statistics

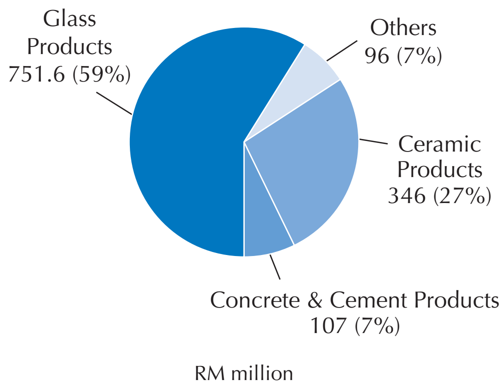
Projects Approved in 2007

In 2007, a total of 16 projects were approved in the non-metallic mineral products industry. Approved investments increased from RM1.2 billion in 2006 to RM1.3 billion in 2007. Of the projects approved, 13 were new projects while three were expansion/diversification projects. Domestic investments totalled RM293.4 million, while foreign investments totalled RM 1 billion.

Of the 16 projects approved:

- Two projects (RM751.6 million) were for the manufacture of glass products. One was a new project (RM51.8 million) to manufacture glass cullet while the other was an expansion/diversification project (RM699.8 million) to manufacture glass fibre;
- Seven projects (RM346.3 million) were for the manufacture of ceramic products. Five were new projects (RM171.3 million), while two were expansion/diversification projects (RM175 million);
- Three new projects (RM107 million) for the manufacture of concrete and cement products; and
- Four new projects (RM96 million) were for the manufacture of other non-metallic mineral products such as calcium carbonate and composite products.

Graph 65
Investments in Projects Approved in the Non-Metallic Mineral Products Industry by Sub-Sector, 2007



Significant projects approved include:

- An expansion/diversification project by a foreign-owned company with an investment of RM699.8 million for the expansion of production capacity of glass fibre. Currently, the company is producing glass panels and funnels for CRTs, glass fibre and glassware; and

- An expansion/diversification project by Guocera Tile Industries Sdn. Bhd. with an investment of RM161.5 million for the expansion of production capacity of floor and wall tiles at the existing location.

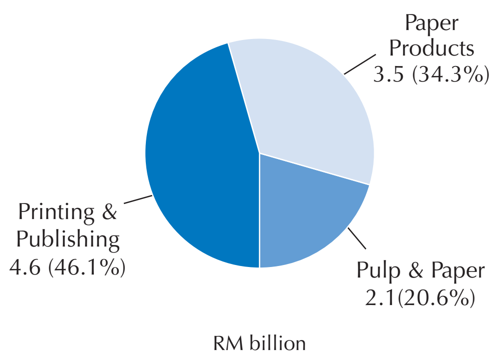
Glass industry in Malaysia has diversified from production of glass for packaging, automotive and construction industry to hi-tech precision glass such as hard disc glass substrates, glass funnels and panels for cathode ray tubes (CRTs) and plasma display exhaust pipes. In 2006, Malaysia attracted large investments in technical glass products, which are used as devices in the E&E industry. The main producers in the technical glass industry in Malaysia are Nippon Electric Glass (Malaysia) Sdn. Bhd. and Samsung Corning (M) Sdn. Bhd. which produce glass funnels and panels for cathode ray tubes (CRTs), and Konica Minolta Glass Tech (M) Sdn. Bhd. which produces hard disc glass substrates.

A potential growth area in the glass industry sub-sector is in the glass solar panels. There is a growing demand for solar energy since the present sources of energy such as oil, natural gas and coal are depleting. Therefore, efforts should be intensified to promote the production of glass solar panels and encourage the usage of solar energy in supporting the efforts for a cleaner environment.

PAPER, PRINTING AND PUBLISHING INDUSTRY

The paper, printing and publishing industry in Malaysia can be classified into three major categories namely, manufacture of pulp and paper, manufacture of paper products and printing/publishing activities. The paper sub-sector covers the production of medium paper, test liners, newsprint, printing and writing paper, tissue paper and joss paper. The paper products sub-sector consists of paper packaging products such as corrugated cartons, inner packaging and cushioning materials and products like labels, stickers and disposable diapers. The printing and publishing sub-sector includes all printing of packaging materials, books, magazines, security documents and other miscellaneous printing activities such as greeting cards, calendars, diaries, signage, labels, stickers and wall coverings.

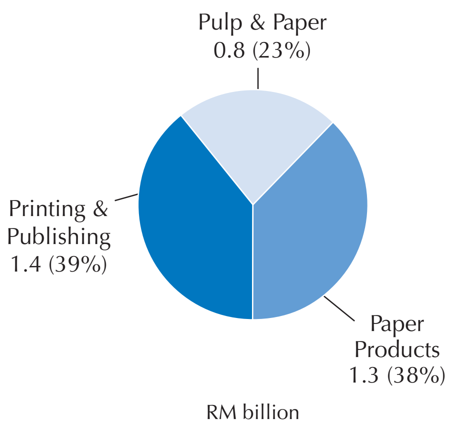
Graph 66
Sales Value of Paper, Printing and Publishing Industry, 2007 (January-November)



Source: Department of Statistics

The overall sales value of the paper, printing and publishing industry was RM10.2 billion in 2007 (January-November) compared with RM10.2 billion for the whole of 2006. In 2007 (January-November), the total sales value of the pulp and paper manufacturing sub-sector was RM2.1 billion with an employment of more than 7,000 persons. Sales value of paper products and printing/publishing sub-sectors totalled RM3.5 billion and RM4.6 billion respectively.

Graph 67
Exports of Paper, Paper Products and Printing Materials, 2007 (January-November)

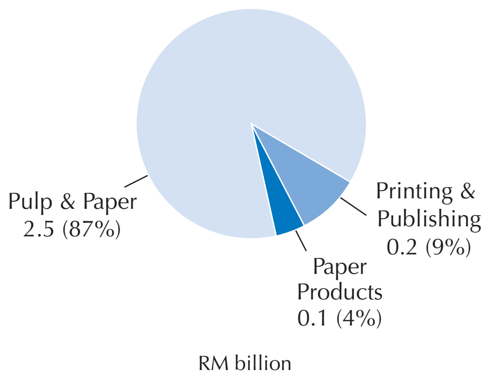


Source: Department of Statistics

The overall exports of paper, paper products and printed materials increased to RM3.5 billion in 2007 (January-November) from RM2.9 billion for the whole of 2006. Main exports were printed materials totalling RM1.4 billion (39%), paper products (RM1.3 billion or 38%) and pulp and paper (RM816 million or 23%).

In 2007, a total of 35 projects with a total investment of RM2.8 billion were approved in the paper, printing and publishing industry compared with RM688 million in 2006. Of these, 27 were new projects (RM848 million) and eight were expansion/diversification projects (RM2 billion). Domestic investments amounted to RM1 billion while foreign investments totalled RM1.8 billion.

Graph 68
Investments in Projects Approved in the Paper, Printing and Publishing Industry, 2007



Source: Department of Statistics

Of the 35 projects approved:

- 10 projects (RM2.5 billion) were for the manufacture of pulp and paper. Nine were new projects (RM614 million) while one was an expansion/ diversification project (RM 1.9 billion);

- 10 projects (RM126 million) were for the manufacture of paper products. Nine were new projects (RM119.9 million) while one was an expansion/ diversification project (RM6.7 million); and

- 15 projects were for printing and publishing activities (RM260 million). Nine were new projects (RM106 million) while six were expansion/diversification projects (RM154 million).

Significant projects approved include:

- An expansion/diversification project by Sabah Forest Industries Sdn. Bhd. with an investment of RM1.9 billion to manufacture pulp. This expansion and diversification is a result of the acquisition by Ballapur Industries Ltd. (BILT) in 2007. BILT is the largest paper and pulp company in India. The acquisition will ensure the continual supply of wood pulp for BILT's paper manufacturing plants in India. In five years, BILT will invest around RM1.9 billion for a new pulp plant as an expansion project at the existing site in Malaysia;

- A new joint venture project between Malaysia and Korea with an investment of RM190 million to produce coated duplex board;

- A Malaysian-owned project with an investment of RM179 million to produce test liner and medium paper; and

- An expansion/diversification project with an investment of RM 121 million to undertake the activities of publishing and printing of newspapers.

The pulp and paper products industry is important in the economic growth and industrial development of Malaysia. This is particularly applicable to paper packaging products, which is a supporting industry to the manufacturing sector. Total capacity of pulp and paper in Malaysia is more than 1.5 million tonnes a year. Most local paper mills rely on waste paper as a source of fibre except Sabah Forest Industries Sdn. Bhd. (SFI). SFI produces virgin pulp for its own consumption. Malaysia produces six types of paper namely corrugating medium paper, testliner, newsprint, printing/writing paper, tissue paper and joss paper.

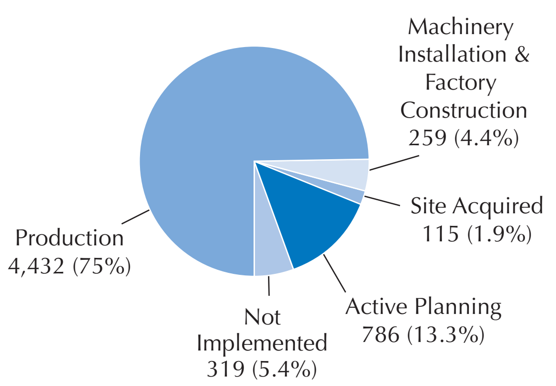
The printing and publishing industry in Malaysia is becoming more export-oriented. Malaysia has more than 1,000 printers and most of them are small and medium scale companies. Local printers and publishers have attracted printing contracts from Germany, the USA, UK, Australia and ASEAN countries especially for security documents and books. This is due to the competitive prices and high quality of products and services offered.

Overall exports of printed materials increased by 47.6 per cent from RM948.2 million in 2006 to RM1.4 billion in 2007 (January-November). Exports of security documents contributed more than 40 per cent of overall exports of printed materials. Printed materials from Malaysia are exported to the USA, Europe, Australia and ASEAN countries. This sector has good potential for further investments and exports. The lower cost of printing in Malaysia compared with Singapore and Hong Kong as well as the utilisation of the state-of-the-art technology increases the efficiency and productivity of the local printing industry. The Malaysian Government's continuous commitment to uphold intellectual property and copyright laws has made Malaysia a reputable centre for printing and publishing activities in the region.

C. IMPLEMENTATION OF APPROVED MANUFACTURING PROJECTS

A total of 5,911 manufacturing projects were approved for the period 2002 – 2007 of which 4,432 (75%) projects have commenced production while 259 (4.4%) are at the stage of machinery installation. Of the 4,432 projects in production, 737 projects had commenced production in 2007.

Graph 69
Status of Implementation of Manufacturing Projects Approved during 2002-2007, as at 31 December 2007



The total capital investment of the 4,691 projects implemented (which include projects which have commenced production and machinery installation) amounted to RM117.4 billion. Apart from this, 115 projects with investments of RM13.8 billion have also acquired the sites for their factories, while 786 projects (RM74.5 billion) are in the active planning stage. When these 901 projects are realised, the total investment generated will be RM88.3 billion.

Of the 4,691 projects implemented, a total of 2,372 (50.6%) are export-oriented (more than 50% exports). These projects were mainly in the following industries:

Industry	No. of Projects
• Electrical & Electronics	566
• Furniture & Fixtures	205
• Machinery & Equipment	204
• Fabricated Metal Products	189
• Food Manufacturing	182
• Plastic Products	165

Most of the implemented projects are located in Selangor (1,462 projects), followed by Johor (1,058 projects), Penang (705 projects), Perak (265 projects), Kedah (260 projects) and Melaka (223 projects).

Significant projects implemented in 2007 cover a broad range of industry sectors such as electrical and electronics, chemicals, scientific and measuring equipment and fabricated metal products.

The various measures undertaken by the Government to facilitate investment has contributed to the increase in the rate of implementation from 75.8 per cent

(2001-2006) to 79.4 per cent. These measures include:

- Establishment of Project Implementation and Coordination Unit (PICU) on 1 February 2001;

- Appointment of Special Project Officers (SPOs) on 21 May 2003;

- Setting-up of One Stop Centre (OSC) committee meetings at both local authority and state levels on 21 May 2003; and

- Establishment of State Investment Centres (SIC) on 22 April 1999 and District Industry Implementation Units (DIIU) on 15 August 2006.

Additional measures which were introduced to expedite implementation of the projects approved include:

- The introduction of Certificate of Completion and Compliance (CCC) which replaced the Certificate of Fitness of Occupation on 12 April 2007. With the CCC, certification responsibilities were transferred from local authorities to authorised professionals (e.g. architects and engineers) based on self regulation practices.

- The formation of Special Taskforce To Facilitate Business (PEMUDAH) was announced 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. Since its inception, PEMUDAH has introduced measures to further improve the public sector delivery system:

  - Business registration by the Companies Commission of Malaysia (SSM);

  - Tax refund and stamp duty for land transfers by Inland Revenue Board (IRB); and

  - Work passes for expatriates by Immigration Department.

  Other measures undertaken by PEMUDAH are:

  o Publication of the Guidebook on the Employment of Expatriates: Processes and Procedures on 26 October 2007; and

  o The proposed establishment of the Business Licensing Electronic Support Services (BLESS) which is aimed at further improving the Government's delivery system. The objective of BLESS is to reduce the processing time as well as the number of business licenses required in Malaysia. Applicants can submit online business licence applications through BLESS which will monitor the processing time taken by the respective agencies in approving the licences. BLESS would be implemented in stages, commencing with the manufacturing sector and subsequently moving to other sectors.

The Ministry of Human Resources has reported that for the period January-December 2007, a total of 162 companies had down-sized their operations, which resulted in the retrenchment of 4,999 workers. In addition, 75 companies had ceased operations, resulting in the retrenchment of 22,559 workers.

However, 737 projects commenced production in 2007 resulting in the creation 68,619 job opportunities. These projects also provide alternative employment to the 27,558 workers who were retrenched during the year.

7

INVESTMENT PERFORMANCE OF THE SERVICES SECTOR

7 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 2,439 projects with investments of RM65.4 billion were approved in 2007. Domestic investments amounted to RM54.6 billion (83.5%) and foreign investments totalled RM10.8 billion (16.5%). The services projects approved in 2007 are expected to provide 49,770 employment opportunities.

In 2006, a total of 2,501 projects were approved with a total investment of RM55.5 billion. Of these, domestic investments amounted to RM49.5 billion (89.2%) while foreign investments amounted to RM6 billion (10.8%). The projects approved in 2006 were expected to create 55,084 employment opportunities.

Table 7
Approved Investments in the Services Sector, 2007 and 2006

Services Sub-Sector	2007		2006	
	No.	RM mil.	No.	RM mil.
Regional Establishments	163	700.5	183	950.0
Support Services	86	6,184.9	30	318.8
MSC Status Companies	266	3,698.7	307	2,918.0
Real Estate (Housing)	1,004	21,612.7	976	18,042.6
Transport	56	16,740.5	58	11,577.1
Energy	-	5,536.8	-	4,599.6
Telecommunications	8	3,927.4	13	4,803.0
Distributive Trade	591	2,907.7	701	2,667.9
Hotels & Tourism	51	1,311.8	79	2,431.0
Financial Services	53	1,298.0	78	6,982.0
Health Services	8	1,012.6	16	155.5
Education Services	123	347.9	60	75.1
Others	30	150.7	-	-
TOTAL	**2,439**	**65,430.2**	**2,501**	**55,520.6**

B. PERFORMANCE OF THE SERVICES SUB-SECTORS

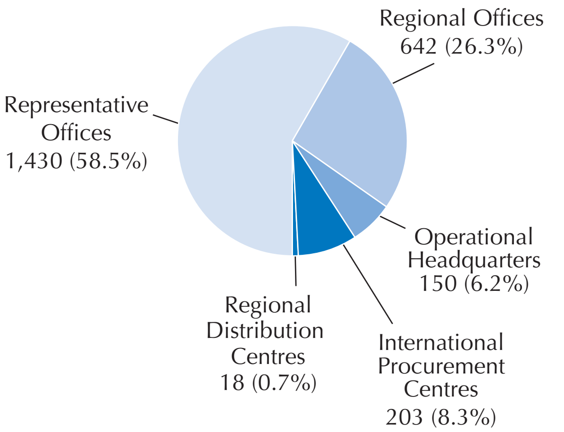
REGIONAL ESTABLISHMENTS

Regional establishments include the establishment of Operational Headquarters (OHQs), International Procurement Centres (IPCs), Regional Distribution Centres (RDCs), Regional Offices (ROs) and Representative Offices (REs).

As at 31 December 2007, a total of 2,443 regional establishments were approved in

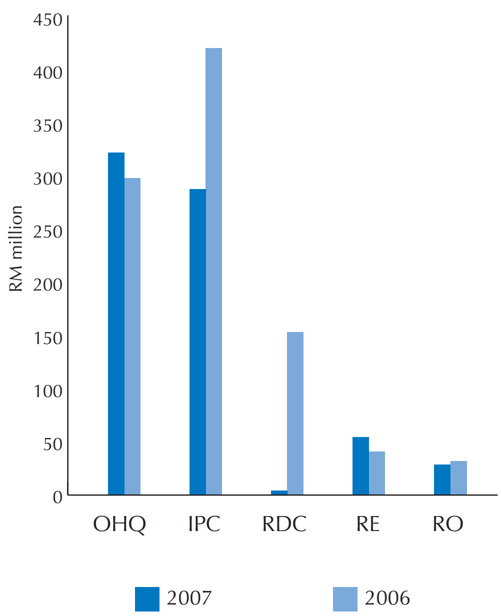
Malaysia, which include 150 OHQs, 203 IPCs, 18 RDCs, 642 ROs and 1,430 REs.

Graph 70
Number of Regional Establishments Approved as at 31 December 2007



In 2007, a total of 163 (2006: 183) new regional establishments were approved to be set up in Malaysia. Proposed annual business spending by these establishments amounted to RM700.5 million (2006: RM950 million).

Graph 71
Annual Business Spending by Regional Establishments, 2007 and 2006



Estimated annual sales turnover for IPCs and RDCs amounted to RM2.7 billion (2006: RM5.8 billion).

These operations will create a total of 2,557 jobs (2006: 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 2007, a total of 150 OHQs were approved. Of these, 30 were from the USA, followed by Japan (14), Germany (14), UK (11), the Netherlands (10) and Australia (10). Total paid-up capital amounted to RM669.3 million with proposed annual business spending of RM1.8 billion. A total of 1,835 expatriates were approved to be employed in these OHQs and 8,575 job opportunities were created for Malaysians. Most OHQs established in Malaysia are engaged in business process outsourcing (BPO) activities including provision of shared services to their related companies in the Asia Pacific region.

As at 31 December 2007, a total of 96 OHQs have started operations. These OHQs are involved mainly in oil and gas, finance, E&E, construction, food and beverages, timber, logistics, healthcare and health informatics, pharmaceuticals, 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 • Du Pont • Dow Chemicals • PepsiCo • Grey Communications • Hess Oil & Gas • Air Products	• Kellogg's • Schlumberger • Baker Hughes • Intel • Transocean • Agilent • IBM
Japan	• Sharp Electronics • Kajima Corporation • Japan Tobacco International • Bridgestone	• NEC Infrontia • Sumitomo • Nippon Electric Glass • Nippon Menard
Germany	• BASF • Muehlbauer • Eppendorf • Arvato	• Siemens • Nordenia • Bayer • Binder
Australia	• IBA Health • IEV Group • Leighton • Linfox	• Wagners • Paradigm • Ansell • Dome
UK	• RMC Industries • British-American Tobacco • Diagonal Consulting Group	• Fitness First • James R Knowles
Switzerland	• Michelin • Norvatis Corporation	• SBM Group • Omya Group
France	• Lafarge	• Thales International
Netherlands	• Flexsys • Prometric	• Organon
Sweden	• Volvo	• UCB Group
China	• China Shipping	
Norway	• Aker Kvaerner • Wilhelmsen	• AGR
Singapore	• NOL Global	• ACE Asia Pacific

There is an increasing trend amongst companies in the oil and gas industry to use Malaysia as an OHQ base for their operations in the Asia Pacific region. To date, 20 oil and gas companies have established their OHQs in Malaysia, including Weatherford, Schlumberger, Westerngeco, Baker Hughes, Hess Oil & Gas, Paradigm Geophysical, Technip, Worley, Transocean, IEV Group, GE O&G Pipeline Solutions, Aker Kvaerner, SBM Group, Consolidated Capital, KNM Group, Gyrodata and AGR. The OHQs set up by these companies provide services such as planning, coordination and monitoring of bidding of oil and gas projects in the Asia Pacific region; technical support during bidding and implementation stages, including technical designs and drawings as well as certification and standards compliance; management of material and equipment sourcing and logistics; data management and processing; and training and personnel management.

Projects Approved in 2007

A total of 17 OHQs were approved in 2007 (2006: 27) with total paid-up capital amounting to RM63 million (2006: RM107.7 million) and total annual business spending of RM323.7 million (2006: RM300.5 million). Of these, four OHQs involved upgrading from existing regional offices and one involved relocation of operations from the USA and Australia to Malaysia.

Of the OHQs approved, four were from the USA, two each from Germany, Norway and Singapore and one each from Cayman Islands, the Netherlands, Bermuda, Belgium and Switzerland. The remaining two were joint-venture projects between Malaysia, the USA and Germany. A total of 155 expatriate posts were approved for these OHQs and 1,955 employment opportunities will be provided for Malaysians. Of these, 14 per cent of the posts were for senior management and senior executive positions which will be filled by Malaysians. In the technical, skilled and specialist category, 67 per cent of the posts will be filled by Malaysians.

Major OHQs approved in 2007 included:

- The IBM Group, which is a US-based global IT solutions provider, to expand its shared service centre to provide a wide range of common services to its related entities in Australia, New Zealand, Japan, Korea, China, Hong Kong, the USA, Europe etc. Among the services provided are general management and administration, business planning and coordination, technical support services and data/information management and processing. The OHQs will create 924 employment opportunities for Malaysians at the managerial, professional and technical levels;

- Baker Hughes Incorporated has established a shared service centre in Malaysia for its oilfield service activities, supporting operations in the Middle East-Asia Pacific region including Australia, Bermuda, the USA, Panama, Cayman Islands, Singapore, Indonesia, New Zealand and Thailand. The shared services to be provided include general management and administration, business planning and coordination, technical support and maintenance, data/information management and processing, treasury and fund management, corporate financial advisory as well as training and personnel management. This OHQ will employ 75 Malaysians, including 69 in the managerial, professional and technical categories;

- Philip Morris (M) Sdn. Bhd., a subsidiary of FTR Holdings SA from Switzerland, and one of the largest tobacco manufacturers in the world, to render services to its related companies in Philippines, Indonesia, Korea, Australia, Hong Kong and Switzerland.

The OHQ will provide six types of support services including general management and administration, business planning and coordination, technical support and maintenance and procurement of raw materials, components and finished products. A total of 54 employment opportunities in the professional, technical and specialist staff will be created for Malaysians;

- NOL Group Services Centre Sdn. Bhd., a subsidiary of Neptune Orient Lines Ltd. which is Singapore's national shipping company, will serve as a 'Global Finance Centre' and 'Regional Administrative Centre' and provide support services to 150 related companies around the world. Among the services provided by these centres are general management and administration, business planning and coordination, technical support and maintenance and data/information management and processing. A total of 314 job opportunities will be created for Malaysians including 62 from the managerial and professional level;

- Air Products & Chemicals Group, which is a USA-based Fortune 500 company involved in technology, energy, healthcare and industrial markets worldwide, to establish a shared services centre in Malaysia to support its related companies in eight countries. The services to be provided include general management and administration, business planning and coordination, technical support and maintenance, data/information management and processing, corporate financial advisory as well as training and personnel management. This centre will employ 84 Malaysians, including 76 in the managerial, professional and technical categories;

- Cognis Oleochemicals Holdings Sdn. Bhd., a 50:50 joint-venture of Golden Hope Plantations Berhad and Cognis BV from Germany. Cognis Group is a leader in specialty chemicals and nutritional ingredients. The Group will establish an OHQ to provide general management and administration, business planning and coordination, treasury and fund management as well as corporate financial advisory services to its related companies in the USA, UK, Canada, Japan and Germany;

- Wilhelmsen Maritime Services (Asia) Sdn. Bhd., a subsidiary of Wilhelmsen Group which is the leading logistics service provider from Norway. The Group's three principal activities are shipping, logistics and maritime services. To further establish itself in the fastest growing and changing Asia region, Malaysia has been chosen to become a co-ordination centre for its activities. The OHQ will provide support services to more than 19 related companies in Norway, Hong Kong, Singapore, Mauritius and UK. Among the services to be provided are procurement, technical support and maintenance, market control and sales promotion planning, data/information management and processing, treasury and fund management, corporate financial advisory as well as training and personnel management. A total of 132 employment opportunities, including 83 positions for professional, technical and specialist staff will be created;

- The ADA Cellworks Sdn. Bhd., a joint-venture company which is involved in the telecommunications industry. It was formed through the merger of the three established wireless engineering services providers: Aalishan, Dergo and ACS. The OHQ will provide eight types of services to its related companies in China, India, Indonesia, Taiwan and Australia. The services to be provided include general management and administration, data/information management and processing, treasury and fund management, corporate financial advisory and R&D;

- Binder Sdn. Bhd., a subsidiary of Binder GmbH from Germany which is the world's largest manufacturer of simulation chambers for scientific and industrial applications. It also markets a range of laboratory test chambers which create a simulation of physical, chemical and biological environmental conditions as well as environmental simulation chambers which create simulation of natural environmental conditions. The company upgraded its Representative Office in Malaysia to be the Group's Regional Management and Administration Headquarters to coordinate its operations in the Asia Pacific region. This OHQ will undertake general management and administration, business planning and coordination, procurement, market control and sales promotion planning, corporate financial advisory as well as training and personnel management;

- Prometric Technology Sdn. Bhd., a subsidiary of Thomson Group based in the Netherlands, which is the world's largest provider of integrated and financial management applications for legal and professional markets from the Netherlands. The Group's business consists of legal and regulatory, learning, financial and scientific and healthcare activities. The company upgraded its Regional Office to OHQ and provides common services to support the group's operations in the Netherlands, Australia, Korea and Singapore. Among the services provided are general management and administration, business planning and coordination, procurement, technical support and maintenance as well as data/information management and processing;

- The Arvato Systems (SEA) Sdn. Bhd., a subsidiary of Bertelsmann (BMG) Group, a global IT service provider based in Germany. The Group has diverse activities mainly in broadcasting, TV production, printing, publishing and entertainment. The OHQ will provide a wide range of support services to its related companies in Thailand, People's Republic of China, Singapore and Malaysia, which include general management and administration, business planning and coordination, technical support and maintenance, market control and sales promotion planning, data/information management and processing, corporate financial advisory and R&D;

- Richina Inc. Sdn. Bhd., a subsidiary of Richina Pacific Limited with its headquarters in New Zealand and its holding company in Bermuda is involved in financial and commercial services, construction and property development and manufacture of leather products. The Group will establish an OHQ in Malaysia to serve a total of 46 related companies in Bermuda, People's Republic of China, New Zealand, Singapore and Hong Kong. Among the services to be undertaken by the OHQ are general management and administration, procurement, technical support and maintenance, data/ information management and processing, corporate financial advisory as well as treasury and fund management;

- Dovebid Asia Pacific Sdn. Bhd., a subsidiary of DoveBid, Inc. of the USA which is a global provider of capital asset auction and valuation services to large corporations and financial institutions. The Group has identified Malaysia as a service hub for the Asia-Pacific region, the USA and Europe. Several services which are currently being provided by its related companies in the USA and Australia will be relocated to the OHQ in Malaysia. Among the services to be provided are general management and administration, business planning and coordination, technical support and maintenance, market control and sales promotion planning, data/information management and processing, treasury and fund management as well as training and personnel management;

- The AGR Group from Norway, an integrated oil and gas service provider, to establish an OHQ in Malaysia to serve as a hub for its services in Southeast Asia. The OHQ will provide support services to related companies in the USA, Norway, Australia and UK. Services provided include general management and administration, business planning and coordination, technical support and maintenance and R&D. This OHQ will employ 112 Malaysians, including 62 positions in the managerial and professional level; and

- ACE Group, a USA-based global insurance and reinsurance company from Singapore, to establish an OHQ in Malaysia as a centre of excellence for the development and support of IT applications and software solutions. The OHQ will serve as the Group's regional IT software development centre and will render services to its related companies in the Asia Pacific region including Australia, New Zealand, Singapore, Hong Kong, Korea, Philippines, Viet Nam, Indonesia and Thailand. Among the services provided are technical support and maintenance, data/information management and processing, R&D and training and personnel management.

International Procurement Centres (IPCs)

International corporations, with their strong network of production bases in the Asia Pacific region, have established IPC operations in the country. Their IPCs serve as procurement and distribution centres and undertake supply chain management for their manufacturing operations both in Malaysia and abroad.

As at the end of 2007, a total of 203 IPCs were approved. Total annual sales turnover of these IPCs was estimated at RM66 billion while their business spending was estimated at RM5.3 billion per annum. Of the IPCs approved, 88 or 43.3 per cent were by corporations from Japan, followed by Malaysia (35), the USA (14), Taiwan (11), Singapore (11) and Germany (5) while the remaining 39 were joint-ventures mainly with companies from Japan and Singapore.

A total of 113 or 55.7 per cent of these IPCs were servicing the E&E industry, followed by the chemicals/petrochemicals (27), machinery and industrial parts (16), textiles (9) and furniture (7) industries. To date, a total of 114 IPCs have started their operations.

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

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

Projects Approved in 2007

A total of 12 IPCs were approved in 2007 (2006: 14 projects) with proposed annual business spending of RM289.3 million (2006:RM423.0 million) and estimated annual sales turnover of RM2.7 billion (2006: RM5.9 billion). Of the IPCs approved, three each were by Japanese MNCs and Malaysian companies, two by Singaporean companies and one each by companies from the USA and Germany. The remaining company is a joint-venture between Malaysia and UK/ Singapore/Japan. These IPCs will provide employment opportunities for 292 Malaysians (2006: 740), mainly in the managerial, technical and skilled categories.

Major IPCs approved included:

- Clearnaxis Sdn. Bhd., under the Guocera Holdings which is involved in the production of ceramic tiles, to relocate their procurement and distribution operation from Singapore. This IPC serves as a centralised procurement and distribution centre for three of its manufacturing plants in Malaysia;

- TGP Marketing Sdn. Bhd., which is involved in various industries such as food and beverages, medical and construction. The IPC will consolidate the procurement and distribution activities especially for the export market and act as the marketing arm of the Group;

- Agri Export (M) Sdn. Bhd., a subsidiary of Agrifert Sdn. Bhd. which is involved in the production of compound fertilisers in Malaysia and Indonesia, to establish an IPC in Malaysia in line with the Group's manufacturing expansion plans in Indonesia, Viet Nam and Thailand;

- Asahi Sangyo (M) Sdn. Bhd., a subsidiary of Asahi Sangyo Kaisha, Ltd. in Japan which is a trading company involved in the import and export of raw materials, industrial products as well as electrical and electronic components to its clients based in different countries;

- Kelly Textile Sdn. Bhd., a subsidiary of Ghim Li Group from Singapore which is involved in the textile and apparel industry. The Group's vision is to be a global textile and apparel supply chain manager to its customers. This project is a re-location of existing Singapore procurement operations to Malaysia;

- Jackspeed Leather Special Manufacturer (M) Sdn. Bhd., a subsidiary of Jackspeed Corporation Ltd. from Singapore. The Group which is involved in the manufacture of leather car seat covers, aims to make Malaysia a procurement and distribution centre for raw materials and finished goods for the Group;

- Techfast International Sdn. Bhd., a subsidiary of Techfast Holdings Bhd., which is listed on the Mesdaq Market of Bursa Malaysia. Techfast is one of the biggest companies specialising in "self clinching fasteners, electronic hardware and panel fasteners". The Techfast Group has identified Malaysia as the procurement centre for raw materials, parts and components for its manufacturing operations as well as distribution centre for its finished products to cater for the global market; and

- Knowles IPC (M) Sdn. Bhd., which was granted special incentives for the establishment of an International Supply Chain Centre (ISCC). The project has an annual business spending of RM226.9 million and an annual sales turnover of RM1.1 billion. The Group is the world's largest manufacturer of balanced amature transducers for use in the hearing aid and other high quality acoustic applications. The company is also a global market leader for technologically advanced hearing aid components and products, and caters for 80 per cent of the international market.

These IPCs, when operational will increase the usage of local seaports and airports. A total of RM1.63 billion worth of goods will be exported, of which RM1.51 billion or 93 per cent will be exported through seaports and RM0.1 billion or 7 per cent through airports. The bulk of the goods, worth RM684 million (45.3%), will be exported through Penang Port. A total of RM400 million will be exported through Port of Tanjung Pelepas, followed by Port of Pasir Gudang (RM257 million) and Port Klang

(RM170 million). Of the goods to be exported through airports, RM102 million will be exported via Kuala Lumpur International Airport (KLIA) and the balance of RM13 million via Senai Airport.

These IPCs proposed to procure a total of RM937.9 million worth of products from local companies, including SMIs. This will provide Malaysian companies opportunities to integrate into the MNCs' global supply chain network.

Regional Distribution Centres (RDCs)

Since 2003, a total of 18 RDCs have been approved with total annual sales turnover of RM3.4 billion and annual business spending of RM285.7 million. Of these, three were from Germany, two from UK, one each from Switzerland, Malaysia, Belgium, Finland, France, Italy, Ireland, Spain, Denmark, Canada, India and two were joint-venture projects with Japan and Germany. A total of 441 employment opportunities were created by these RDCs, of which 88.5 per cent will be filled by Malaysians.

One project was approved for RDC in 2007. The RDC approved was BEML Group from India, which aims to make Malaysia its marketing and distribution centre for its mining and construction equipment in the Asia Pacific region. This RDC is the first distribution centre established outside India.

As at the end of 2007, eleven MNCs have started their RDC operations. These RDCs are:

- Osram Opto Semiconductors from Germany in the optoelectronics industry, distributing Osram brand lighting products;

- BMW from Germany in the automotive industry, utilising Malaysia as its distribution centre for components and spare parts for its major markets in the Asia Pacific region. The RDC distributes components and spare parts for its BMW and Mini brands;

- UMW Toyota, a joint-venture project with Japan in the automotive industry, distributing component parts for the Toyota brand. The RDC undertakes distribution of parts and components for Toyota models to nine assembly plants in Thailand, Indonesia, the Philippines, Viet Nam, Australia, India, Pakistan and South Africa;

- Scapa Group from UK in the adhesive film and tapes, generator and motor industry, distributing technical tapes, sealant and megolon under the Scapa and Megolon brands;

- Agfa from Belgium, distributing graphic systems, healthcare and specialty products under the Agfa brand. The RDC undertakes distribution of Agfa products as well as spare parts and accessories for its products in the Asia Pacific region;

- Amer Sport from Finland, distributing sports items under the Wilson, Atomic, Suunto and Precor brands. This RDC distributes and monitors the Group's distribution activities for its markets mainly in the Asia Pacific region;

- the Sidel Group from France, the world leader in the manufacture of plastic packaging equipment, which operates a manufacturing plant in Malaysia. It has expanded its activities by setting up its Asia distribution centre in Malaysia to distribute parts for Sidel products from Asia to Europe and other markets;

- Acerinox from Spain, the world's third largest steel producer, distributing its stainless steel products under various brands i.e. Acerinox (ACX), Roldan (RDN), Inoxfil (IF), Columbus (COL) and North American Stainless (NAS). These products are distributed mainly to Southeast Asia and Australia;

- the Kerry Group, which will consolidate and distribute food ingredients, flavours and consumer food produced by its group of companies under various brand names. These products will be distributed to the group's customers in 17 countries outside Malaysia;

- EPCOS AG from Germany, a market leader in Europe and the second largest in the world for passive electronic components, relocated its distribution centre from Singapore to Malaysia. This RDC will coordinate distribution activities for its operations in Germany, Austria, Singapore, Hong Kong, People's Republic of China and the USA; and

- the Siteco Group from Germany, a market leader in lighting applications for use in office, industry, traffic systems and shopping malls has established an RDC to consolidate the distribution of Siteco brand lighting products for its Asian market. The Group has production facilities in Germany, People's Republic of China, Turkey and Malaysia.

Regional/Representative Offices (ROs/REs)

Regional offices (ROs) and representative offices (REs) are also encouraged in Malaysia to provide services to their head offices or principals overseas. These offices usually carry out coordinating 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.

As at 31 December 2007, a total of 642 ROs and 1,430 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 and XM Satelite Radio from the USA; Korea Petroleum, Hyundai, Samsung and Xener System from Republic of Korea; Infrasys, Soft Imaging System, D-Link, Lawson Software and 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 2007

In 2007, a total of 49 ROs and 84 REs were approved compared with 41 ROs and 94 REs approved in 2006. Total business spending of these offices is estimated at RM85.4 million per annum (2006: RM73.1 million). The major sources of investment were Singapore (27), UK (16), the USA (15), Hong Kong (12), and Australia (11).

Representative offices of foreign banks and financial institutions have also been established in Malaysia. Currently, there are 21 such offices in operation. Japan and India are the leading countries with four offices each, followed by the USA (3), France (2) and Switzerland (2).

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.

In terms of implementation, of the 77 activities approved for the period of 2006-2007, a total of 56 activities were implemented. The breakdown of the implemented activities is as follows:

Type of Activities	Numbers
• Operational Headquarters (OHQs)	37
• International Procurement Centres (IPCs)	14
• Regional Distribution Centres (RDCs)	5

The total annual business spending of the regional establishments for the period of 2006-2007 was RM375.8 million. These companies employed a total of 346 foreigners and 1,880 Malaysians.

Some of the major services based activities which commenced operations in 2007 include:

- OHQs such as Philip Morris (Malaysia) Sdn. Bhd., Columbia Pacific Healthcare Sdn. Bhd., Wilhemsen Maritime Services (Asia) Sdn. Bhd. and KNM Management Services Sdn. Bhd.;

- IPCs such as Classita (M) Sdn. Bhd., Brother Industries Technology (M) Sdn. Bhd. and TGP Marketing Sdn. Bhd.; and

- RDCs such as International Merchandising Inc. and Brilliant Chronicles Sdn. Bhd.

SUPPORT SERVICES

Support services such as research and development (R&D), integrated logistics services, integrated market support services, renewable energy, integrated central utility facilities and cold chain facilities for food products are an essential link in the industrial value chain.

Table 8
Investments in Approved Support Services, 2007 and 2006

Support Services	2007		2006	
	No.	RM mil.	No.	RM mil.
Research & Development (R&D)	62	398.7	21	100.3
Integrated Logistics Services (ILS)	8	1,298.4	1	9.8
Integrated Market Support Services (IMS)	2	11.1	-	-
Renewable Energy	14	4,476.7	8	208.7
TOTAL	**86**	**6,184.9**	**30**	**318.8**

Research and Development (R&D)

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

As at 31 December 2007, a total of 98 R&D projects involving investments of RM1.35 billion have been granted Pioneer Status/Investment Tax Allowance (PS/ITA) incentives. Foreign investments in these R&D projects amounted to RM927.7 million while domestic investments totalled RM423.1 million. R&D investments were mainly in the E&E (34 projects, RM684.4 million), chemicals and chemical products (15 projects, RM215.3 million), machinery manufacturing (8 projects, RM125.3 million), transport equipment (18 projects, RM78.1 million), textiles and textile products (1 project, RM72.1 million) and plastic products (2 projects, RM67.8 million) industries. A total of 3,044 employment opportunities were created by these projects.

Projects Approved in 2007

In 2007, seven R&D projects were granted PS/ITA incentives, involving investments of RM18.9 million (2006: 7 projects/ RM30.8 million). Two projects were approved for the life sciences industry involving nanotechnology and hair & skin care products with investments of RM3.1 million; two projects were approved for the machinery equipment industry i.e industrial biodiesel engines and intelligent building systems & smart elevator systems (RM14 million); and one project each was approved for E&E (RM0.45 million); ICT (RM0.5 million); and non-ferrous metal (RM0.81 million) industries. Domestic investments in the R&D projects amounted to RM6.4 million (2006: RM25.4 million).

In addition, a total of 55 R&D projects with total investments of RM379.8 million were approved financial assistance. These comprised:

- 45 projects with investments of RM368.9 million approved under the Commercialisation of R&D Fund (CRDF); and

- 10 projects with investments of RM10.9 million approved under the MSC R&D Grant Scheme (MGS).

Integrated Logistics Services (ILS)

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. The performance of the industry will have an impact on the pace of the nation's industrialisation and its competitiveness in international trade. An increasing number of MNCs are outsourcing their logistics activities to logistics providers. This trend towards outsourcing 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.

Currently, the Malaysian logistics industry comprises largely single specialised service providers such as freight forwarders, transport companies and warehousing companies. In view of the need to encourage local logistics service providers to assume a bigger role in providing integrated logistics services, the Government introduced the ILS incentive in 2002 to encourage logistics service providers to consolidate or integrate their activities and become Third Party Logistics Service Providers. As at 31 December 2007, a total of 20 companies have been granted the ILS incentive. Investments proposed by these companies amounted to RM4.1 billion. Of these, four were new projects and 16 were expansion projects.

Projects Approved in 2007

In 2007, eight logistics companies were granted ILS incentive for their expansion/ diversification projects. Investments in these projects amounted to RM1.3 billion, of which 99 per cent were domestic investments. A total of 1,157 employment opportunities will be created.

Among the services provided are container haulage, freight forwarding, inland clearance depots, warehousing, customs clearance, storage, pre-delivery inspection, inventory management, contract distribution, consolidation, packaging/repackaging, bulk breaking, palletising, procurement, labelling/re-labelling, on-site logistics management, marking, quality control and product assembly/installation.

Integrated Market Support Services (IMS)

Integrated Market Support Services (IMS) comprise the activities of branding, market research and customer relationship management. As at 31 December 2007, a total of five companies have been granted the IMS incentive. Total investments proposed by these companies amounted to RM11.6 million. In 2007, two projects with investments of RM11.1 million were approved. Both the projects are Malaysian-based and are involved in market support activities for both local and foreign brand names.

Renewable Energy

Renewable energy has been identified as an important source of energy for the future. The Government has announced that renewable energy is Malaysia's fifth major fuel resource after coal, oil, natural gas and hydro. This includes renewable energy from biomass, solar, mini-hydro and municipal waste. Renewable energy from biomass and solar energy accounts for 90 per cent of the renewable energy potential.

There are plenty of biomass resources in Malaysia suitable for the generation of renewable energy. Oil palm waste is the main source of biomass for the renewable energy due to the abundant palm oil plantations. 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 oil palm mill effluents (POME). If all the wastes are fully utilised and converted into renewable energy, it would be able to generate 2,400MW 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 had launched the SURIA 1000 programme that enables each premise to install solar building integrated photovoltaic (BIPV) system. In line with the emerging demand for solar energy globally, the Government is intensifying the promotion of investment in solar modules production.

Another way forward for this sector is the Clean Development Mechanism (CDM). It is a mechanism established by the Kyoto Protocol to assist the developed countries with commitments for reducing greenhouse gases (GHGs) emission to meet their target, and at the same time promoting sustainable development for the developing countries. Companies in the developing countries which succeed in reducing emissions of (GHGs) under the CDM are given a Certified Emission Reductions (CERs) certificate which can be traded with developed countries. Malaysian companies, particularly in the energy sector are encouraged to participate in the CDM. To promote the participation in the CDM, under the Budget 2008 announcement, income derived from trading of CER certificates will be given tax exemption.

Under the Ninth Malaysia Plan, the Government will continue to encourage the utilisation of renewable energy. By

2010, the Government has targeted about 350 MW of electricity to be generated from renewable sources of energy. The strategies adopted to intensify the development of renewable energy include:

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

To promote and develop green energy resources, a special incentive is granted in the form of Pioneer Status with full tax exemption for 10 years or Investment Tax Allowance of 100 per cent for five years for renewable energy and energy efficiency/conservation projects. Under 2008 Budget, it was announced that the renewable energy incentives have been further enhanced whereby other companies in the same group could be given either Pioneer Status or Investment Tax Allowance even though one company in the same group have been granted the incentive.

To date, 41 projects, all Malaysian-owned, have been granted Pioneer Status/Investment Tax Allowance (PS/ITA) incentives for renewable energy generation. The total investment in these projects was RM877.8 million. The approved projects are capable of generating 176.7 megawatts (MW) of electricity, 1,043.4 tonnes of steam, 150.7 giga joules (GJ) of heat and 1,000 refrigerant tonnes (RT) of chilled water, utilising 7.2 million tonnes of biomass per annum. Sources of biomass are oil palm, wood, rice, sugarcane and municipal waste. Of the 41 projects approved, 18 are in operation of which, 11 are located in Peninsular Malaysia and seven in Sabah.

For the energy efficiency/conservation activities, nine projects, all Malaysian-owned, have been granted PS/ITA incentives with total investments of RM109.3 million. Of the projects approved, seven projects (RM4.8 million) involved energy efficiency/conservation service providers while the other two projects (RM104.5 million) were energy efficiency/conservation for own consumption. The projects, when implemented, would be able to conserve about 385MW of electricity per annum.

Projects Approved in 2007

In 2007, a total of 10 renewable energy projects were granted PS/ITA, involving investments of RM338.5 million compared with eight projects with investments of RM194.4 million in 2006. The energy generation capacities of these projects are estimated at 24 MW of electricity and 115 tonnes of steam utilising 1.3 million tonnes of biomass per annum. Of the projects approved, five were for electricity generation and another five were for the generation of steam.

For energy efficiency/conservation activities, four projects were granted PS/ITA incentives with a total investment of RM4.1 billion in 2007. All the projects approved were energy efficiency/ conservation activities for own consumption. The approved projects, when implemented, would be able to conserve about 147 MW of electricity per annum.

Among the major approved projects were:

- A new Malaysian-owned project, with investments of RM15 million, to generate 11.5 MW of electricity utilising 432,000 tonnes of palm oil biomass per annum;

- A new project by a Malaysian-owned company with investments of RM85.7 million for the generation of 11.4 MW of electricity utilising 180,000 tonnes of palm oil biomass annually; and

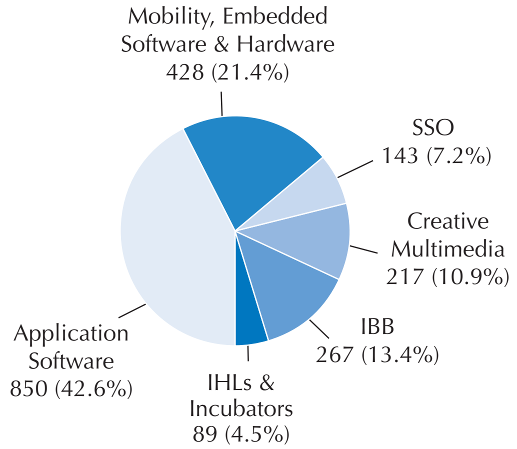
- A new Malaysian-owned project with investments of RM3.7 billion to engage in energy efficiency/conservation activities. This project will utilise the Co-Generation system, which when implemented, would be able to conserve about 74 MW of electricity per annum.

Renewable energy and energy efficiency/ conservation are important tools for the development of sustainable energy and this will result in reducing the impact of GHGs emission and global warming on the environment. The emphasis that the Government is putting on the promotion of the usage of new and alternative sources of energy will also support the development of this industry. In addition, measures were also undertaken to utilise energy in an efficient manner through energy efficiency/conservation activities. With the global trend of environment-friendly approach to production combined with the various efforts and programmes undertaken by the Government, it is expected that more investments would be forthcoming into this sector.

MSC STATUS COMPANIES

As at 31 December 2007, a total of 1,994 companies were granted MSC Status Companies by the Multimedia Development Corporation Sdn. Bhd. Of these, 1,472 were majority Malaysian owned, 467 were majority foreign-owned and 55 were with equal ownership. The 1,994 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

Graph 72
Approved MSC Status Companies by Technology Cluster as at 31 December, 2007



Source: Multimedia Development Corporation (MDeC)

& incubators. Of these 1,994 companies, 1,594 or 79.9 percent are in operation.

The MSC Malaysia Annual Impact Survey 2007 indicates the total expenditure of companies which participated in the survey amounted to RM7.09 billion (OPEX only). This is an increase of 22 per cent compared to RM 6.5 billion reported in the 2006 MSC Malaysia Impact Survey. Total sales of these companies were reported at RM12.11 billion in 2007.

In 2007, a total of 266 companies were granted the MSC Status with approved investments amounting to RM3.7 billion. Domestic investments amounted to RM2.4 billion (64.2%) while foreign investments totalled RM1.3 billion (35.8%). In 2006, a total of 307 companies were awarded MSC Status with approved investments amounting to RM2.9 billion.

Of the 266 companies awarded MSC Status in 2007, a total of 192 (72.1%) were wholly Malaysian-owned, 61 (22.9%) were wholly foreign-owned, while the remaining 13 (5 %) were joint-venture projects.

REAL ESTATE (HOUSING)

Real estate covers the housing industry (excluding commercial buildings) in Peninsular Malaysia.

Real estate was the largest services sub-sector in terms of investments approved in 2007. A total of 1,004 projects were approved with total investments amounting to RM21.6 billion. Of this, domestic investments totalled RM19.9 billion (92.1%). In comparison, the total investments in 2006 for this sub-sector was RM18 billion (976 projects).

TRANSPORT

The transport sub-sector covers:

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

In 2007, a total of 56 projects were approved with investments of RM16.7 billion. Domestic investments amounted to RM12.2 billion (73%) and foreign investments totalled RM4.5 billion (27%). In comparison, 58 projects with investments of RM11.6 billion were approved in the transport sub-sector in 2006.

The investments approved in 2007 were mainly in the aviation sub-sector (RM9.2 billion) and construction and maintenance of highways (RM5.1 billion). The huge investments in the aviation sub-sector was due to the purchase of aircrafts. Highway projects approved in 2007 include the MRCB Lingkaran Selatan Sdn. Bhd., Lebuhraya Kajang-Seremban Sdn. Bhd. and Penang Bridge Sdn. Bhd.

ENERGY

The energy sub-sector covers independent power producers; and generation, transmission and distribution of electricity by Tenaga Nasional Bhd. (TNB), Syarikat SESCO Berhad (SESCO) and Sabah Electricity Sdn. Bhd. (SESB).

In 2007, investments in generation, transmission and distribution of electricity amounted to RM5.5 billion, all of which were domestic investments. In 2006, investments in this sector amounted to RM4.6 billion.

TELECOMMUNICATIONS

The telecommunications sub-sector covers network facilities, network services, application services including content application services; and broadcasting.

In 2007, eight individual licences were approved in this sub-sector. Total investments amounted to RM3.9 billion all of which were domestic investments. In comparison, 13 individual licences were approved in 2006 with total investments of RM4.8 billion all of which were domestic investments.

DISTRIBUTIVE TRADE

The distributive trade sub-sector covers:

- Projects 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 591 projects were approved with total investments of RM2.9 billion in 2007. Domestic investments amounted to RM948 million (31%) while foreign investments totalled RM2 billion (69%). A significant development in 2007 was the take over of MAKRO Cash and Carry (M) Sdn. Bhd. by TESCO (M) Sdn. Bhd. in the hypermarkets/supermarkets sub-sector.

The major projects approved in 2007 were:

- 39 new and expansion hypermarket and supermarket projects, with total investments of RM2.2 billion. Domestic investments amounted to RM666.0 million (30.3%) while foreign investments totalled RM1.6 billion (69.7%);

- Eight departmental stores with total investments of RM410.0 million;

- 220 projects in wholesale and retail trade with total investments of RM152.4 million (5.2%). Domestic investments amounted to RM42.0 million (27.6%) while foreign investments totalled RM110.4 million (72.4%);

- 33 projects in direct selling with total investments of RM53.5 million. Domestic investments amounted to RM41.2 million (77.2%) while foreign investments totalled RM12.3 million (22.8%);

- 201 projects approved under the Petroleum Development Act with total investments of RM42.3 million (all of which were domestic investments), involving the establishment of petrol stations, wholesale of LPG, and transportation of petroleum products; and

- 90 projects in franchising with total investments of RM29.5 million, all of which were domestic investments.

HOTELS AND TOURISM

A total of 51 projects were approved in the hotels and tourism sub-sector in 2007, with investments of RM1.3 billion. Domestic investments amounted to RM1.2 billion (92.3%) while foreign investments totalled RM122.7 million (7.7%).

The approved projects were for new and expansion of hotel projects, holiday resorts, theme parks, and convention centres.

Table 9
Hotel and Tourism Projects Approved, 2007 and 2006

Activity	2007		2006	
	No.	RM mil.	No.	RM mil.
Hotel projects:				
- with incentives	34	394.0	38	1,082.6
- others	12	786.7	18	665.4
Tourism projects:				
- with incentives	1	22.0	6	69.2
- others	4	109.1	17	613.8
Total	**51**	**1,311.8**	**79**	**2,431.0**

Of the 46 hotel projects approved, 34 projects were granted investment incentives, while 12 projects were approved without incentives. Currently, investment incentives for new hotels are granted only to budget hotels. Domestic investments amounted to RM1,059.0 million (89.7%) while foreign investments totalled RM121.7 million (10.3%).

In 2007, prominent hotel projects approved include the Saujana Hotel Sdn. Bhd., Casuarina Hotel and Hard Rock Hotel. Notable tourism projects approved include the Sentoria Themepark & Resort Sdn. Bhd. and Extreme Park Sdn. Bhd.

FINANCIAL SERVICES

Financial services covers:

- banking;
- capital markets (brokerage, fund management, investment advisory and venture capital); and
- insurance.

A total of 53 projects were approved in 2007, with investments of RM1.2 billion. Domestic investments amounted to RM853.7 million (65.8%) while foreign investments totalled RM444.3 million (34.2%).

Banking attracted the largest amount of investments in the financial services sub-sector with RM794.1 million or 61.2 per cent of total investments, followed by capital markets (RM475.1 million), and insurance (RM28.8 million).

In 2007, the Asian Finance Bank Bhd. was approved under the Islamic Bank category with 100 per cent foreign investment. Investments in banking included expansion

Table 10
Investments in Projects Approved in the Financial Services Sub-Sector, 2007 and 2006

Activity	2007		2006	
	No.	RM mil.	No.	RM mil.
Banking	14	794.1	22	3,376.7
Insurance	9	28.8	23	854.0
Capital Markets	30	475.1	33	2,751.3
Total	53	1,298.0	78	6,982.0

and diversification projects for on-shore and off-shore banking.

Investments in capital markets were mainly in brokerage (RM449.7 million) and venture capital (RM11.4 million). Investments in insurance comprised solely of offshore insurance (RM28.8 million).

HEALTH SERVICES

Health services cover approvals for private healthcare institutions.

In 2007, approvals were granted to eight private healthcare institutions (comprising hospitals, maternity homes, nursing care centres, and medical specialist centres) involving total investments of RM1.0 billion, all of which were domestic investments.

Approvals in 2007 include the Prince Court Medical Centre Sdn. Bhd., Hospital Pusrawi Sdn. Bhd., QHC Medical Centre and Perling Specialist Hospital Sdn. Bhd. Investments in health services in 2007 exceeded the investments in 2006 which amounted to RM155.5 million (16 projects).

EDUCATION SERVICES

Education services cover private colleges/universities, skills centres, and private education institutions.

In 2007, a total of 123 projects were granted approval for the establishment of educational institutions, involving investments of RM347.9 million. Of this, domestic investments amounted to RM292.9 million (84.2%).

Investments in education services in 2007 exceeded the investments in 2006 which totalled RM75.1 million (60 projects). Investments in education services were mainly in private colleges/universities (RM221.0 million or 63.6%), followed by skills centres (RM122.6 million or 35.2%) and private education institutions (RM4.3 million or 1.2%).

Approvals in 2007 include the upgrading of institutions such as the Limkokwing University of Creative Technology and Kolej Universiti Antarabangsa Nilai to university and university-college status respectively.

Notable approvals also include the 100% foreign-owned Al-Madinah International University (MEDIU) and two institutions which were approved to cater for the air transportation industry, namely the Asia Pacific Flight Training Sdn. Bhd. and Kolej Pengurusan Penerbangan.

BOX ARTICLE 2: THE MALAYSIAN SERVICES DEVELOPMENT COUNCIL (MSDC) AND THE MALAYSIAN LOGISTICS COUNCIL (MLC)

BACKGROUND

The services sector including logistics, has been identified as an important source of growth for the Malaysian economy and it is expected to assume a greater role in broadening the economic base of the country and in contributing towards greater export of goods and services.

Currently, the services sector is the largest contributor to the country's GDP. In 2006, the non-Government services sector, including the construction sector, contributed 53.3 per cent to GDP and 48.3 per cent to the total employment.

Target and Objectives

In the Third Industrial Master Plan (IMP3), 2006-2020, the non-Government services sector is targeted to grow at 7.5 per cent per annum with investments of RM45.8 billion per annum. In addition, the construction services sector which currently contributes about 2.5 per cent to GDP is expected to grow by 5.7 per cent per annum with an investment target of RM12.6 billion per annum.

The logistics industry (transport, storage and communications) which contributed 8.8 per cent to GDP in 2006 is expected to grow at 8.6 per cent annually. In 2020, the logistics industry's contribution to GDP is expected to reach 12.1 per cent. Cargo throughput is expected to grow from 375.5 million tonnes in 2006 to 771.9 million tonnes in 2020.

To coordinate and spearhead the growth of the services sector, the IMP3 had recommended the establishment of the Malaysian Services Development Council (MSDC) and the Malaysian Logistics Council (MLC).

The MSDC will be entrusted to oversee and coordinate the growth and development of the following services sub-sectors:

- Business and Professional Services;
- Distributive Trade Services;
- Construction Services;
- Education and Training Services;
- Health Services; and
- Tourism Services.

The MLC will coordinate the growth and development of the following sub-sectors:

- Marine Transport Services;
- Land Transport Services;
- Air Transport Services; and
- Integrated Logistics and Supply Chain Management.

The objectives of MSDC and MLC are:

- To enhance the growth and contribution of the services sector including logistics, to the national economy as outlined in the IMP3; and

- To ensure coordinated development and promotion of the targeted services including logistics, in Malaysia.

The terms of reference of the Councils are:

- To steer the development of the targeted services sub-sectors including logistics, in line with the overall strategic thrusts and policy measures of the IMP3;
- To provide leadership in the implementation of policies and programmes in the IMP3, including liberalisation, institutional support and infrastructure;
- To monitor the implementation of programmes and activities of the respective ministries, state Governments and authorities involved in the development and promotion of the sector; and
- To streamline the strategies and policies governing the respective services sub-sectors including logistics, to improve and enhance the approval process and delivery system.

ORGANISATIONAL STRUCTURE

The MSDC is chaired by YB Dato' Ahmad Husni Ahmad Hanadzlah, Deputy Minister (Trade), Ministry of International Trade and Industry. The council comprises 21 private sector members, four members from the academia and 13 from the public sector. MIDA serves as the secretariat to this council.

The MLC is chaired by YB Ng Lip Yong, Deputy Minister (Industry), Ministry of International Trade and Industry. The council comprises 23 private sector members and 15 members from the public sector. MIDA also serves as the secretariat to the MLC.

To assist the MSDC and the MLC in implementing their work programmes, 11 Focus Groups have been established covering the targeted sub-sectors (6 for MSDC and 5 for MLC). These Focus Groups are largely private sector-driven.

These Focus Groups deliberate on areas affecting their respective sectors and recommend action plans to be implemented in the short (2007- 2010), medium term (2007-2015) and long term (2007-2020).

The Focus Groups will present their reports and findings, as well as recommendations to the respective councils for consideration.

One of the issues identified is data deficiency in the services sector in Malaysia. In order to have sufficient data for proper policy formulation, a Task Force has been formed to address the issue of data deficiency for the services sector. Members of the task force include the relevant stake holders from the public sector and the academia.

DEVELOPMENTS TO DATE

Since the inception of the MSDC and MLC in early 2007, both councils have had four meetings each. Among the issues that have been deliberated by the councils are:

MSDC

- Programmes to enhance service provision in the tourism sector to help further boost tourist arrivals to the country;
- The rapid increase in the price of steel bars which is hampering companies in the construction industry;
- The issue of shortage of skilled workers affecting all segments of the identified services sub-sectors and hence the need for a comprehensive human resource development programme;
- The need for coordination by the relevant Government agencies and private sector organisations when undertaking overseas promotional programmes particularly in the education and health sub-sectors;
- Rules and regulations relating to the establishment of distributive trade services in the country; and
- The need to look at progressive liberalisation in view of globalisation and the various FTAs that are being negotiated by the Government.

MLC

- Harmonising the licensing requirement for forwarding agent activity in relation to equity and workforce;
- Introducing standards for the logistics industry incorporating safety and security;
- Training and career development for the logistics industry with the view to increasing the profile of the industry;
- Impact on logistics related charges on shippers' competitiveness;
- ASEAN Roadmap for integration of the logistics industry; and
- Addressing the issue of the Cabotage policy.

8

INVESTMENT FACILITATION

8 INVESTMENT FACILITATION

The Government continues with its efforts to expedite the implementation of approved projects. Among the measures introduced in 2007 were:

Establishment of an Immigration Branch Office in MIDA

As has been announced in the 2007 Budget, an Immigration Unit was established in MIDA to approve visas and work permits for expatriates.

The Immigration Unit is located at 3rd Floor, 1 Sentral, Jalan Travers, KL Sentral, 50470 Kuala Lumpur which is adjacent to MIDA Headquarters. The Unit commenced operation on 3 December 2007, with a staff strength of 10 officers.

The functions of the Immigration Unit in MIDA are to:

- Assist and advise companies on immigration matters.
- Process applications for:
  - Employment Passes;
  - Dependent Passes for wives and children under 21 years;
  - Social Visit Passes for husbands, parents and children above 21 years;
  - Students' endorsements for the children of expatriates; and
  - Identification cards for expatriates.

As at 31 December 2007, the Unit has approved 88 expatriate posts.

Activities of Advisory Services Centre (ASC) Officers in MIDA

The ASC in MIDA provides services and assistance to investors. Currently, the representatives who are stationed in MIDA are:

- Royal Malaysian Customs;
- Immigration Department;
- Tenaga Nasional Bhd. (TNB);
- Department of Environment (DOE);
- Telekom Malaysia Berhad (TM);
- Labour Department, Ministry of Human Resources; and
- Ministry of Finance.

A representative from the Department of Occupational Safety and Health (DOSH) is expected to be stationed in ASC soon.

To further enhance the stature of the ASC, designated Liaison Officers have been identified from selected Ministries/Agencies such as:

- Malaysian Communication and Multimedia Commission;
- Construction Industry Development Board (CIDB);
- Ministry of Health;
- Ministry of Tourism; and
- Ministry of Higher Education.

Business Information Centre (BIC)

MIDA's BIC assists investors to obtain information on investment, trade, financing, productivity and services specifically pertaining to Malaysia's manufacturing and services sector. A Duty Officer is stationed at the BIC daily from 8.30 a.m. – 5.30 p.m. to assist investors.

In 2007, a total of 1,309 enquiries were received through phone calls and walk-in-enquiries. Most of the enquiries were for matters pertaining to MIDA and other Government agencies. Visitors to the BIC can avail themselves to guidebooks, brochures, pamphlets and application forms required for their businesses.

Customer Services Centre (CSC)

The CSC in MIDA responds to all telephone enquiries pertaining to MIDA with regards to policies, procedures, information on industries and the status of applications.

A total of 11,943 telephone enquiries were received in 2007. Besides enquiries on MIDA, the CSC also handled enquiries on other matters relating to Ministries/ Agencies such as Ministry of International Trade and Industry (MITI), Small and Medium Industries Development Corporation (SMIDEC), National Productivity Corporation (NPC), Ministry of Domestic Trade and Consumer Affairs and Ministry of Agriculture (MOA).

Visitors Service Centre (VSC)

MIDA, in collaboration with MATRADE has set-up a Business Information Centre (BIC) at Kuala Lumpur International Airport (KLIA). The BIC, which is located at the VSC, Main Terminal Building, is the first point of contact for investors intending to obtain information on business opportunities in Malaysia.

The VSC Duty Officers attended to visitors from all over the world arriving at the KLIA.

9

INVESTMENT OUTLOOK

9 INVESTMENT OUTLOOK

Malaysia continued to attract significantly higher investments into the manufacturing sector in 2007, surpassing the record level achieved in 2006. Investments amounting to RM59.9 billion were approved in 2007 compared with RM46 billion in 2006. This was more than double the average annual investment target of RM27.5 billion set in the Third Industrial Master Plan (IMP3), 2006-2020.

Domestic investments in manufacturing projects approved in 2007 were the highest level approved to date. Domestic investments totalled RM26.5 billion compared with RM25.8 billion in 2006. This reflected continued interest by domestic companies in investing in the manufacturing sector particularly in the petroleum products industry and the basic metal products industry in response to strong global demand and higher prices of oil and steel.

Despite the intense global competition for FDI, Malaysia was successful in attracting a record level of foreign investments in the manufacturing sector. Foreign investments in manufacturing projects approved in 2007 amounted to RM33.4 billion, which was 65.3 per cent higher than the RM20.2 billion recorded in 2006.

Investments in the services sector were also encouraging, increasing to RM65.4 billion in 2007 from RM55.5 billion in 2006. This exceeded the average annual investment target of RM45.8 billion as outlined in the IMP3. It is also in line with plans for the services sector to assume a greater role in generating economic growth.

It is anticipated that global competition for FDI will intensify in 2008 and the years ahead. Developed as well as developing countries are improving their investment environment and offering more attractive fiscal and non-fiscal incentives in efforts to stay ahead of competitors. In this respect, the Government will continue to undertake measures to ensure that Malaysia remains an attractive location for investments in the manufacturing and services sector. Efforts will also be intensified to target and promote investments in industries in which Malaysia has a strong competitive advantage as well as in new growth areas such as the renewable energy sector.

There is also a growing trend of Malaysian companies undertaking business ventures abroad in efforts to secure new and larger markets, gain access to raw materials and reduce costs. This is expected to continue and lead to greater integration of Malaysian companies in the regional and global supply chains.

TABLES

Table 1
PRODUCTION INDICES OF SELECTED INDUSTRIES, 2007 AND 2006

Industry	2007	2006	Change (%)
Overall Manufacturing	**140.9**	**138.9**	**1.4**
Chemicals & Petroleum Products	162.0	156.3	3.6
Rubber Products	152.1	142.7	6.6
Food Manufacturing	144.9	133.0	8.9
Electrical & Electronics	138.1	140.8	-1.9
Iron & Steel	127.5	109.5	16.4
Wood & Wood Products	127.0	121.1	4.9
Motor Vehicle Assembly (Transport Equipment)	114.1	133.2	-14.3
Machinery & Equipment	104.8	106.3	-1.4
Textiles & Apparel	80.9	89.9	-10.0

Note: Base Year 2000 =100

Note : All figures refer to the period January - November

Source: Department of Statistics

Table 2
SALES VALUE OF SELECTED INDUSTRIES, 2007 AND 2006

Industry	2007 (RM billion)	2006 (RM billion)	Change (%)
Overall Manufacturing	**474.2**	**467.6**	**1.4**
Electrical & Electronics	174.9	191.6	-8.7
Chemicals & Petroleum Products	142.4	131.7	8.1
Iron & Steel	21.0	16.8	24.7
Wood & Wood Products	20.5	19.7	4.0
Motor Vehicle Assembly (Transport Equipment)	11.7	12.9	-9.5
Food Manufacturing	16.0	13.8	15.9
Rubber Products	10.8	10.4	4.3
Textiles & Apparel	7.1	7.6	-6.5
Machinery & Equipment	5.4	5.3	1.9

Note : All figures refer to the period January - November

Source: Department of Statistics

Table 3
MAJOR EXPORTS

PRODUCTS	2007			2006	
	Value (RM million)	Share* (%)	Change (%)	Value (RM million)	Share* (%)
MANUFACTURED GOODS	**452,481.9**	**74.8**	**0.2**	**451,748.4**	**76.7**
Electrical & Electronic Products	266,380.4	44.0	-5.2	281,017.3	47.7
Chemicals & Chemical Products	33,245.6	5.5	14.3	29,080.0	4.9
Machinery, Appliances & Parts	21,895.4	3.6	10.3	19,842.9	3.4
Manufactures of Metal	16,616.2	2.7	17.4	14,157.0	2.4
Wood Products	16,293.6	2.7	-2.4	16,687.5	2.8
Optical & Scientific Equipment	13,613.0	2.2	0.4	13,558.0	2.3
Rubber Products	10,583.1	1.7	13.4	9,332.7	1.6
Iron & Steel Products	10,522.8	1.7	12.4	9,358.5	1.6
Textiles & Clothings	10,262.9	1.7	-3.2	10,601.9	1.8
Processed Food	8,661.2	1.4	19.4	7,255.7	1.2
Transport Equipment	8,400.3	1.4	-3.3	8,691.0	1.5
Manufactures of Plastics	8,379.1	1.4	6.7	7,852.8	1.3
Jewellery	5,006.8	0.8	29.3	3,873.4	0.7
Non-Metallic Mineral Products	3,952.4	0.7	13.1	3,495.9	0.6
Petroleum Products	2,895.2	0.5	16.4	2,487.8	0.4
Paper & Pulp Products	2,540.9	0.4	17.2	2,168.2	0.4
Beverages & Tobacco	2,193.5	0.4	14.1	1,922.2	0.3
Other manufactures	11,039.5	1.8	6.5	10,365.7	1.8
AGRICULTURAL GOODS	**57,728.3**	**9.5**	**24.4**	**46,411.4**	**7.9**
MINING GOODS	**84,819.0**	**14.0**	**7.0**	**79,299.2**	**13.5**
OTHERS	**10,070.2**	**1.7**	**-12.5**	**11,506.5**	**2.0**
TOTAL EXPORTS	**605,099.4**	**100.0**	**10.3**	**588,965.5**	**100.0**

*Note: * % share to total exports*

Source: Department of Statistics

Table 4
APPROVED MANUFACTURING PROJECTS, 2007 AND 2006

		New		Expansion/Diversification		Total	
		2007	2006	2007	2006	2007	2006
Number		625	653	324	424	949	1,077
Potential Employment		65,703	53,306	31,970	35,646	97,673	88,952
Proposed Called-up Capital (RM million)		4,117.6	3,744.6	855.2	729.1	4,972.8	4,473.7
Malaysian Equity	**(RM million)**	2,304.9	2,075.2	441.8	155.8	2,746.7	2,231.0
- Bumiputera	(RM million)	608.2	780.8	10.6	41.6	618.8	822.4
- Public Corporation	(RM million)	5.9	-	15.0	-	20.9	-
- Non-Bumiputera	(RM million)	1,690.8	1,294.4	416.2	114.2	2,107.0	1,408.6
Foreign Equity	**(RM million)**	1,812.6	1,669.4	413.4	573.3	2,226.1	2,242.7
Loan	**(RM million)**	14,329.8	11,899.3	6,115.8	4,686.0	20,445.6	16,585.3
Other Sources **	**(RM million)**	12,702.7	13,706.5	21,811.1	11,227.6	34,513.8	24,934.1
Total Proposed Capital Investment	**(RM million)**	31,150.0	29,350.4	28,782.1	16,642.6	59,932.1	45,993.0
- Local	(RM million)	13,875.6	20,153.3	12,630.6	5,611.8	26,506.2	25,765.1
- Foreign	(RM million)	17,274.4	9,197.1	16,151.5	11,030.8	33,425.9	20,227.9

** *Includes retained earnings and other sources of financing not yet determined at time of approval*

Table 5
NEW MANUFACTURING PROJECTS APPROVED BY SIZE OF CAPITAL INVESTMENT, 2007 AND 2006

Size of Capital Investment	2007				2006			
	No.	Domestic Investment (RM)	Foreign Investment (RM)	Total Capital Investment (RM)	No.	Domestic Investment (RM)	Foreign Investment (RM)	Total Capital Investment (RM)
Less than RM 2.5 million	160	174,979,833	29,587,603	204,567,436	142	132,207,220	16,955,122	149,162,342
RM 2.5 million - < RM 5.0 million	97	276,921,909	73,779,997	350,701,906	100	275,075,600	74,500,661	349,576,261
RM 5.0 million - < RM 10.0 million	111	598,821,754	182,702,569	781,524,323	149	780,581,453	278,624,267	1,059,205,720
RM 10.0 million - < RM 50.0 million	167	2,354,225,213	1,294,147,403	3,648,372,616	159	2,270,803,815	919,029,799	3,189,833,614
RM 50.0 million- < RM 100.0 million	45	1,782,638,966	1,151,537,041	2,934,176,007	56	3,091,711,334	1,069,630,820	4,161,342,154
RM 100.0 million - < RM 500.0 million	29	2,131,757,687	2,964,311,193	5,096,068,880	40	3,828,929,314	3,501,396,237	7,330,325,551
RM 500.0 million - < RM 1.0 billion	11	2,490,421,998	4,638,197,254	7,128,619,252	4	1,030,000,000	1,255,391,898	2,285,391,898
RM 1.0 billion & above	5	4,065,875,000	6,940,135,000	11,006,010,000	3	8,744,000,000	2,081,534,000	10,825,534,000
Total	**625**	**13,875,642,360**	**17,274,398,060**	**31,150,040,420**	**653**	**20,153,308,736**	**9,197,062,804**	**29,350,371,540**

Table 6
APPROVED MANUFACTURING PROJECTS BY INDUSTRY, 2007 AND 2006

Industry	2007					2006				
	No.	Employment	Domestic Investment (RM)	Foreign Investment (RM)	Total Capital Investment (RM)	No.	Employment	Domestic Investment (RM)	Foreign Investment (RM)	Total Capital Investment (RM)
Electronics & Electrical Products	144	32,455	1,374,470,819	13,737,095,642	15,111,566,461	170	24,239	1,422,217,371	8,601,472,584	10,023,689,955
Petroleum Products (Incl.Petrochemicals)	17	1,050	8,497,037,360	5,335,373,574	13,832,410,934	10	1,395	10,832,590,833	604,973,745	11,437,564,578
Basic Metal Products	52	7,133	7,183,784,135	4,989,573,351	12,173,357,486	30	1,502	436,051,594	2,288,126,615	2,724,178,209
Chemicals & Chemical Products	71	3,404	2,240,614,955	1,560,162,468	3,800,777,423	149	5,897	6,112,415,169	3,031,525,349	9,143,940,518
Paper,Printing & Publishing	36	3,191	1,083,358,437	1,814,613,477	2,897,971,914	26	1,900	594,590,353	93,409,809	688,000,162
Food Manufacturing	75	5,465	2,014,079,508	369,238,265	2,383,317,773	76	4,744	725,022,039	895,363,741	1,620,385,780
Machinery & Equipment	98	4,437	545,667,073	1,219,610,765	1,765,277,838	102	4,129	610,256,470	656,946,564	1,267,203,034
Textiles & Textile Products	22	9,487	100,113,602	1,300,816,597	1,400,930,199	30	2,863	669,096,004	152,170,446	821,266,450
Non-Metallic Mineral Products	16	1,619	293,425,568	1,007,551,388	1,300,976,956	29	2,344	204,354,067	962,206,159	1,166,560,226
Transport Equipment	53	4,581	889,419,788	306,548,125	1,195,967,913	66	5,180	1,231,689,419	216,622,960	1,448,312,379
Plastic Products	92	4,220	510,662,372	565,868,616	1,076,530,988	85	7,607	378,260,780	757,208,211	1,135,468,991
Fabricated Metal Products	101	4,445	418,321,573	239,153,020	657,474,593	123	6,614	709,361,650	616,338,995	1,325,700,645
Wood & Wood Products	33	3,316	286,378,913	285,380,981	571,759,894	41	6,063	696,682,537	286,416,581	983,099,118
Rubber Products	33	3,607	268,434,257	241,808,834	510,243,091	37	4,967	456,832,791	257,741,515	714,574,306
Scientific & Measuring Equipment	19	1,310	196,645,268	175,597,947	372,243,215	20	1,099	116,465,033	664,617,145	781,082,178
Furniture & Fixtures	51	5,242	208,576,064	100,534,728	309,110,792	62	6,982	355,837,433	55,039,269	410,876,702
Beverages & Tobacco	10	630	78,001,916	22,175,893	100,177,809	6	232	61,688,229	1,011,584	62,699,813
Leather & Leather Products	1	77	0	4,590,000	4,590,000	1	15	0	1,000,000	1,000,000
Miscellaneous	25	2,004	317,306,380	150,195,380	467,501,760	14	1,180	151,711,422	85,692,760	237,404,182
Total	**949**	**97,673**	**26,506,297,989**	**33,425,889,050**	**59,932,187,039**	**1,077**	**88,952**	**25,765,123,194**	**20,227,884,033**	**45,993,007,227**

Table 7

APPROVED MANUFACTURING PROJECTS WITH INVESTMENTS OF RM100 MILLION AND ABOVE, 2007

Industry	New				Expansion/Diversification				Total			
	No.	Domestic Investment (RM)	Foreign Investment (RM)	Total Capital Investment (RM)	No.	Domestic Investment (RM)	Foreign Investment (RM)	Total Capital Investment (RM)	No.	Domestic Investment (RM)	Foreign Investment (RM)	Total Capital Investment (RM)
Electronics & Electrical Products	9	566,283,000	6,232,604,020	6,798,887,020	11	203,541,000	6,616,161,532	6,819,702,532	20	769,824,000	12,848,765,552	13,618,589,552
Petroleum Products Incl. Petrochemicals	2	-	494,122,098	494,122,098	4	8,231,395,610	4,833,991,710	13,065,387,320	6	8,231,395,610	5,328,113,808	13,559,509,418
Basic Metal Products	7	5,057,030,538	4,159,499,462	9,216,530,000	2	1,437,532,800	514,383,200	1,951,916,000	9	6,494,563,338	4,673,882,662	11,168,446,000
Chemicals & Chemical Products	7	874,959,019	840,007,987	1,714,967,006	3	498,156,945	280,017,677	778,174,622	10	1,373,115,964	1,120,025,664	2,493,141,628
Paper,Printing & Publishing	2	321,500,000	47,500,000	369,000,000	2	310,698,993	1,696,654,256	2,007,353,249	4	632,198,993	1,744,154,256	2,376,353,249
Food Manufacturing	4	1,333,254,869	2,463,413	1,335,718,282	-	-	-	-	4	1,333,254,869	2,463,413	1,335,718,282
Textiles & Textile Products	2	-	1,180,000,000	1,180,000,000	-	-	-	-	2	-	1,180,000,000	1,180,000,000
Non-Metallic Mineral Products	1	-	148,500,000	148,500,000	2	152,449,728	708,843,628	861,293,356	3	152,449,728	857,343,628	1,009,793,356
Machinery & Equipment	2	-	807,847,000	807,847,000	-	-	-	-	2	-	807,847,000	807,847,000
Transport Equipment	4	260,477,410	209,216,000	469,693,410	1	128,013,167	6,496,833	134,510,000	5	388,490,577	215,712,833	604,203,410
Wood & Wood Products	1	-	210,000,000	210,000,000	-	-	-	-	1	-	210,000,000	210,000,000
Scientific & Measuring Equipment	1	133,961,852	-	133,961,852	-	-	-	-	1	133,961,852	-	133,961,852
Fabricated Metal Products	1	66,843,147	48,066,853	114,910,000	-	-	-	-	1	66,843,147	48,066,853	114,910,000
Rubber Products	1	-	106,500,000	106,500,000	-	-	-	-	1	-	106,500,000	106,500,000
Miscellaneous	1	73,744,850	56,316,614	130,061,464	-	-	-	-	1	73,744,850	56,316,614	130,061,464
Total	**45**	**8,688,054,685**	**14,542,643,447**	**23,230,698,132**	**25**	**10,961,788,242**	**14,656,548,837**	**25,618,337,079**	**70**	**19,649,842,928**	**29,199,192,284**	**48,849,035,211**

Table 8
APPROVED NEW AND EXPANSION/DIVERSIFICATION MANUFACTURING PROJECTS BY INDUSTRY, 2007 AND 2006

Industry	2007						2006					
	New		Expansion/Diversification		Total		New		Expansion/Diversification		Total	
	No.	Total Capital Investment (RM)	No.	Total Capital Investment (RM)	No.	Total Capital Investment (RM)	No.	Total Capital Investment (RM)	No.	Total Capital Investment (RM)	No.	Total Capital Investment (RM)
Electronics & Electrical Products	59	7,613,806,417	85	7,497,760,044	144	15,111,566,461	59	1,999,422,103	111	8,024,267,852	170	10,023,689,955
Petroleum Products (Incl.Petrochemicals)	12	752,023,61	5	13,080,387,320	17	13,832,410,934	6	8,771,604,578	4	2,665,960,000	10	11,437,564,578
Basic Metal Products	36	9,884,404,227	16	2,288,953,259	52	12,173,357,486	20	2,458,871,785	10	265,306,424	30	2,724,178,209
Chemicals & Chemical Products	50	2,614,239,857	21	1,186,537,566	71	3,800,777,423	108	7,895,153,391	41	1,248,787,127	149	9,143,940,518
Paper,Printing & Publishing	28	851,409,433	8	2,046,562,481	36	2,897,971,914	9	236,434,329	17	451,565,833	26	688,000,162
Food Manufacturing	50	1,997,544,312	25	385,773,461	75	2,383,317,773	51	1,214,479,044	25	405,906,736	76	1,620,385,780
Machinery & Equipment	77	1,637,430,660	21	127,847,178	98	1,765,277,838	78	706,851,864	24	560,351,171	102	1,267,203,035
Textiles & Textile Products	13	1,319,961,465	9	80,968,734	22	1,400,930,199	7	614,699,022	23	206,567,428	30	821,266,450
Non-Metallic Mineral Products	13	426,183,600	3	874,793,356	16	1,300,976,956	18	928,615,790	11	237,944,436	29	1,166,560,226
Transport Equipment	35	886,913,085	18	309,054,828	53	1,195,967,913	47	1,224,919,739	19	223,392,640	66	1,448,312,379
Plastic Products	50	712,958,891	42	363,572,097	92	1,076,530,988	48	548,658,273	37	586,810,718	85	1,135,468,991
Fabricated Metal Products	82	524,365,815	19	133,108,778	101	657,474,593	88	849,029,291	35	476,671,354	123	1,325,700,645
Wood & Wood Products	23	490,694,266	10	81,065,628	33	571,759,894	26	463,956,986	15	519,142,132	41	983,099,118
Rubber Products	21	352,033,684	12	158,209,407	33	510,243,091	15	169,728,528	22	544,845,778	37	714,574,306
Scientific & Measuring Equipment	17	372,243,215	2	**0	19	372,243,215	14	753,766,300	6	27,315,878	20	781,082,178
Furniture & Fixtures	33	211,776,139	18	97,334,653	51	309,110,792	44	288,118,098	18	122,758,604	62	410,876,702
Beverages & Tobacco	5	69,664,764	5	30,513,045	10	100,177,809	5	62,699,813	1	**0	6	62,699,813
Leather & Leather Products	1	4,590,000	-	-	1	4,590,000	-	-	1	1,000,000	1	1,000,000
Miscellaneous	20	427,796,976	5	39,704,784	25	467,501,760	10	163,362,606	4	74,041,576	14	237,404,182
Total	**625**	**31,150,040,420**	**324**	**28,782,146,619**	**949**	**59,932,187,039**	**653**	**29,350,371,540**	**424**	**16,642,635,687**	**1,077**	**45,993,007,227**

** *Expansion of capacities or manufacture of additional products not involving additional capital*

Table 9

APPROVED MANUFACTURING PROJECTS WITH MALAYSIAN MAJORITY* OWNERSHIP BY INDUSTRY, 2007 AND 2006

Industry	2007						2006					
	New		Expansion/Diversification		Total		New		Expansion/Diversification		Total	
	No.	Total Capital Investment (RM)	No.	Total Capital Investment (RM)	No.	Total Capital Investment (RM)	No.	Total Capital Investment (RM)	No.	Total Capital Investment (RM)	No.	Total Capital Investment (RM)
Petroleum Products (Incl.Petrochemicals)	10	257,901,516	3	12,286,802,320	13	12,544,703,836	6	8,771,604,578	1	2,062,960,000	7	10,834,564,578
Basic Metal Products	24	4,514,384,790	10	1,854,477,738	34	6,368,862,528	13	198,923,750	6	211,299,904	19	410,223,654
Chemicals & Chemical Products	36	1,576,910,466	11	649,657,812	47	2,226,568,278	85	5,387,751,240	20	639,361,562	105	6,027,112,802
Food Manufacturing	44	1,763,442,135	17	203,614,152	61	1,967,056,287	41	553,795,838	13	221,158,032	54	774,953,870
Electronics & Electrical Products	37	979,159,077	23	423,656,800	60	1,402,815,877	43	1,120,856,000	28	577,356,630	71	1,698,212,630
Paper,Printing & Publishing	24	801,891,050	5	152,727,773	29	954,618,823	5	204,161,162	11	388,983,624	16	593,144,786
Transport Equipment	32	600,413,085	14	296,056,618	46	896,469,703	43	1,155,091,239	13	86,539,600	56	1,241,630,839
Plastic Products	31	357,949,094	23	172,771,664	54	530,720,758	37	303,547,610	14	101,435,924	51	404,983,534
Machinery Manufacturing	56	414,789,975	14	82,388,417	70	497,178,392	54	460,483,671	15	170,166,216	69	630,649,887
Fabricated Metal Products	69	420,099,752	6	44,248,529	75	464,348,281	66	362,543,751	15	205,490,987	81	568,034,738
Wood & Wood Products	21	236,844,266	7	50,279,030	28	287,123,296	23	307,017,849	11	287,523,827	34	594,541,676
Non-Metallic Mineral Products	6	117,520,800	1	161,493,356	7	279,014,156	15	123,298,210	5	89,060,778	20	212,358,988
Rubber Products	15	180,124,210	6	88,011,407	21	268,135,617	11	81,991,012	14	319,608,616	25	401,599,628
Furniture & Fixtures	28	165,696,933	11	45,519,953	39	211,216,886	42	269,498,098	15	108,006,490	57	377,504,588
Scientific & Measuring Equipment	11	210,639,079	1	**0	12	210,639,079	8	82,985,900	2	7,555,100	10	90,541,000
Textiles & Textile Products	8	61,099,465	5	17,305,734	13	78,405,199	4	594,309,522	14	74,826,322	18	669,135,844
Beverages & Tobacco	4	46,164,764	4	20,210,824	8	66,375,588	5	62,699,813	1	**0	6	62,699,813
Miscellaneous	18	409,923,776	1	100,000	19	410,023,776	8	154,942,606	-	-	8	154,942,606
Total	**474**	**13,114,954,233**	**162**	**16,549,322,127**	**636**	**29,664,276,360**	**509**	**20,195,501,849**	**198**	**5,551,333,612**	**707**	**25,746,835,461**

* Projects with Malaysian equity ownership of more than 50 percent.

** Expansion of capacities or manufacture of additional products not involving additional capital.

Table 10
APPROVED MANUFACTURING PROJECTS IN THE ELECTRICAL AND ELECTRONICS INDUSTRY BY SUB-SECTOR, 2007

Sub-sector	New				Expansion/Diversification				Total			
	No.	Domestic Investment (RM)	Foreign Investment (RM)	Total Capital Investment (RM)	No.	Domestic Investment (RM)	Foreign Investment (RM)	Total Capital Investment (RM)	No.	Domestic Investment (RM)	Foreign Investment (RM)	Total Capital Investment (RM)
Consumer Electronics	2	-	386,458,766	386,458,766	13	908,813	1,560,377,692	1,561,286,505	15	908,813	1,946,836,458	1,947,745,271
Electronic Components	16	95,980,576	5,244,659,082	5,340,639,658	28	297,379,525	5,037,184,565	5,334,564,090	44	393,360,101	10,281,843,647	10,675,203,748
Industrial Electronics	11	91,063,699	196,552,665	287,616,364	20	13,828,102	463,821,826	477,649,928	31	104,891,801	660,374,491	765,266,292
Electrical Products	30	782,456,745	816,634,884	1,599,091,629	24	92,853,359	31,406,162	124,259,521	54	875,310,104	848,041,046	1,723,351,150
Total	**59**	**969,501,020**	**6,644,305,397**	**7,613,806,417**	**85**	**404,969,799**	**7,092,790,245**	**7,497,760,044**	**144**	**1,374,470,819**	**13,737,095,642**	**15,111,566,461**

Table 11
APPROVED PROJECTS IN THE ENGINEERING SUPPORTING INDUSTRY BY SUB-SECTOR, 2007

Sub-sector	New				Expansion/Diversification				Total			
	No.	Domestic Investment (RM)	Foreign Investment (RM)	Total Capital Investment (RM)	No.	Domestic Investment (RM)	Foreign Investment (RM)	Total Capital Investment (RM)	No.	Domestic Investment (RM)	Foreign Investment (RM)	Total Capital Investment (RM)
Moulds, Tools & Dies	19	30,893,463	3,383,215	34,276,678	6	4,932,891	10,994,200	15,927,091	25	35,826,354	14,377,415	50,203,769
Machining	29	91,848,911	7,169,629	99,018,540	1	1,514,200	.	1,514,200	30	93,363,111	7,169,629	100,532,740
Stamping	4	3,998,769	6,800,000	10,798,769	3	885,746	3,011,799	3,897,545	7	4,884,515	9,811,799	14,696,314
Casting	4	8,100,600	41,262,400	49,363,000	1	-	40,000,000	40,000,000	5	8,100,600	81,262,400	89,363,000
Surface Engineering	7	19,215,787	16,596,410	35,812,197	4	1,220,000	30,749,942	31,969,942	11	20,435,787	47,346,352	67,782,139
Heat Treatment	2	8,657,700	4,119,300	12,777,000	-	-	-	-	2	8,657,700	4,119,300	12,777,000
Forging	1	12,700,000	-	12,700,000	1	185,500	3,314,500	3,500,000	2	12,885,500	3,314,500	16,200,000
Total	**66**	**175,415,230**	**79,330,954**	**254,746,184**	**16**	**8,738,339**	**88,070,441**	**96,808,778**	**82**	**184,153,567**	**167,401,395**	**351,554,962**

Table 12
APPROVED MANUFACTURING PROJECTS WITH FOREIGN PARTICIPATION BY SOURCE, 2007 AND 2006

Country	2007		2006	
	No.	Foreign Investment (RM)	No.	Foreign Investment (RM)
Japan	60	6,522,739,241	81	4,411,582,988
Germany	26	3,756,800,095	15	232,287,597
Iran	3	3,067,759,766	-	-
USA	33	3,019,981,085	38	2,476,649,294
Singapore	108	2,952,175,965	130	1,884,693,675
India	8	2,923,717,459	6	8,317,717
China	13	1,883,191,954	19	134,052,932
Netherlands	9	1,690,415,209	13	3,284,184,701
Australia	17	1,685,051,556	20	2,560,053,181
Korea,Rep.	23	1,118,759,178	18	437,825,114
Cayman Islands	1	892,000,252	2	860,500,000
France	4	787,048,319	5	85,026,200
Taiwan	41	408,650,978	70	405,451,042
United Kingdom	20	385,254,150	17	641,983,444
Belgium	4	213,496,294	-	-
Bermuda	3	171,498,945	1	80,000,000
Thailand	6	137,673,197	5	109,462,220
Switzerland	7	61,269,400	7	46,109,598
Hong Kong	14	59,781,174	9	84,460,615
Sweden	2	54,000,000	3	43,734,760
Canada	2	53,055,000	4	6,804,184
Italy	4	52,153,198	9	218,628,203
British Virgin Islands	3	49,352,386	6	647,665,369
Spain	2	44,057,082	-	-
United Arab Emirates	2	42,500,000	1	40,000,000
Indonesia	5	41,162,472	11	214,889,222
Brunei	2	31,069,168	-	-
Turkey	1	19,687,236	1	37,000,000
Luxembourg	1	14,500,000	-	-
Ireland	1	13,707,720	-	-
Denmark	3	10,978,776	1	7,419,060
Bahamas	1	10,650,000	1	34,000,000
New Zealand	1	9,273,200	-	-
Finland	1	9,027,004	-	-
Philippines	1	4,461,011	1	1,000,000
Pakistan	1	2,353,400	3	12,052,900
Egypt	1	532,190	2	17,175,000
Albania	1	114,153	-	-
Lebanon	-	-	1	562,291,898
Portugal	-	-	1	179,775,000
Norway	-	-	1	114,000,000
Mauritius	-	-	3	26,521,952
Panama	-	-	2	20,907,500
Cyprus	-	-	2	5,000,000
Austria	-	-	1	1,835,400
Others	80	1,225,990,837	97	294,543,267
Total	***	**33,425,889,050**	***	**20,227,884,033**

*** The number of projects approved figures are not totalled to avoid double counting.

Table 13
APPROVED MANUFACTURING PROJECTS BY STATE, 2007 AND 2006

State	2007						2006					
	New		Expansion/Diversification		Total		New		Expansion/Diversification		Total	
	No.	Total Capital Investment (RM)	No.	Total Capital Investment (RM)	No.	Total Capital Investment (RM)	No.	Total Capital Investment (RM)	No.	Total Capital Investment (RM)	No.	Total Capital Investment (RM)
Kedah D.A.	27	838,267,731	19	13,151,949,442	46	13,990,217,173	32	8,046,632,644	27	1,833,607,540	59	9,880,240,184
Selangor D.E.	231	7,021,513,581	87	4,159,936,788	318	11,181,450,369	210	3,045,664,793	102	2,282,919,525	312	5,328,584,318
Johor D.T.	102	7,216,967,404	86	2,025,871,160	188	9,242,838,564	121	2,922,684,286	101	4,813,638,575	222	7,736,322,861
Terengganu D.I.	9	6,148,229,293	2	15,000,000	11	6,163,229,293	6	2,887,755,498	1	46,000,000	7	2,933,755,498
Penang	84	3,622,013,182	50	1,146,648,065	134	4,768,661,247	84	2,111,554,924	72	3,239,099,423	156	5,350,654,347
Melaka	19	1,007,048,267	19	2,830,664,338	38	3,837,712,605	22	884,845,250	33	516,277,298	55	1,401,122,548
Sabah	33	1,093,253,168	8	2,164,291,620	41	3,257,544,788	61	4,627,049,489	13	366,749,218	74	4,993,798,707
Negeri Sembilan D.K.	24	1,256,708,462	16	1,418,854,758	40	2,675,563,220	20	1,540,783,234	17	259,080,082	37	1,799,863,316
Perak D.R.	46	1,510,249,408	13	524,357,627	59	2,034,607,035	39	854,080,301	23	327,229,930	62	1,181,310,231
Pahang D.M.	18	789,955,367	10	773,808,821	28	1,563,764,188	18	1,193,683,630	15	598,880,587	33	1,792,564,217
Sarawak	13	518,121,848	10	516,344,000	23	1,034,465,848	18	608,105,126	12	151,714,691	30	759,819,817
F.T. - Kuala Lumpur	11	39,435,909	1	52,920,000	12	92,355,909	14	447,689,139	4	56,178,818	18	503,867,957
Kelantan D.N.	7	81,166,800	2	1,500,000	9	82,666,800	5	42,073,840	1	5,000,000	6	47,073,840
Perlis I.K.	1	7,110,000	1	-	2	7,110,000	2	1,380,115	1	59,800,000	3	61,180,115
F.T.- Labuan	-	-	-	-	-	-	1	136,389,271	2	2,086,460,000	3	2,222,849,271
TOTAL	**625**	**31,150,040,420**	**324**	**28,782,146,619**	**949**	**59,932,187,039**	**653**	**29,350,371,540**	**424**	**16,642,635,687**	**1,077**	**45,993,007,227**

Table 14
PROJECTS APPROVED IN THE SERVICES SECTOR, 2007 AND 2006

Sub-Sector	2007				2006			
	No.	Domestic Investment (RM million)	Foreign Investment (RM million)	Total Capital Investment (RM million)	No.	Domestic Investment (RM million)	Foreign Investment (RM million)	Total Capital Investment (RM million)
Real Estate (Housing)	1,004	19,905.9	1,706.8	21,612.7	976	17,331.5	711.1	18,042.6
Transport	56	12,220.8	4,519.7	16,740.5	58	11,136.8	440.3	11,577.1
Support Services	86	6,038.5	146.4	6,184.9	30	295.9	22.9	318.8
Energy	-	5,536.8	-	5,536.8	-	4,599.6	-	4,599.6
Telecommunications	8	3,927.4	-	3,927.4	13	4,803.0	-	4,803.0
MSC Status Companies	266	2,375.4	1,323.3	3,698.7	307	1,985.7	932.3	2,918.0
Distributive Trade	591	948.0	1,959.7	2,907.7	701	1,039.9	1,628.0	2,667.9
Hotel/Tourism	51	1,189.1	122.7	1,311.8	79	2,363.5	67.5	2,431.0
Financial Services	53	853.7	444.3	1,298.0	78	5,304.1	1,677.9	6,982.0
Health Services	8	1,012.6	-	1,012.6	16	138.9	16.6	155.5
Regional Establishment	163	214.3	486.2	700.5	183	459.5	490.5	950.0
Education Services	123	292.9	55.0	347.9	60	69.0	6.1	75.1
Others	30	130.6	20.1	150.7	-	-	-	-
Total	**2,439**	**54,646.0**	**10,784.3**	**65,430.2**	**2,501**	**49,527.3**	**5,993.2**	**55,520.6**