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The Malaysian Chemical Industry: Fighting for its Moment

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INTRODUCTION

Its successful shift from an agricultural to a middle-income, knowledge-based economy has made the Malaysian economy a role model for many developing countries. After gaining independence from British rule in 1963, the contribution of agriculture to GDP has dropped from 28.8% in the 1970s to 11.9% in 2012. Malaysia continues to show a remarkable industrial production growth rate, reaching 7.5% in 2012, with industry the lead contributor to GDP at 41%. This has driven solid



Dr. A Hapiz Abdullah, CICM chairman.

GDP growth since the country recovered from the Asian financial crisis of 1997/98 and the local business community often praises the government for seeking to promote investment and international trade. In an attempt to further Malaysia on its path to become a high-income, developed country by the year 2020, the Malaysian government is committed to stimulate growth in the manufacturing sector through the Economic Transformation Plan (ETP). Despite the central bank's (Bank Negara Malaysia) announcement of a downwardly revised GDP growth forecast for 2013 to between 4.5% and 5% from the previously projected 5% to 6%, Malaysia's economic outlook remains positive.

Malaysia, as an export-driven country, saw a total of 804 manufacturing projects approved in 2012, with investment in the manufacturing sector totaling at 41 billion MYR (\$12.94 billion) and investments in chemical and petroleum products accounting for almost 30% of total investment in the sector. According to Dr. A. Hapiz Abdullah, chairman of the Chemical Industries Council of Malaysia, "Malaysia has a very diverse chemicals industry comprising various sub-sectors petrochemicals; oleochemicals; cosmetics and toiletries; organic chemicals; industrial gases; paints and coatings; as well as chemical traders, distributors and service providers. In 2012, the chemicals industry, including the petrochemicals industry, contributed 7.4% to Malaysia's GDP."

Nazmi Sallehhudin, director of the chemicals division of Chemical Corporation Malaysia (CCM) said: "With the changes in market movement, such as the migration of businesses from Western Europe to Asia Pacific, the ever-changing market dynamics in Japan and China, the growth in India and the rise of the African continent, Southeast Asia is becoming an increasingly attractive location to invest in."

With the refinery and petrochemical integrated development (RAPID) project, led by government-owned Petronas, Malaysia is sparking renewed attention as an investment destination, especially in light of the successes of neighboring Singapore and its integrated petrochemicals complex in Jurong Island. While Singapore's development in terms of infrastructure in the region is unrivalled, Malaysia is working to ameliorate its own. However, being the lesser developed of the two still has advantages in terms of lower costs when it comes to labor and land ownership and availability. Here, however, Malaysia is

competing with the likes of Indonesia, and Thailand, where the palm oil industries are on the rise and labor costs are even lower still. H. A. Khoo, general manager of local chemical distributor, Suka Chemicals, elaborates on Malaysia's competitive position in region: "When it comes to manufacturing, Malaysia cannot compete with the likes of China's ability to produce and take advantage of economies of scale. However, Malaysia's advantages in the development of its logistic and financial infrastructure give it an advantage in the region over countries such as Indonesia that is also rich in resources."

Consequently, Malaysia finds itself in a somewhat awkward position as it determines on which level to compete with the momentous forces on both sides of the development spectrum.

THE REFINERY AND PETROCHEMICAL INTEGRATED DEVELOPMENT (RAPID) PROJECT

Malaysia holds the world's 14th largest natural gas reserves and 23rd largest crude oil reserves. Its petrochemical industry is world-renowned and is an integral part of the wider chemicals industry providing a steady supply of feedstock material to the sector. Until now, the three world-scale petrochemical zones in Gebeng, Kertih and Pasir Gudang have been the country's petrochemical manufacturing hubs. However, the refinery and petrochemical integrated development (RAPID) project in Pengerang

is poised to change the face of Malaysia's and South East Asia's chemical industry.

Petroliam Nasional Berhad, better known as Petronas, dominates the Malaysian petrochemicals industry, operating Malaysia's three petrochemical hubs and now is the driver behind the RAPID project. Upon completion the RAPID complex developed in Southern Johor, will produce 9 million tonnes of petrochemicals per year (mt/y). The proposed 300,000 bpd crude oil refinery will produce diesel and gasoline to Euro 5 specifications and will supply the feedstock for the produc-

tion of highly specialized chemicals at the petrochemical complex. With this, the project aims to take a sizeable portion of the \$400 billion global specialty chemicals market.

Being developed at an estimated cost of 60 billion MYR (\$18.94 billion), the RAPID project was launched in May 2012 with completion expected by 2016. However, the recent delay in awarding work contracts for the project means that Petronas has set the new target for the sites full commission and completion in 2018. With a project of this size, delays are not unexpected, but the investment community is eager to see the project take off: an announced delay in July causing shares in Petronas to drop by 0.6%. The construction of the site is expected to be done through 20 construction contracts, creating an estimated 40,000 jobs during construction and a further 4,000 jobs when completed.

The RAPID project will aim to become the new face of the Malaysian chemicals industry from one driven by low cost and physical capital to an industry that reflects the strength of innovation, efficiency and technology. In line with Vision 2020 of becoming a developed country, the RAPID project should set the new industry standards in the employment of latest technologies that will minimize the impact on the environment.



H.A. Khoo, general manager, Suka Chemicals.

OLEOCHEMICALS

Malaysia enjoys an abundance of palm oil and, since the early 1980s, the industry has expanded rapidly. Today the Malaysian oleochemical industry is one of the largest in the world, accounting for 20% of global capacity and home to some key players in the sector such as KLK Oleo, Pacific Oleo and Natural Oleo.

Oleochemical companies are currently feeling downward price pressures due to the current oversupply of oleochemicals in the global market. However, as

in many industries, the market is a cyclical one and as a leader in the Malaysian and the region's oleochemical industry, A. K. Yeow, managing director of KLK Oleo, provides some insight into the cyclicality of the market: "Malaysia is an export driven economy an the market for oleochemicals changes very quickly and favorability varies from one day to the next. Every market has its cycle and therefore you have to spread your footprint to have opportunities at every phase of the cycle. While the prices in the oleochemical industry mirrors the oil price, the consumption of oleochemicals is not really cyclical as a majority of oleochemicals are being used for the household and personal care industries. These two industries do not, to a certain extent, feel external market conditions such as recession, while demand for oleochemicals in other industries like the plastics and tyremanufacturing industries may come down significantly."

When risks are higher, new business developments seem bolder, and the recent entry of Turkish soap manufacturer Evyap has sparked much excitement in the industry. The company has chosen Malaysia as it first point of entry into the Asian market as well the very first destination where it has become involved in oleochemical manufacturing. Tanuj Roy, managing director of Evyap Sabun Malaysia, explains the significance of this



move: "There had been absolutely no investments made in Malaysia by a Turkish company nor have there been any business ties between the two countries for 28 years. Evyap saw this as an opportunity to move into the market just as the business ties were restarting."

Evyap manufactures soaps in Turkey and Egypt from beef tallow and Roy elaborates on the many factors prompting the decision to move into the oleochemical industry. "Relying solely on beef tallow, a feedstock that represents only 12% of global oil and fats with a global production level of 25 million to 26 million mt/y is no longer the best raw material to depend on. As a company operating in many Muslim countries and catering to Muslim market you have to be absolutely clear on the halal certification and traceability of your product. Coupled with the logistical difficulties of sourcing the

beef tallow from the US, which requires around two to three months shipping time, and the issue of sustainability, it is a major part of our motivation to switch to vegetable base manufacturing and diversify into oleochemicals and therefore enter into Asia."

For bodies like MIDA (Malaysian Investment Development Authority), the hope is that many companies follow suit. In a region where countries are vving to attract foreign direct investment, the entry of Evyap in Malaysia is a victory and proof that the right incentives are in place. "While incentives like indirect fiscal benefits were offered by Indonesia, we perceived it as a temporary benefit and were proven correct as Indonesia's export tax has fallen from 25% to 0% over the last two years. Policies change as governments change, but Evyap's investment would remain and therefore we wanted to invest in a place where ease of doing business is more stable and with more developed infrastructure," said Roy.

Despite being overtaken by Indonesia as the world's largest producer of oleochemicals, the Malaysian oleochemical industry remains strong and is forecast to continue to grow, albeit at a slightly slower pace. "Even though some figures estimate growth in the Malaysian oleochemical sector to be 6% in the next five years to reach 15 mil-

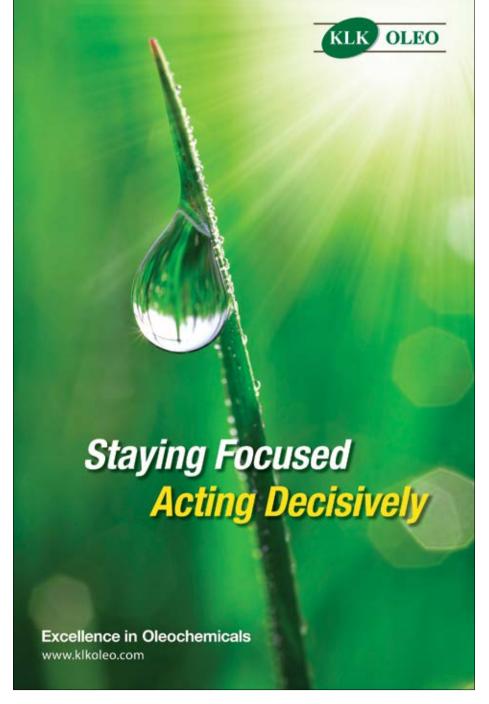




Photo courtesy of Suka Chemicals.



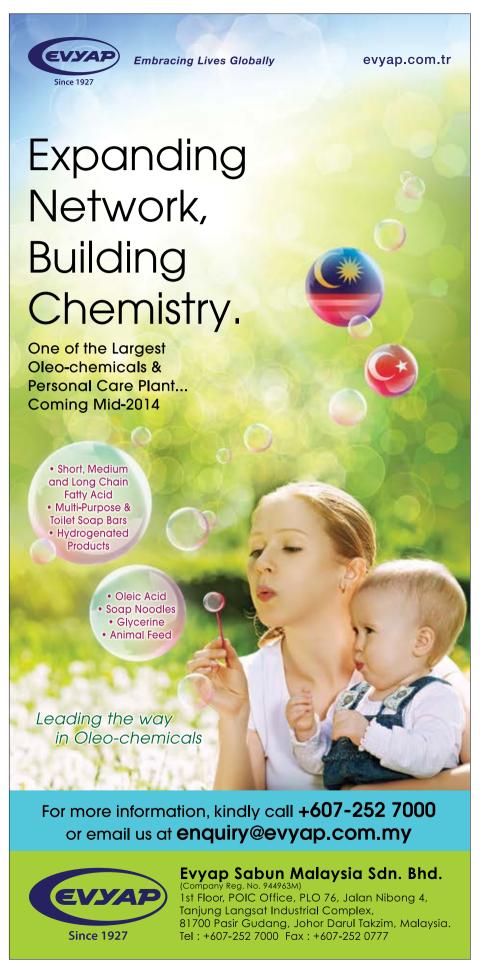
Tanuj Roy, managing director, Evyap Sabun Malaysia.

lion mt/y by 2018, 3% to 4% is a more realistic expectation in line with the global trend and taking into account the economic uncertainty in the West," said Yeow from KLK Oleo.

RUBBER AND RUBBER GLOVES

According to the Ministry of Plantation Industries and Commodities, the Malaysian Rubber Industry contributed over 36.4 billion MYR (\$11.49 billion) to total exports last year. To ensure the strong growth of this sector, the Malaysian Rubber Board (MRB) plans to launch special strategies within the next few months, which aims to increase the average national rubber productivity to 2,000 kg/ha per year by 2020. Just behind, Thailand, Indonesia and Vietnam, Malaysia is currently the fourth largest producer of natural rubber in the world, producing 0.9 million mt/y of rubber in 2012.

Identified as a National Key Economic Areas (NKEAs) in the ETP, the industry aims to increase production to meet the goal of 30 billion MYR (\$9.47 billion) by 2020. According to Lim Kwee Shyan, president of the Malaysia Rubber Glove Manufacturers Association (MARGMA): "[MARGMA] did the first analysis of this goal in 2010. At that time, raw material was almost double the cost of what it is now, as was crude oil. As 50% of the cost was feedstock, increasing revenue was a bigger challenge. It is difficult to predict feedstock prices, but if they remain at present levels, both consumers and manufacturers will benefit."



Rubber gloves remain the industry's flagship product. "Malaysian rubber gloves are the main product in the rubber sector, contributing 80% of its revenue. In 2012, this contribution was 10.56 billion MYR in exports and in 2013 we hope to cross the 11 billion MYR threshold. Rubber gloves are the most established product in the Malaysian rubber industry and Malaysia exports over 60% of its output. Regardless of how the revenue in value terms grows, production output growth will continue to grow steadily at the rate of 8 to 12% annually barring anv unforeseen interruption," says Lim.

Malaysia's four top rubber glove producers, Hartalega, Kossan Rubber, Supermax and Top Glove continue to expand production as the demand for synthetic gloves also continues to rise. As the world's number one rubber glove manufacturer, Top Glove is setting targets in line with optimistic growth expectations. "We expect to grow at a rate of 10% annually over the next five years and we are confident that we will meet our objective to hold 30% of the global market share by 2015," says Top Glove Chairman, Tan Sri Lim Wee Chai.

MARGMA is confident that Malaysia will retain its leading position in years to come, with the only precondition being a continued drive for efficiency and innovation. "We have teams dedicated to working on how to increase efficiency, capacity, and automation technologies and, while we have achieved a great deal so far, we have a great deal more to achieve in the future," says Lim Kwee Shyan.



Rubber glove manufacturing process. Photo courtesy of Top Glove.

SPECIALTY AND INDUSTRIAL CHEMICALS

The industrial and specialty chemical sectors have important linkages to practically every other sector in the economy. Paul Ellis, managing director of Schaefer Kalk in Malaysia, explains the significance of the quicklime and other lime products that the company produces in Malaysia: "Schaefer Kalk sells its product as a chemical that goes into the manufacturing of other products. Malaysia's characteristics geographical allow Schaefer Kalk to produce some of the world's finest quality quicklime and hydrated lime. Schaefer Kalk has managed to develop our product to the extent that we have international oil companies that use our products in the manufacturing of oil additives. With the growing automotive industry in Asia, many American oil additive manufacturing companies are moving to this region. Schaefer Kalk has had the opportunity to develop products for these companies to use here in Asia."

Taking the cue from leading international players, the sector continues to attract positive attention. "The Linde Group recognizes Malaysia's long-term growth potential and has, over the past three years, invested around 90 million MYR (\$28.41 million) in the business here," says Wong Siew Yap, managing director of Linde Malaysia. Linde is just one



Paul Ellis, managing director, Schaefer Kalk Malaysia.

of leading specialty and industrial chemical companies that have facilities in Malaysia and the A-list includes players such as BASF, Evonik, DOW and DuPont.

As a highly technical sector, the drive is for international companies to bring research and development facilities to the country to increase innovation in the region holding such a vast market with unique needs. Ellis, from Germany-headquartered Schaefer Kalk, explains the company's position in this regard: "It is certainly time to seriously consider having a technical expertise base in Asia, especially looking at growth markets such as the rubber glove industry that is located here. Malaysian materials have certain characteristics that the European materials cannot have because of the quality characteristics of the limestone here. The process of bringing in more technical expertise to Malaysia is starting and there is a general shift from relocating research and development centers in Europe and the US to Asia."



Evyap Malaysia Plant. Photo courtesy of Evyap.

THE CHALLENGES AND OPPORTUNITIES OF THE MALAYSIAN CHEMICAL INDUSTRY

While opportunity abounds in Malaysia, developmental challenges still need to be addressed. Daniel Loh, managing director of BASF Malaysia identifies globally observed trends: "In the current scenario, the key challenges moving forward will be ensuring sustainable energy, environmental and climate protection, meeting the demands for food and nutrition and doing all this with increasingly limited available land. Chemistry enables us to find solutions to each of these challenges."

In addition to global trends, companies in Malaysia are also finding ways to deal with high costs of transportation and logistics and recruiting the right skills.

TRANSPORTATION AND LOGISTICS

Located along the Strait of Malacca, a major sea-route connecting the Far East to Asia, Europe, and the Middle East, Malaysia's infrastructure is well developed with international airports and seven international seaports. The country's strategic location is a key differentiating factor as Roy from Evyap explains: "[A key] factor in [Evyap's] decision to set up a plant in Malaysia was its infrastructure and location. Logistically, Malaysia has clear advantages, as its infrastructure is very developed. When it comes to cost of production, one may argue that labor costs in Indonesia are much lower, however one should not discount that there is a tradeoff that is diluted by the cost that will be incurred in compensating for a lower level of infrastructure development and much higher logistic cost compared to Malaysia."

The efficient management of Malaysia's ports is pivotal to the industry and organizations such as the Kuantan Port Consortium continue to drive develop-



Photo courtesy of Kuantan Port.



SCHAEFER KALK stands for high quality lime and quicklime products as well as for Precipitated Calcium Carbonates (PCC).

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APPLICATIONS:

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Kuantan Port is one of Malaysia's key chemical transportation channels and recognizes the importance of partnerships with companies in its main export destinations. Kadir explains: "Most of the chemicals exports we see through Kuantan are shipped to China and other Far East markets such as Japan and Korea. In a strategic decision, 40% of the new expansion will be owned by China's Guangxi Beibu Gulf International Port Group (GBIPG) to

strengthen trade from Kuantan Port to the Chinese market even further. This will be a catalyst for Kuantan Port that has been experiencing marginal and organic cargo growth of between 5% and 10%, to grow even faster. The new port will be more attractive to modern businesses, eager for newer systems."

While Malaysia's infrastructure is comparatively well developed in the region, according to Schaefer Kalk's Paul Ellis: "Logistics remains expensive and it is not a free market in Malaysia, adding to costs, and that needs to change so that material can be shipped competitively."

SKILLS

Malaysia is one of few emerging economies that boast negligible unemployment. However, the low unemployment rate translates to a lack of readily available skills, in professional and elementary positions. According to James Thong, country manager of Dow Malaysia: "At the moment, there is a slight labor shortage in the country with almost a million



Mr. Ganesan Periasamy, general manager, Brunel-Energy Malaysia.



Ir. Hj. Khasbullah A. Kadir, chief operating officer, Kuantan Port Consortium.



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(890,000) elementary jobs vacant. If not addressed quickly, some industries may be forced to move, challenging Malaysia's competitive edge in some sectors."

Professional recruiter for the oil and gas and petrochemicals industry, Brunel-Energy Malaysia's general manager, Ganesan Periasamy, describes the situation: "In the late 1990s, it was an employers market [in Malaysia], but over the last decade it has become an employees market. We have seen a growth in the market and from 2000 they have all been competing for people with the right skills."

Periasamy elaborates on the affect of regional projects on local skills availability: "Petronas is the industry's backbone and dictates the policy that aims to employ local people and utilize local resources. The fabrication yards become busy with local jobs, but there are also international jobs being created by massive projects such as the Gorgon project in Australia that is being developed by Chevron for which some modules are also fabricated in Malaysia. The yards are getting busier but the resources available remain the same. The talent is not sufficiently developed and there is always a shortage."

SUSTAINABILITY

Malaysia's focus on environmental sustainability has increased over recent years. H. A. Khoo, from Suka Chemicals, observes: "In different segments of the industry the increased focus on environmental sustainability is a significant challenge. The trend is to move toward water-based or environmentally friendly chemicals."

The Chemical Industries' Council of Malaysia (CICM) is sending a clear message on sustainability, as Dr. A Hapiz Abdullah, CICM chairman, notes: "[CICM's] new vision centers on the word 'sustainable', which is pivotal if we still want a vibrant chemical industry in 20 years. We are taking the lead and pushing our members to incorporate sustainable business models. This is to be crafted around our Responsible Care initiative. Running chemical plants is risky and trying to run it without any disruptions is extremely difficult and requires a collectively focused effort."



KUANTAN PORT

The Gateway to the Eastern Corridor of Peninsular Malaysia

KUANTAN PORT CONSORTIUM SDN BHD (KPC), a subsidiary of IJM Corporation Berhad, a major public listed company in Malaysia, is the operator, manager and developer of Kuantan Port. Kuantan Port is a world-class petrochemical hub and multi-cargo port and a leading maritime and logistics services centre in the east coast of Peninsular Malaysia.

Kuantan Port is strategically situated on the eastern seaboard of Peninsular Malaysia, overlooking the major sea lanes through the South China Sea. The port started its operations in 1984 handling primarily sawn timber and palm oil. Today, Kuantan Port has grown into one of the busiest ports in the country and handles a wider range of cargoes emanating from the port hinterland.

A deep sea port with more than four [4] kilometres of berthing facilities encompassing dedicated container berths, palm oil berths, liquid chemical berths, mineral oil berth, multi-purpose berths and steel pipe berths. Kuantan Port facilitates trade activities and has become a commercial hub for the region and it is linked to global shipping destinations. The present facilities have a capacity to handle 40,000 Deadweight Tonnes (DWT) ships.

KPC in collaboration with the Government has embarked on a port expansion project to cater for ships up to 200,000 DWT and to commence operation in 2017. The expansion of the port shall act as a catalyst for the realisation of Malaysia-China Kuantan Industrial Park [MCKIP] in Gebeng. This will spearhead the economic development of the region and Kuantan Port shall be a regional trade hub in the coming years.



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DISTRIBUTION

In a country with a strong chemical industry, it is no surprise that competition for chemical distributors in Malaysia is very strong, with the presence of many local and international players, such as Suka Chemicals, Finn Chemicals, Hextar, Connell Brothers (CBC), Brenntag and WWRC to name a few. Under these conditions, companies have to go above and beyond the needs of both their customers and suppliers to provide the value-added services that have become the industry standards.

Leong Buh Kwong, managing director of Finn Chemicals, elaborates on the importance of finding the right suppliers and niche products: "As a distributor, Finn Chemicals' main challenge is always to find the right supplier that renders the company competitive over the long-term. Our model of distributing new and unique products also presents its own challenges, as trying to source these products is not as easy as it is in a country such as China."

Local distributor Suka Chemicals also sees new opportunities outside of Malaysia. "The Middle East is becoming Malaysia's biggest export destination in terms of lifestyle products. Until now the majority of the demand for these products has been supplied by Europe. However, being an Islamic country, Malaysia has a



Leong Buh Kwong, managing director, Finn Chemicals.

distinct advantage when it comes to doing business with Gulf countries", says Khoo of Suka Chemicals.

Leong Buh Kwong from Finn Chemicals highlights the importance of leveraging on Malaysia's key growth areas. "Although growth across industries maybe slower than in the past, it is still positive. When we look at the advantages of different products in Malaysia, naturally the proximity to feedstock plays an important role and for Malaysia, the oleochemical industry has a particular advantage in this area."

In addition to oleochemicals, distributors are also tapping into the growing rubber sector. "When it comes to the overall economic growth of Malaysia, it is important to focus on the original industries, namely palm oil and rubber with which Malaysia has been naturally

endowed. Rubber exports are expected to grow as gloves and other rubber producers continue to import latex from Malaysia. Similarly, Malaysia has the competitive advantage of raw materials, exporting crude palm oil for applications in the oleochemical industry," says Khoo from Suka Chemicals.

Distributors such as Brenntag are also offering value added services by collaborating with its clients. "[Brenntag] continues to bring our products to the market in the most innovative ways, co-developing products with our customers for example in the food and beverage industry. This also solidifies our philosophy that we are not a company that just buys, stores and sells, but also adds value", says KC Lim, managing director of Brenntag Malaysia.

CONCLUSION

There is no doubt about the staying power of the Malaysian chemical industry and, with the RAPID project, the country is showing its continued commitment to the industry and to attracting foreign investors. In the past, the Malaysia's unique characteristics were driving growth in the sector, but with growing competition in the region, innovation will be pivotal if the industry is reach its targeted growth levels and for Malaysia's transformation to high-income developed country. Malaysia has to fight for its moment.

