

Petrochemical Industry in Malaysia

OVERVIEW

The petroleum and petrochemicals industry is one of the leading industries in Malaysia. From being an importer of petrochemicals, Malaysia is today an exporter of major petrochemical products. A wide range of petrochemicals are produced in Malaysia, such as olefins, polyolefins, aromatics, ethylene oxides, glycols, oxo-alcohols, ethoxylates, acrylic acids, phthalic anhydride, acetic acid, styrene monomer, polystyrene, ethylbenzene, vinyl chloride monomer and polyvinyl chloride.

Malaysia holds the world's 24th largest crude oil reserves. According to BP's "Statistical Review of World Energy 2008", Malaysia is also the world's 14th largest natural gas reserves with a capacity of 88 trillion cubic feet. Besides, Malaysia also possesses the world's largest production facility at a single location of liquefied natural gas (LNG) with production capacity of 23 million metric tonnes per year.

Through efforts provided by the government and Petroliam Nasional Berhad (PETRONAS), Malaysia has attracted investors and major industry players such as Shell, ExxonMobil, Dow Chemical, ConocoPhillips, Kaneka, Polyplastic, Toray, Dairen, Mitsui, BP, BASF, Idemitsu, Titan and Eastman Chemicals.

The rapid growth of the industry is mainly attributed to the availability of oil and gas as feedstock, a well-developed infrastructure, a strong base of supporting services, and the country's cost competitiveness, as well as Malaysia's strategic location within ASEAN and its close proximity to major markets in the Far East.

The long term reliability and security of gas supply ensures the sustainable development of the country's petrochemical industry. Feedstock at competitive prices have made Malaysia a viable petrochemical hub in the ASEAN region attracting more than USD\$9 billion in investments from leading petrochemical and chemical manufacturers.

Production of Petrochemical Feedstocks

PETROCHEMICAL PRODUCTS	CAPACITY (mtpa)	COMPANY
Naphtha	2.4 million	<ul style="list-style-type: none"> • Petronas Penapisan (Terengganu) Sdn Bhd • Petronas Penapisan (Melaka) Sdn Bhd • Malaysia Refinery Company Sdn Bhd • Shell Refinery Company (FOM) Bhd • Esso (Malaysia) Bhd
Methane (sales gas) million <ul style="list-style-type: none"> • <i>Ethane</i> • <i>Propane</i> • <i>Butane</i> • <i>Condensate</i> Liquefied Petroleum Gas (LPG)	20.4 million	<ul style="list-style-type: none"> • Petronas Gas Berhad • Malaysia LNG Tiga Sdn Bhd
Ethylene	1.63 million	<ul style="list-style-type: none"> • Titan Petchem (M) Sdn Bhd • Ethylene Malaysia Sdn Bhd • Optimal Olefins (M) Sdn Bhd
Propylene	854 thousand	<ul style="list-style-type: none"> • Titan Petchem (M) Sdn Bhd • MTBE (M) Sdn Bhd • Optimal Olefins (M) Sdn Bhd
Benzene, Toulene and Xylene (BTX)	775 thousand	<ul style="list-style-type: none"> • Titan Petchem (M) Sdn Bhd • Aromatics Malaysia Sdn Bhd

{Source: MIDA}

Petrochemical Zones in Malaysia

Petrochemical Zones	Facilities & Infrastructures	Products
Kertih, Terengganu	<ul style="list-style-type: none"> • Gas processing plants • Peninsular Gas Utilisation (PGU) project • Centralised utility facilities • Institute Technology Petroleum • Kertih Port • Kuantan Port 	<ul style="list-style-type: none"> • Paraxylene • Benzene • Ammonia • Acetic Acid • Ethylene • Polyethylene • Ethanolamines • Ethoxylates • Glycol Ethers • Butanol • Butyl Acetate • Ethylene Oxide • Ethylene Glycol • Low Density Polyethylene • Vinyl Chloride Monomer • Polyvinyl Chloride
Gebeng, Pahang	<ul style="list-style-type: none"> • Peninsular Gas Utilisation (PGU) project • Centralized utility facilities • Kuantan Port • Environment Technology Park • East Coast Highway 	<ul style="list-style-type: none"> • Acrylic Acid and Esters • Syngas • Butyl Acrylate • Oxo-alcohols • Phthalic Anhydride and Plasticizers • Butanediol • Tetrahydrofurane • Gamma-butyrolactone • Polyester Copolymers
		<ul style="list-style-type: none"> • Purified Terephthalic Acid • Dispersion Polyvinyl Chloride • Methyl Methacrylates Copolymers • MTBE • Propylene • Polyacetals • Polypropylene • Polybutylene Terephthalate (PBT)
Pasir Gudang - Tanjung Langsat, Johor	<ul style="list-style-type: none"> • Peninsular Gas Utilisation (PGU) project • Tank farms developed for storage of petrochemical liquid • Johor Port • Tanjong Pelepas Port • Tanjung Langsat Port 	<ul style="list-style-type: none"> • Ethylene • Propylene • BTX • Polyethylene • Polypropylene • High Impact Polystyrene • Ethylbenzene • Styrene Monomer • Expandable Polystyrene • Ethylene Vinyl Acetate
Bintulu, Sarawak	<ul style="list-style-type: none"> • Bintulu Port • Bintulu Airport 	<ul style="list-style-type: none"> • Ammonia • Urea • LNG • Synthetic Gas Oil • Synthetic Kerosene • Synthetic Naphtha • Synthetic Solvents • Synthetic Detergent Feedstock • Synthetic Paraffin Wax / Waxy Raffinate

{Source: MIDA}

SIGNIFICANT DEVELOPMENTS IN 2010

In 2010, the Malaysian petrochemicals industry began its recovery, with production surging due to export demand. According to the Ministry of International Trade and Industry, the chemical and petrochemical industry is poised for recovery this year based on better overall performance of the economy. Industry players also agreed that this year would be better than 2009 in terms of sales and performance while the industry expected to see steady growth in 2011, given the rise in global energy demand and economic growth. This is an opportunity for the chemical and petrochemical industry to move up the value chain by using high-technology producing high value-added products, and reinventing into knowledge-based and skills-intensive industries.

Another proof for expansion in the petrochemical industry is the launching of the largest initial public offering (IPO) to date in Malaysia and in South East Asia by PETRONAS Chemicals Group Berhad (PCG) during in November 2010. PCG is the leading integrated petrochemicals producer in Malaysia and one of the largest petrochemicals producers in South East Asia. Their IPO had attracted overwhelming response from both leading domestic and international institutional investors. This not only clearly reflects the investors' confidence in the company, but also in the Malaysian petrochemical industry.

With increased productivity and expansion in industry output, coupled with world class infrastructure across the value chain, and the integrated petrochemical zones, the industry is set for further development and growth. Malaysia continues to attract foreign investment, but the industry is reassessing its competitive status within the ASEAN and the 'threat' posed by China's rapid industrial expansion. The petrochemical industry is facing tougher market conditions with falling product prices, slowing demand growth and a massive increase in capacities in Asia and the Middle East. In order to sustain production volumes, Malaysian producers will need to constrain feedstock costs. In the face of intensified competitiveness in the global market, prospects for the Malaysian petrochemicals industry depend on its ability to cultivate and maintain competitive advantages over other competing nations.

The People's Republic of China is expected to remain the largest market for Malaysia's exports of petrochemicals. There will be considerable potential for the export of higher value-added products, for example, petrochemical derivatives, to the People's Republic of China. Demand for commodity-type petrochemicals higher value-added products, such as fine and specialty chemicals, from other ASEAN countries from ASEAN countries, especially Cambodia, Lao PDR, Myanmar and Viet Nam, is expected to increase, in tandem with the growth of their economies. Demand for, namely Thailand, Indonesia and the Philippines, is also expected to increase. Malaysia has an advantage in that there are downstream industries using the products produced.

Based on the present and future market trends, there is potential to create greater synergies, by increasing Malaysia's share in both the domestic and regional markets for petrochemical products. To sustain the competitiveness of the Malaysian petrochemical industry, value integration through inter-plant synergies is promoted. The development of petrochemical zones where petrochemical plants are clustered together has created a value chain, which ensures the progressive development of downstream petrochemicals activities.

CHALLENGES

a) High Cost of Developing New Petrochemical Zones

The establishment of new petrochemical zones is costly, in view of the high investments required in the provision of dedicated infrastructure facilities, such as ports and CUF, as well as support services. Upstream linkages to a refinery or gas processing plants, including a cracker, will be an advantage to ensure the availability of feedstock. However, the challenge will be to structure the downstream products, which will generate optimum value-added in the utilization of oil and gas resources.

b) Competition for Investments and Markets

The cyclical nature of the petrochemical business is a characteristic of the industry. The industry will need to overcome short-term and sporadic volatilities in feedstock costs, product prices and low margins, brought about by competition in the global and regional markets, notably from West Asia and other ASEAN producers. Malaysian petrochemical companies will face increasing competition to gain greater access to the ASEAN markets, as these countries are also developing their own petrochemical industries. Malaysia will need to increase the volume of production of petrochemicals and provide a more conducive environment to promote investments in a wider range of high value-added products. The industry is the need to maintain a long-term perspective of the business and build a business portfolio with a range of products, which will sustain its competitiveness throughout the business cycle, improve its cost structure through enhancing supply chain management, develop superior customer-service orientation, with niche market products, and create awareness in the development of environment-friendly products.

c) Lack of Synergies and Economies of Scale

Main users of petrochemicals, which mostly comprise SMEs, generally lack economies of scale, capital, and technical and marketing expertise to become major producers. There will be a need to encourage consolidation within the industry, through joint ventures, strategic partnerships and other forms of collaborations with MNCs, to benefit from technology transfers, cost efficiencies and larger markets in areas such as medical devices, automotive parts and biotechnological products.

d) Availability and Reliability of Feedstocks

The availability and reliability of feedstocks at competitive prices is a key factor for the further development and enhancement of the industry. Natural gas and condensates, obtained from the gas fields off the coast of Terengganu, are the main raw materials for petrochemicals in Kertih, Terengganu and Gebeng, Pahang. In Pasir Gudang-Tanjung Langsat, Johor, naphtha is the main raw material. Although naphtha is available from the oil refineries in the country, the current requirement of naphtha is still met mainly through imports.

e) Insufficient Infrastructure and Support Services

The future growth of the industry in the existing and new petrochemical zones requires the further development of infrastructure, utilities, facilities and manufacturing-related services. Such infrastructure, facilities and services will need to be provided at competitive costs.

f) Technology Enhancement

There is potential to improve the process technologies. Efforts will need to be channeled towards development in specific areas, such as high-end polymer applications, engineering plastics and composite materials. The key challenges include:

- Establishing R&D centres for chemical processes and process technologies at the local institutions of higher learning, in particular, PETRONAS University;
- Nurturing expertise in management and innovative utilisation of catalysts to improve yields;
- Encouraging applications of composite materials by formulating guidelines for the definition, production and usage of such materials, which will, in turn, lead to the diversification in the range of petrochemicals produced; and
- Focusing on research in new materials and development of renewable raw materials and biodegradable materials (for example, polylactic acid) and hybrids of natural materials (for example, glucose or palm oil) with petrochemicals, leading to new products (for example, polyhydroxybutaric acid or esters). Such technologies are relatively new and expensive.

g) Shortage of Skilled Personnel

There is a shortage of experienced workforce with the relevant technical skills, awareness and responsibility towards safety, health and environmental concerns. There will be a need to enhance collaboration between industries and training institutes to nurture the technical skills of trainees.

CONCLUSION

Malaysia has the infrastructure and system in place for petrochemical manufacturers to compete favourably with regional players. Manufacturers based in Malaysia will also benefit from the access to a much larger Asia Pacific market. With China being a net importer of petrochemicals and its entry into the WTO will also open up new business opportunities for petrochemical manufacturers in Malaysia. The Malaysian government continues to implement measures to further enhance the business environment, infrastructure development, human resources support and the position of feedstock supply, in which all appear to be contributing factors for a stable and conducive investment environment for the future development of Malaysia's petrochemical industry.

{Sources: MITI, MOF, MIDA, MATRADE, Bank Negara Malaysia, Department of Statistics Malaysia, MPA}

GENERAL MATTERS & RAW MATERIALS COMMITTEE

GENERAL MATTERS & RAW MATERIALS COMMITTEE

Industry Overview

The industry is characterized by high capital investments and long gestation periods. To date, the industry is one of the leading manufacturing sub-sectors with total investments of RM58.0 billion. PETRONAS is the leading investor in the sector.

The petroleum products sub-sector includes refinery products such as liquefied petroleum gas, naphtha, gasoline, kerosene, fuel oils, gas oils, jet oils, diesel, bitumen and lubricating oils. There are currently six refineries and a gas-to-liquid plant in operation. PETRONAS, Shell, Esso and Conoco are the major investors in this sub-sector.

Natural gas and naphtha are the two locally available basic raw materials for the petrochemical industry. Three major petrochemical zones have been established in Kertih, Terengganu; Gebeng, Pahang; and Pasir Gudang-Tanjung Langsat, Johor with 29 petrochemical plants. Each zone is an integrated complex with crackers, syngas and aromatics facilities to produce basic feedstocks for downstream products.

Other petrochemical plants in Malaysia include the ammonia and urea plants in Bintulu, Sarawak and Gurun, Kedah; acrylonitrile butadiene styrene (ABS) plant in Penang; methanol plant in Labuan; and nitrile-butadiene rubber (NBR) plants in Kluang and Pasir Gudang, Johor.

Core Products Manufactured in the Three Major Petrochemical Zones

Zone	Core Products
Kertih, Terengganu	Ethylene, propylene, para-xylene, benzene, and syngas.
Gebeng, Pahang	Propylene and syngas
Pasir Gudang-Tanjung Lnagsat, Johor	Ethylene, propylene, benzene, toluene, xylene, and butadiene

{Source: MIDA }

Industry Outlook

Expanding and enhancing the value-added and broadening the range of products is one of the core priorities. This includes establishing new crackers to provide additional feedstocks to encourage the expansion of capacities of existing petrochemical plants and broadening the range of petrochemical products produced and to promote growth areas, including alpha-olefins and fatty alcohols, vinyl acetate, ethylene dichloride, propylene oxide/ polyols, cumene/phenols, acetones, adipic acid/caprolactam, toluene diamine and diisocyanate, methyl methacrylic, polybutadiene, butadiene-styrene-rubber, nylons and polyurethanes.

Another priority is enhancing linkages with the downstream industries to accelerate the development and enhance the efficiency of the plastics fabrication industry, by establishing a plastics industry park within the vicinity of the petrochemical zones. The various stakeholders is also reviewing the existing facilities, services and infrastructure and to realise the full potential of the existing petrochemical zones, through a more systematic and coordinated approach.

POLYOLEFINS COMMITTEE

POLYOLEFINS COMMITTEE

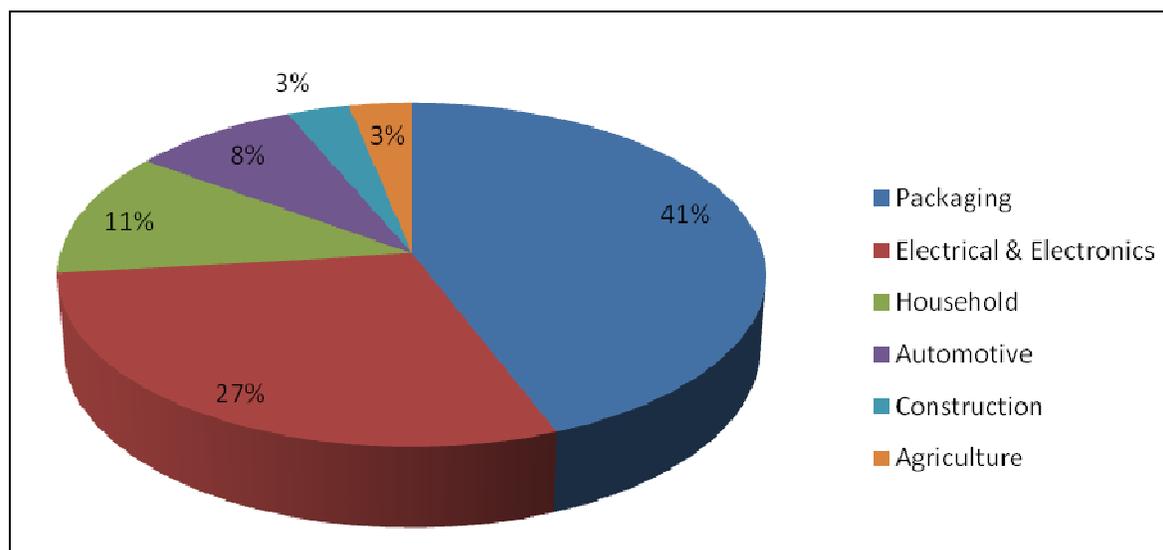
General Information

Malaysia is a net exporter of polyolefin (LDPE, HDPE, LLDPE, PP) with export volume recorded around 774 KMT in the year 2010 (estimated) while import volume recorded around 589 KMT. The major export destinations were China, South East Asia countries and India Sub-Continent. There will be no capacity expansion or addition in 2011 for polyolefin products.

Major Market Segments for Plastic Products

Packaging sub-sector, both flexible and rigid packaging, (including bags, films, bottles and containers) maintained 42% of market share in the plastics industry. The market share of the automotive and electrical & electronics sub-sectors within the plastics industry increased when compared to 2009. However, household sub-sector declined compare to 2009. Market share for the automotive sub-sector increased from 10% to 11% due to an increase of production for passenger cars in 2010. Market share for electrical and electronics consumer products expanded from 25% to 26% due to a strong surge in the production of TV and air-conditioner sets. The sales for plastic household wares reduced to 10% in terms of market share, due to stiff competition from lower cost countries. Although Malaysian producers had switched to hi-end household products but the production volume was relatively small. The market share of the construction sub-sector remained unchanged at 7% in 2010 due to a mild recovery in the sub-sector.

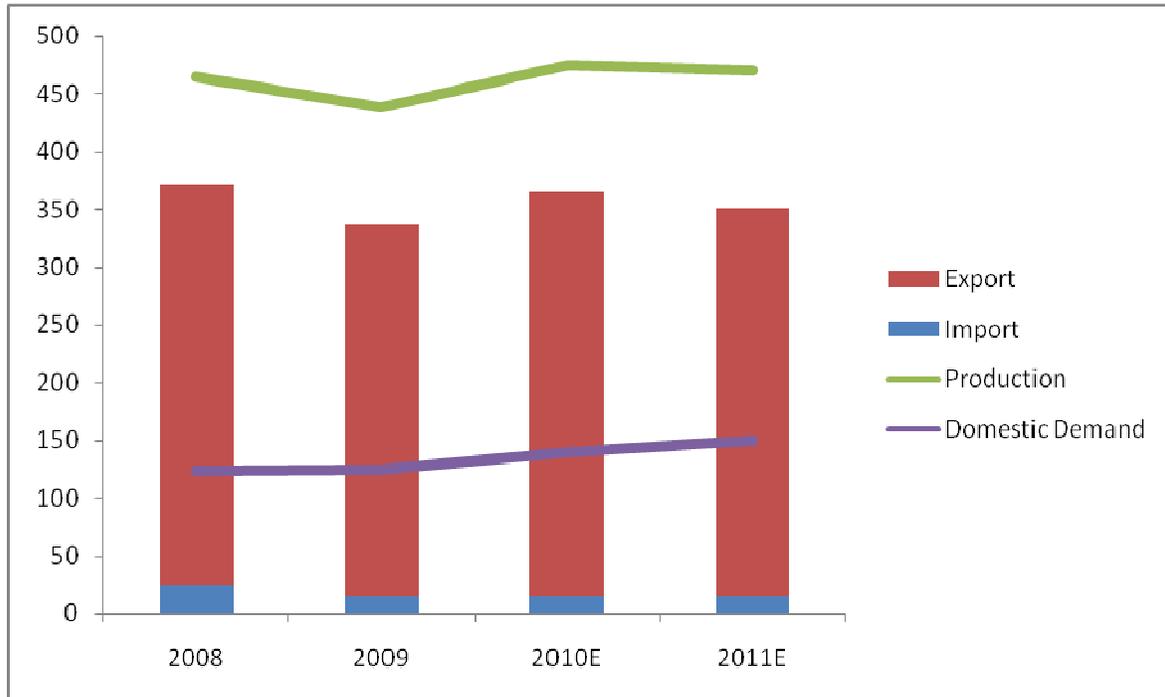
Major Market Segments for Plastic Products



[Source: MPMA]

1. LDPE

Export, Import, Production, & Domestic Demand for LDPE (Unit: KTA)



(Unit: KTA)

Product		2008	2009	2010	2011E
Supply	Production	465	438	470	470
	Import	24	15	25	26
	Total	489	453	495	496
Demand	Domestic	124	125	145	150
	Export	347	321	350	335

Review of 2010

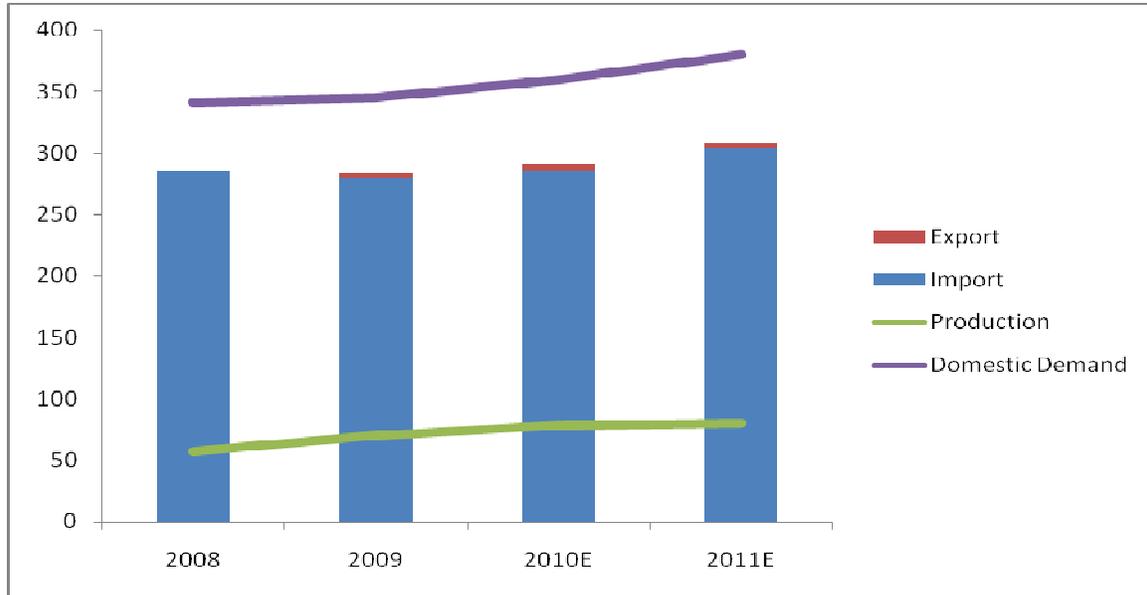
Overall production volume was higher in 2010 compared to 2009 due to the fact that LDPE plants have operated with turnaround despite Titan having turnaround in Q4. The domestic market demand was up in 2010 led by demand from the film and sheet sector. Import volume increased when compared to year 2009 due to the recovery of the economy.

Outlook for 2011

In Malaysia, the domestic LDPE demand is expected to grow to 150 KTA spurred by strong demand from “film and sheet” applications. Production is expected to maintain at 470 KTA.

2. LLDPE

Export, Import, Production, & Domestic Demand for LLDPE (Unit: KTA)



(Unit: KTA)

Product		2008	2009	2010	2011E
Supply	Production	57	70	74	80
	Import	285	279	301	304
	Total	342	349	375	384
Demand	Domestic	341	345	360	380
	Export	1	4	4	4
	Total	342	349	364	384

Review of 2010

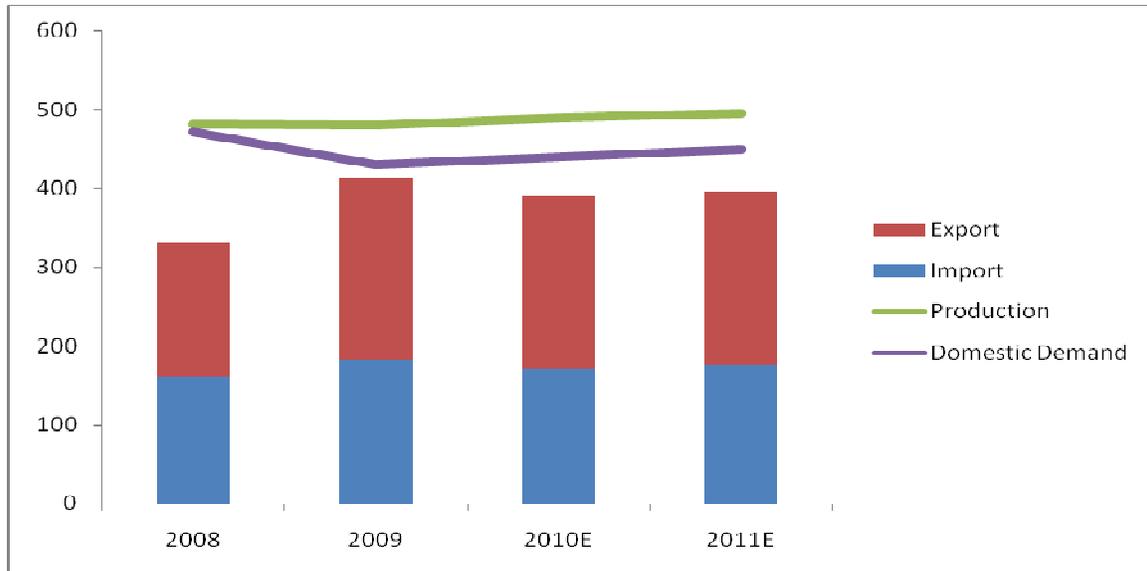
The domestic demand for LLDPE rose in 2010 due to strong resumption in growth, in tandem with the global economic recovery. Import volume went up by 4% to support the domestic demand growth. Production volume in 2010 increased by 5.7% compared to 2009.

Outlook for 2011

The domestic LLDPE demand is forecast to improve to about 380 KTA in view of the projected positive GDP growth rate. Production is expected to increase in tandem with growth in domestic demand. Limited local production may result in more imports so as to support the high demand for domestic market especially in the cast / stretch film sector.

3. HDPE

Export, Import, Production, & Domestic Demand for HDPE
(Unit: KTA)



(Unit: KTA)

Product		2008	2009	2010	2011E
Supply	Production	481	480	463	482
	Import	161	182	205	190
	Total	642	662	668	672
Demand	Domestic	472	430	440	450
	Export	170	232	191	220
	Total	642	662	631	670

Review of 2010

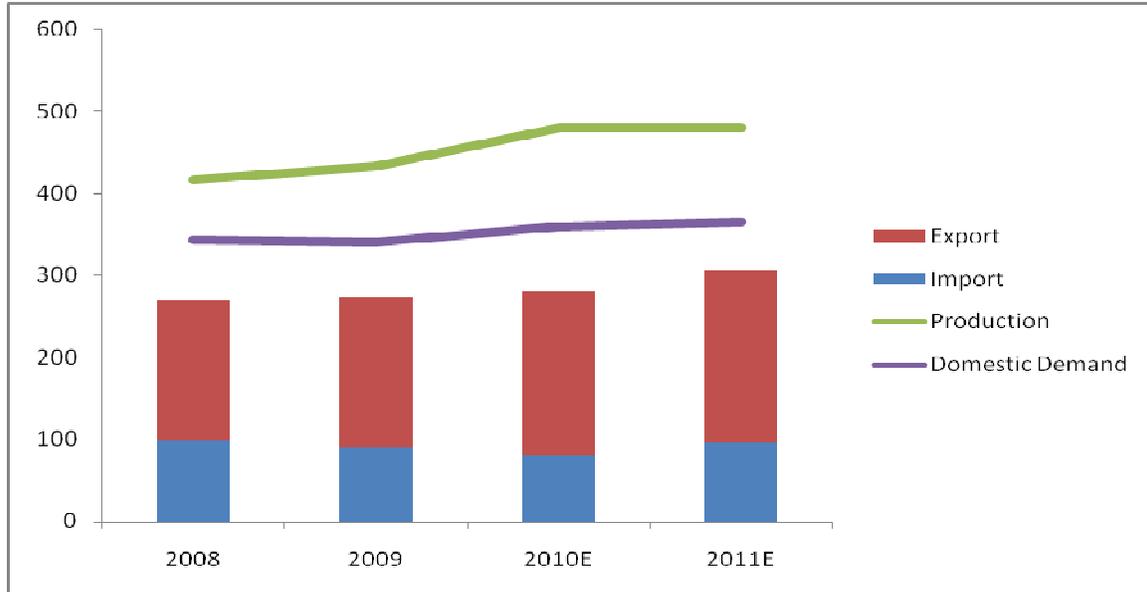
Overall, domestic demand for HDPE was up by 2% led by “film and sheet” application supported by “pipe and extrusion” application demand. Production volume was lower in 2010 as Titan had a turnaround in Q4. Import volume decreased as production volume was able to support the domestic demand.

Outlook for 2011

Similar to LLDPE, domestic demand for HDPE supply is also expected to improve in view of the forecasted positive GDP growth rate. Production is expected to be higher to support the rise in domestic demand.

4. PP

Export, Import, Production, & Domestic Demand for PP (Unit: KTA)



(Unit: KTA)

Product		2008	2009	2010E	2011E
Supply	Production	417	433	480	480
	Import	98	90	98	105
	Total	515	523	578	585
Demand	Domestic	343	340	345	355
	Export	172	183	230	230
	Total	515	523	575	585

Review of 2010

Overall production volume was higher in 2010 compared to 2009 despite Titan turnaround in Q4. The domestic market demand was up in 2010 led by demand from “film and sheet” application and raffia application. Import volume increased as due to support the domestic demand.

Outlook for 2010

The stronger GDP growth rate of 4% to 5% projected for the Malaysian economy is expected to lead stronger demand for PP. The domestic demand for PP is likely to grow 2.9% in 2011 to 355 KTA in tandem with higher forecasted economic growth rate. The import volume is expected to increase but export volume will be flat.

STYRENICS COMMITTEE

STYRENICS COMMITTEE

Malaysia SM Capacity & Demand (Unit:KMts)

YEAR	2007	2008	2009	2010	2011	2012	2013
Demand	322	300	264	308	335	358	355
Capacity	240	240	240	240	240	240	240
Balance	-82	-60	-24	-68	-95	-118	-115
Import	146	135	102	162	160	160	160
Export	34	32	37	49	45	42	45

Malaysia Styrenic Derivative Supply & Demand (Unit:KMts)

Derivatives	Producer	2007	2008	2009	2010	2011	2012	2013
PS	Demand	108	106	100	108	118	120	120
	Capacity Idemitsu	140	132	110	110	110	110	110
	Balance	32	26	10	2	-8	-10	-10
ABS	Demand	103	100	102	103	105	107	107
	Capacity Toray	220	220	220	220	220	220	220
	Balance	117	120	118	117	115	113	113
EPS	Demand	32	33	33	34	34	34	34
	Capacity BASF	75	75	75	75	75	75	75
	Balance	43	42	42	41	41	41	41

PVC COMMITTEE

PVC COMMITTEE

Capacity, Production, Domestic Demand, Import, and Net Inventory Data of PVC in Malaysia

(Unit: 1,000MT)

	2009	2010	2011 - Prospects
Capacity	280	280	280
Production	250	240	245
Domestic Demand	160	165	175
Balance	90	75	70
Import	35	45	45
Net Inventory	125	120	115

Number of producers = 4 (include 1 Paste PVC plant of 30,000MTS Capacity)

Review of 2010

Surplus in Supply over Demand created by temporary slow down in demand due to capacity availability and high raw material costs due to:

- The removal of 5% ASEAN countries' post AFTA tariff effective 1 January 2010 lead to an influx of resins – with ASEAN imports doubling to 24,000 MTS from the normal 12,000 MTS per year that was made worst by the strong Ringgit appreciation against the US Dollar.
- Anti-dumping Duty imposed by the Indian Government against Malaysian producers makes Malaysian PVC uncompetitive for export to Indian market worsen domestic surplus that lead to serious price competition among local producers.
- The uncertainties over the European financial crisis, weak commodity prices and reduced China imports contributed to regional PVC oversupply and the regional shortage of EDC / VCM feedstock that drove costs to high levels affected demands.

Future Prospects

Growth is expected for 2011 although the industry will face severe competitive pressure:

- Forecast economic growth of 5% - 6% in Malaysia plus the Government's Transformation Program and impending General Election expected to have positive impact on Petrochemical industry and improved PVC demand.
- The significant margin erosion due to severe price competition and strong Ringgit may force the industry players to rationalise the PVC industry to restructure for better cooperation and benefit of integration to avoid damage to the industry.

- c) The turmoil in the Middle East and rising oil prices plus the severe earthquake and nuclear fallout in Japan is a significant concern to global economy in the year ahead.

VCM

There is only one VCM producer in Malaysia with annual rated capacity of 400,000 MTS.

SYNTHETIC RUBBER COMMITTEE

SYNTHETIC RUBBER COMMITTEE

Industry Profile

Malaysia is currently the world's ninth largest consumer of all rubber, following China, USA, Japan, and the fifth largest consumer of natural rubber behind China, the USA, and Japan. Malaysia is a global player in the export of high quality, competitively priced rubber and rubber products to the international market.

Consumption

Malaysia's Rubber Consumption by Type (Tonnes)

Year	Natural Rubber		Synthetic Rubber		Total Rubber (NR and SR)			Reclaimed and Compounded Rubber (tonnes)
	Tonnes	% of World	Tonnes	% of World	Tonnes	NR:SR	% of World	
						Ratio		
2000	363,715	4.99	55,608	0.51	419,323	86.7:13.3	2.3	n.a
2001	400,888	5.46	57,699	0.56	458,587	87.4:12.6	2.6	n.a
2002	407,884	5.35	63,150	0.59	471,034	86.6:13.4	2.6	n.a
2003	421,781	5.47	66,452	0.58	488,233	86.4:13.6	2.5	n.a
2004	402,769	4.88	84,236	0.73	487,005	82.7:17.3	2.5	11,316
2005	386,472	4.42	96,417	0.81	482,889	80.0:20.0	2.4	11,693
2006	383,324	4.11	112,385	0.9	495,709	77.1:22.9	2.3	23,125
2007	450,246	4.56	129,002	0.98	579,248	77.6:22.4	2.5	38,305
2008	468,894	4.82	134,297	1.07	603,191	77.1:22.9	3.6	43,205
2009	468,669	4.91	126,376	1.06	595,045	78.8:21.2	2.8	32,110
2010	457,919	4.29	185,077	1.34	642,996	71.2:28.8	2.6	31,768

[Source: Malaysia Department of Statistics, International Rubber Study Group]

Due to the large quantity of planted rubber trees in Malaysia, the consumption of synthetic rubber (which is a petrochemical-based extraction) lags behind the consumption of natural rubber. This phenomenon happens as there are fewer producers of synthetic rubber in Malaysia. However, the consumption of synthetic rubber is increasing year by year due to the research and developments done by the related organisation in promoting and enhancing the usefulness of synthetic rubber in the market.

Producers in the Market

Since the synthetic rubber market is small in Malaysia, there are only 2 major producers which are Synthomer and Revertex. Synthomer is a major producer of styrene-butadiene (SBR) and acrylonitrile-butadiene (nitrile) latex, with around 50 years of experience and a particular strength in specialty applications. Synthomer is also a global leader in nitrile latex for dipped gloves as well as in SBR latex for construction. Their main plant for nitrile latex, and the largest of its kind in the world, is located at Kluang, Malaysia.

Future Outlook

The synthetic rubber is excellent for certain purposes, but it is not yet as satisfactory as natural rubber for general purposes, such as tyres. Efforts have been made to improve efficiency, productivity, and new product development in the downstream activities to produce high value-added and high-technology rubber products such as for engineering, construction, and marine applications. R&D is also required to comply with stringent standards and regulations imposed by export markets, particularly in the EU.

SYNTHETIC FIBER RAW MATERIALS COMMITTEE

SYNTHETIC FIBER RAW MATERIALS COMMITTEE

Ethylene Glycols (MEG & DEG) as Synthetic Fiber Raw Material

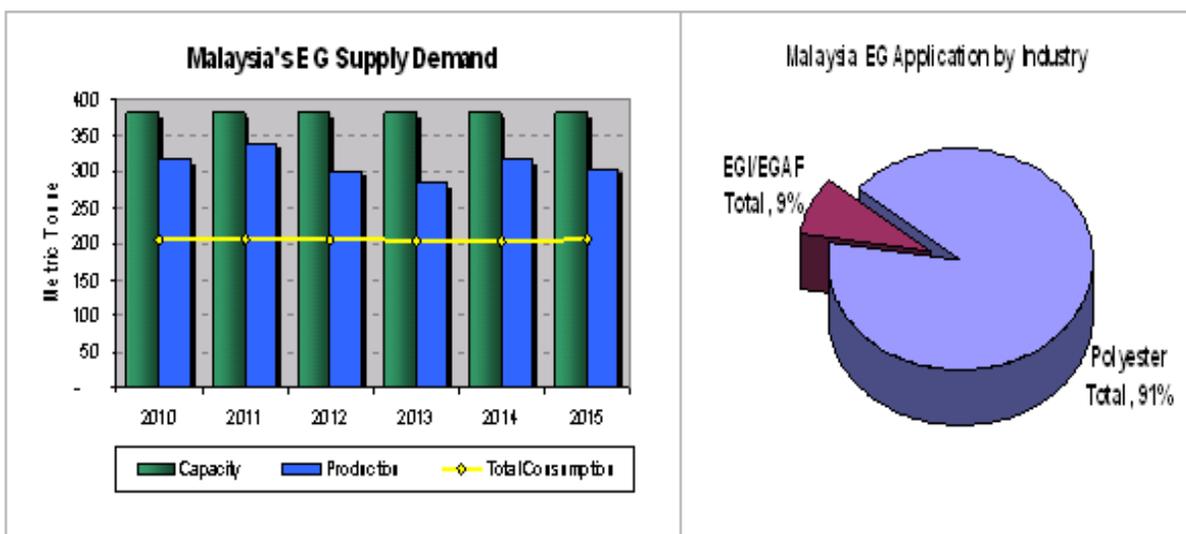
Malaysia's domestic Ethylene Glycols (MEG & DEG) market anticipated to be stable until 2015. The stagnant market is due to no known new expansion / investment or new capacity planned to be built in Malaysia, as demand growth is forecasted to be rather limited.

Malaysia's only EG producer is OPTIMAL with the capacity of 380kta having local demand at 215kta, where by Reliance subsidiary consumes 84% of the total demand to produce Polyester. Meanwhile, other market segment such as Unsaturated Polyester Resin and Automotive are expanding very well. Nevertheless, these market segments consume very low quantity and will not be significant in driving future Ethylene Glycols demand.

EG market growth heavily relies on the polyester demand/supply since it is a key feedstock together with Purified Terephthalic Acid (PTA) in this industry. The Asia market however, projected to have immense potential on the EG growth.

Based on market analysis the world Polyester demand is rapidly growing at 7 – 7.5% rate for the next three years and Asia demand is growing at 15% rate. This rapid growth had equally counter with new capacities in China, India and Middle East which are perceived to introduce additional 1.5 mil tones per annum of polyester supply. Eventually, this new market demand will gradually increase the demand of Ethylene Glycols in Asia.

Malaysia EG Supply Demand and Application by Industry



CHEMICALS COMMITTEE

CHEMICALS COMMITTEE

Industry Profile

The Chemical industry is one of the leading industries in Malaysia. The industry is not only capable of fulfilling the nation's requirement of chemical products, but also exports to other countries. This is because Malaysia is endowed with huge amount of petroleum and palm oil resources. The industry has very strong linkage towards other sector such as automotive, electrical & electronics, and etc. As the chemical industry is a high-tech and capital intensive industry, the players are mostly multinational companies who have highly trained human resource for its research & development and operating activities.

Categories

Chemical and chemical products are categorised into 6 sub-sectors. The sectors cover the production of alcohol, phenols, carboxylic acids, anhydrides, hydrocarbons, and nitrogen-function compound. Some examples of the finished products are packing tape, pallet stretch film, steel strapping band, personal care products, electronics, taurine and glyphosate, glycerin, distilled fatty acids, fractionated fatty acids, PVC additives, plastics and master batches.

Performance of the Industry

The industry is the second largest exporter of manufactured goods in 2010. The main investors in the industry are Singapore and Germany, while the People Republic of China, Indonesia and Japan were the main export markets for chemical elements and compounds for electronics.

Projects Approved, Investment, and Trade Data for Chemicals and Chemical Products

	Year 2010	Year 2009
Projects Approved	89	77
Total Proposed Capital Investments (RM)	2,815,373,368	8,379,561,155
- Domestic Investments (RM)	1,079,779,926	1,341,862,946
- Foreign Investments (RM)	1,735,593,442	7,037,698,209
Export (RM)	40.8 Billion	33 Billion
Import (RM)	45.3 Billion	37 Billion

{Source: MIDA}

Industry Outlook

The domestic chemical industry is likely to diversify its product portfolio to include product variants to position itself better in the global market. The industry is also expected to focus on price issues and take all the necessary steps to bring down the cost of production.

Over the last 5 years, Malaysia's chemical industry has attracted a sizeable inflow of Foreign Direct Investments from the United States, Europe, and Asia companies keen to establish a presence in the growing regional markets. It is expected that the industry to emphasize the use of information technology for product innovation and increased customer orientation, as well as improved operations.

The specialty chemicals segment is expected to record significant growth considering its advantages such as low capital investment and higher returns. The expansion of the manufacturing sector has continued to provide the main stimulus to the growth of the Malaysian economy. The overall growth in the chemicals industry can be partially offset by a substantial increase in Malaysian labor costs, along with the emergence of labor shortage which have led to substantial imports of labor.

As the government plans to further consolidate and strengthen the competitiveness of the manufacturing sector, the chemicals industry is likely to become increasingly concentrated in the coming years. The industry is expected to be well equipped in the future to attract more investments for research and developments.

AUTOMOTIVE COMMITTEE

AUTOMOTIVE COMMITTEE

Industry Profile

The automotive sector is a key industry in the Malaysian economy. The sector's economic contribution is immense, with significant linkages in manufacturing and to the services sectors. The sector comprises the manufacture/assembly of motor vehicles and the manufacture of parts and components. There are currently four manufacturers (national projects) and nine assemblers in the motor vehicle sector, with an annual installed capacity of 963,300 units and 690 manufacturers of automotive parts and accessories.

Malaysia transformed from a net vehicle importer before the 1960s to a full fledged vehicle manufacturer with the establishment of Proton in 1985 and consequently, Perodua in 1993. These developments marked a new phase in the Malaysian automotive sector. Other than technical collaboration with foreign companies, this industry is also a major customer for many other industries (e.g. steel, rubber, electronics, etc).

Industry Performance

Although there were some decreases on year 2006, 2007, and 2009, the total industry production in the automotive industry remained stable from year 2005 to year 2010.

Summary of Passenger & Commercial Vehicles Produced and Assembled in Malaysia

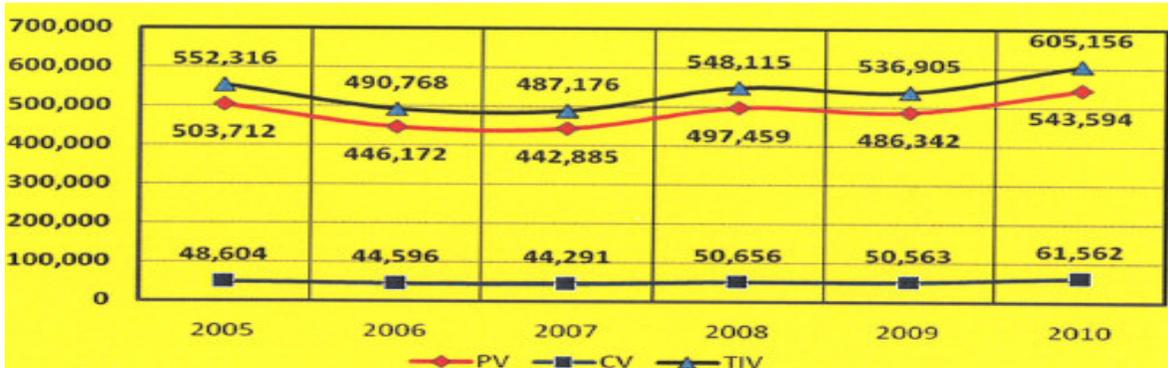
Year	Passenger Cars	Commercial Vehicles	4x4 Vehicles	Total Vehicles
2005	422,225	95,662	45,623	563,510
2006	377,952	96,545	28,551	503,048
2007	403,245	38,433	-	441,678
2008	484,512	46,298	-	530,810
2009	447,002	42,267	-	489,269
2010	522,568	45,147	-	567,715

{Source: MAA}

Total Industry Volume (TIV)

The industry registered a record high TIV with 605,156 vehicles sales for 2010 when compared with 552,316 units in 2005.

Total Industry Volume (TIV) Trend 2005 – 2010

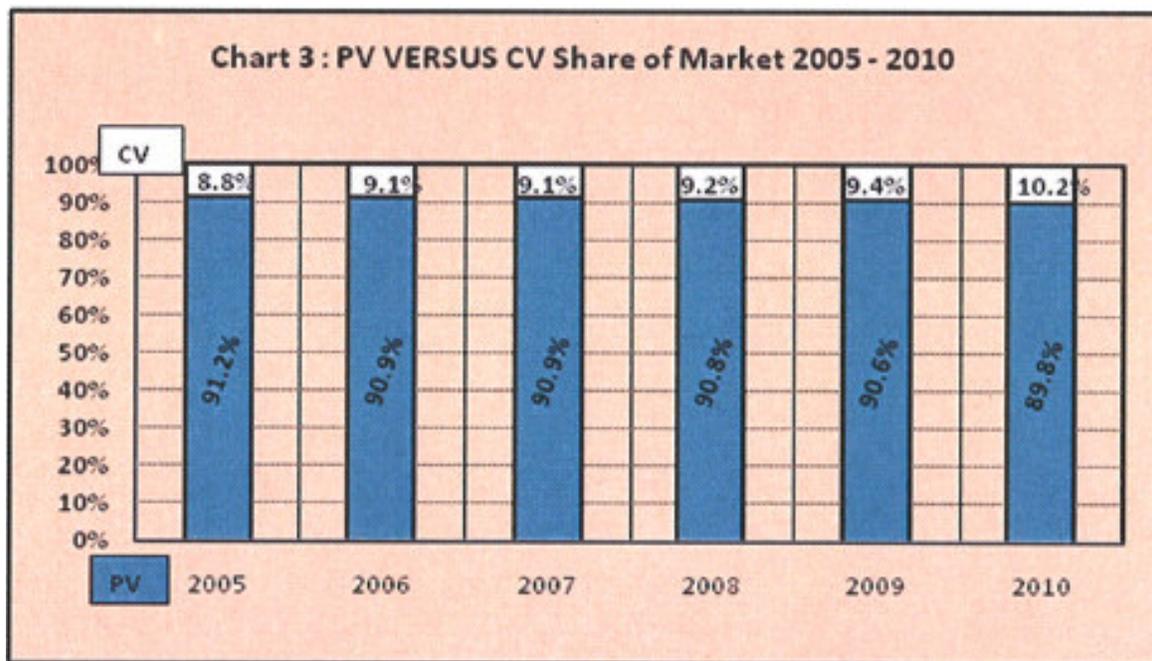


Note: PV = Passenger Vehicles
CV = Commercial Vehicles.

Segment Performance

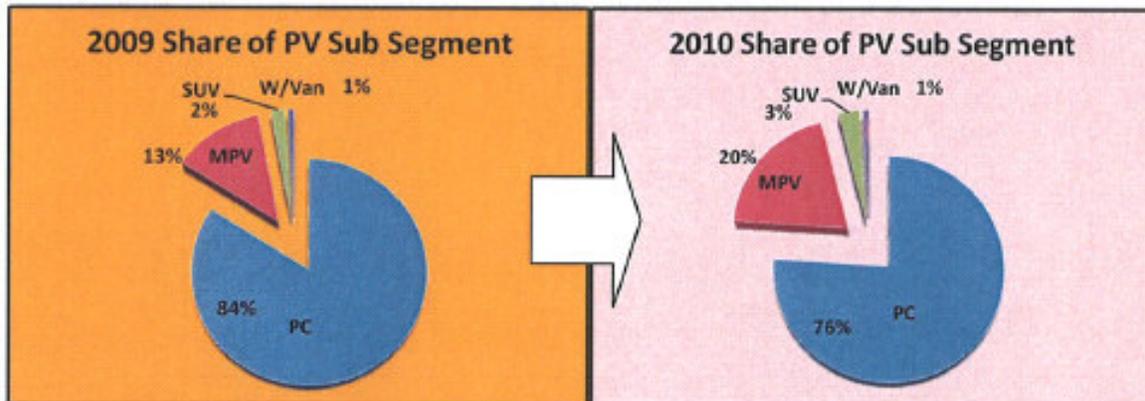
Based on the data from the Malaysian Automotive Association, the commercial vehicles segment expanded their share of the market steadily from 8.8% in year 2005 to 10.2% in year 2010. This was contributed by the increasing popularity of double-cab pick-ups.

PV versus CV Share of Market 2005 - 2010

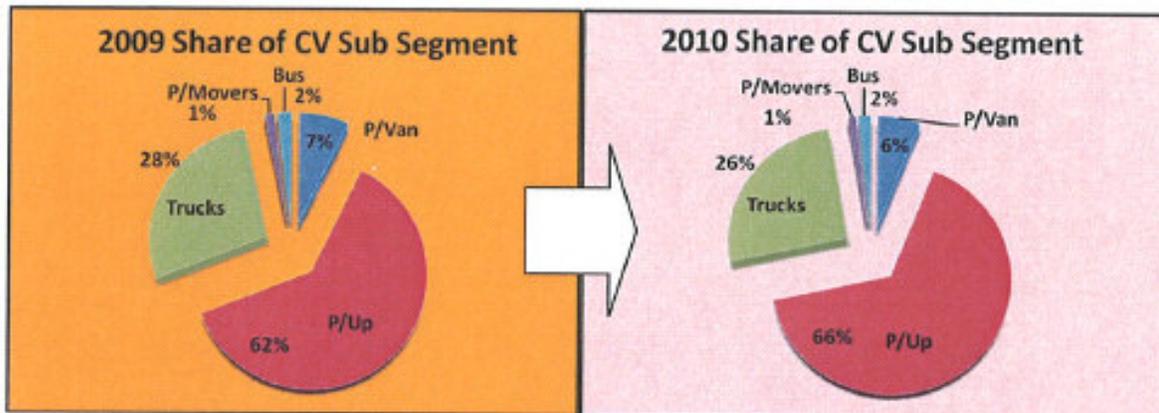


Note: PV = Passenger Vehicles
CV = Commercial Vehicles.

Passenger Vehicles 2010 – Breakdown by Segments



Commercial Vehicles 2010 – Breakdown by Segments



Note: PV = Passenger Vehicles
 CV = Commercial Vehicles
 SUV= Sport Utility Vehicles
 W/Van: Window Vans

Industry Outlook

The total industry volume (TIV) forecast for the next 5 years is as below:-

Total Industry Volume Forecast (2011 – 2015)

Market Segment	2010 (Actual)	2011	2012	2013	2014	2015
Passenger Vehicles	543,594	555,000	560,000	566,500	574,000	581,000
Commercial Vehicles	61,562	63,000	64,000	64,500	65,000	66,000
Total Industry Volume	605,156	618,000	624,000	631,000	639,000	647,000
Growth	-	2.1%	1.0%	1.1%	1.2%	1.3%

The following economic and environmental factors have been taken into account in order to produce the forecast:-

- Malaysia's GDP growth to moderate from 7% (estimate) in year 2010 to between 5% and 6% (forecast) in year 2011.
- The concern that the global economic growth would be threatened by uncertainties in Europe and the USA and their impacts on the economy worldwide.
- Multiplier effects from the 10th Malaysia Plan and the Economic Transformation Programme's (ETP) which would likely give a further boost to the domestic economy and create greater demand for new vehicles.
- Positive consumers' sentiments are expected to continue owing to greater stability in the employment market.
- More job opportunities arising from investments that would be made in the 10th Malaysia Plan as well as the various ETP's entry point projects.
- Introduction of new models to generate buying interest.
- Outstanding orders carried over from last quarter of year 2010 would be fulfilled in year 2011.

{Source: Malaysian Automotive Association}