

# Emerging powerhouse

As the automotive sector evolves in Southeast Asia, the carmakers and suppliers there have to focus on their logistics infrastructure, particularly each country's customs regimes, if they are to have any hope of competing on a global level.

**Anthony Coia** investigates



All eyes are turning to the Asia-Pacific region as manufacturers pursue lower cost alternatives, and besides the crouching tiger of China, two other regions have vast potential: Korea and Southeast Asia.

Southeast Asia (including Myanmar, Thailand, Malaysia, Indonesia, Vietnam, Laos and Kampuchia [the former Cambodia]) has a younger automotive industry than Korea but the former benefits by having logistics hubs in Singapore and Malaysia. But improvements are needed in the logistics infrastructure in all these countries, including simplifying customs regimes and procedures that ultimately have an effect on storage, transport, and other logistics costs. These challenges are shaping the expansion strategies of vehicle manufacturers and their logistics partners.

## Korea expands its global reach

Korea is a successful player in the Asia-Pacific region's dominant automotive sector. Following in the footsteps of Japan, Korea found its niche as a lower cost, high quality manufacturing location. Although China also has lower production costs than most Western countries, Korea's logistics infrastructure is more advanced. Last year, Korea manufactured 3.6 million automobiles, making it the fifth largest car manufacturer in the world after the USA, Japan, Germany, and China. Korea aims to be among the world's top four by 2010.

Korea's largest vehicle manufacturer is Hyundai Motor Company, which exports more than one million vehicles annually from its three Korean plants. Its main facility in Ulsan, southeast Korea, produces more than 80 per cent of Hyundai's total capacity. The Ulsan plant is the largest automobile factory in the world, with an annual capacity of more than 1.5 million vehicles.

Korea's leading ro-ro carrier, Eukor Car Carriers, provides

transportation for its main customers, Hyundai, and its sister company, KIA Motors Corporation. A three-berth terminal at the Port of Ulsan is located within Hyundai's factory boundaries and functions exclusively for vehicle exports. June Kim, Logistics Manager at Eukor, says that the terminal's proximity to Hyundai's facility ensures efficient logistics from plant to port, and thus it can drive all export vehicles onboard Eukor's vessels.

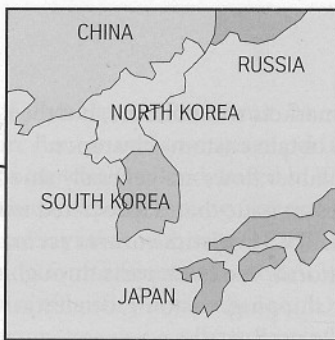
Eukor also transports vehicles for other manufacturers, primarily on back-haul legs to Southeast Asia, the Far East, and the Middle East. Eukor's main trunk lanes serve Europe and the Americas, and its regional routes include intra-Asia, Korea to China, Korea to Australia, and Korea to India.

One of Hyundai's growing export regions is Southeast Asia and vessels depart from Ulsan to Taiwan, the Philippines, Brunei, Indonesia, Singapore, and Malaysia, and from Ulsan to Taiwan, Malaysia, and so on, in the reverse direction. Singapore is Hyundai's leading export market in Southeast Asia, with sales of 15,000 units last year.

## Diversifying the production base

Byung-Chang Lee, Manager in the Export Administration department at Hyundai says that one of the company's most significant changes has been to diversify its production base worldwide. "The continuing challenge is to establish a global distribution network between various plants and our dealers. To accomplish this objective, we are working on improving the order-to-delivery process as well as our information technology system," he explains.

The Port of Pyungtaek, on the west coast, about 100km south of Seoul, mostly handles Kia's exports from the adjacent Kia Hwa Sung factory. Kim says that Pyungtaek also processes some vehicles from Hyundai's Asan plant located about 20km from the port. Glovis, Hyundai's logistics subsidiary, manages all inland logistics from factory to port,



as well as PDI services at Glovis's new PDI facility inside the port area.

One of Eukor's main challenges to providing efficient ocean transportation is the limited storage space at the ports of Ulsan and Pyungtaek. Kim says that Pyungtaek is currently undergoing a large expansion project in which four new-dedicated car terminals are being developed for completion in 2008 and 2009. He tells *AL*: "Eukor is constructing and financing two of these terminals for our exclusive use over the next 20 years. The new terminals will ensure adequate berth availability and improve overall car storage capacity."

Although Eukor's focus is primarily on ocean transportation, it recognises the significance of providing value-added services to improve its customers' finished vehicle flows. Kim says that along with its Korean OEM customers and LSP Glovis, Eukor recently launched an on-time delivery (OTD) initiative that will efficiently coordinate ocean transportation and land-based logistics. Kim adds, "We have also developed a GPS-based real-time tracking and tracing system for all our vessels and cargo that will advance our customers' logistics and sales planning activities."

### Hyundai scandal has had repercussions

Hyundai's pivotal position among VMs suffered a setback following a scandal that erupted in March, when prosecutors raided the offices of Hyundai and Glovis. Hyundai was accused of using companies controlled by Chairman Chung Mong Koo's family to raise money for illegal political lobbying. The CEO of Glovis, Lee Ju Eun, was charged with creating a multi-million dollar slush fund.

Glovis's involvement focused renewed scrutiny on the company's structure and the arrangement that gives Glovis the exclusive authority to deliver vehicles to customers worldwide. Hyundai officials point out that this legal entity that specialises in logistics, allows deliveries that are more efficient and flexible.

As Korea focuses on increasing its foreign investment, with new automotive plants opening worldwide, multinational LSPs are looking for opportunities to invest in Korea. Overcoming cultural barriers and accepting a foreign logistics presence are ongoing challenges.

James Hsu, Managing Director, Asia Pacific, for Menlo Worldwide, says that Korea is trying to learn from the West about outsourcing logistics.

**My brilliant Korea:** the country's top vehicle manufacturer is Hyundai which, although rocked by a slush fund controversy earlier this year, exports one million vehicles across the world annually

Peter Baumann, Director, Business Development: Automotive for Menlo Worldwide Asia Pacific, says, "The infrastructure for distribution is well developed in Korea, at least compared with that in China, where it is broken. However, customs clearance is an issue. To operate effectively in Korea, we would need partners that support us in complying with customs, which is a complex area for automotive parts."

Staff retention is one of the main challenges for operating an efficient logistics system, according to Hsu. "Korea in the early 2000s was not doing well; it lost a lot of industry to China. That in turn created an oversupply of labour, so, there were few labour retention problems. Now, Korea is expected to have a good GDP for the next couple of years, so staff retention will become more of an issue," he says.

### Overcoming the problems at border crossings

Southeast Asia is a less homogeneous region, consisting of about a dozen countries, which presents logistical challenges. A uniting force has been the ASEAN Free Trade Agreement, through which member countries are working toward a borderless trading environment. At consulting firm Frost & Sullivan Asia Pacific, Srinath Manda, Team Leader, Transportation and Logistics Practise, says that ASEAN countries have improved logistics efficiency by implementing common regulations. These regulations have reduced lead-time significantly, especially in the automotive sector where procurement, assembly, spare parts logistics, and outbound logistics differ significantly among member countries.

Singapore is the nerve centre of Southeast Asia, facilitating the movement of goods across the region. With its strong IT and communications infrastructure, Singapore is likely



to maintain its position as the central hub for the region. Manda continues: "Malaysia has risen as a viable competitor to Singapore by improving its infrastructure at the Port of Tanjung Pelepas, Port Klang, and others. Thailand is often referred to as 'Detroit of the East', and is the regional production hub for most VMs. Although Indonesia has also attracted automotive investments, it is hindered by natural disasters and political instability."

### Cost pressures deter new services

Southeast Asia's logistics services are primarily basic in nature, including transportation warehousing, and storage. Manda says that the region's future growth potential is for advanced services such as returns, system integration, inventory planning, order processing and consulting, for example. The development of advanced services may be hindered in part by costs concerns. Kevin Burrell, Business Development Director at TNT Logistics, Asia Regional Office in Singapore, says: "Because of rapid demand and fuel price increases, greater pressure on the supply chain means that we need to be more competitive. We must respond to cost pressures as opposed to providing service enhancements."

On a macro level, VMs are concerned with increases in the steel price, which are causing one of the biggest rises in costs. Fuel price increases are also a concern. This will have a significant impact on logistics and manufacturing. "The VMs are so focused on cost that they are placing it ahead of service. The problem with implementing a visibility platform is that it is priced around a mature industry. Therefore, the VMs cannot justify the return on investment. However, they must understand that they will need to pay more for visibility so as to receive consistent service within the plant," he says.

### Growth in service parts

VMs and their LSPs are expanding throughout Southeast Asia. BMW Group Asia's plants are located in Thailand, Malaysia and Indonesia. Its regional warehouse at the Port of Tanjung Pelepas in southern Malaysia provides parts for the after sales business of the BMW and Mini dealers and importers in the region. Operated by Near-Sea Logistics, the regional warehouse in Malaysia serves Southeast Asia, China, Oceania, and other countries in Asia. Also, warehouses in Thailand, the Philippines, Indonesia, and Taiwan serve BMW's national dealer networks.

BMW ships its sea freight from Tanjung Pelepas using Maersk Logistics and uses Schenker to ship airfreight from Singapore. Trucks deliver outbound parts directly to the dealers in Malaysia and Singapore.

One of the main hindrances to maintaining a high service level for aftermarket logistics are customs disparities. Says Bernhard Schneider, Aftersales Director at BMW, "Our aim is to provide parts to customers in the region within 24 hours. The challenges lie in the differences among customs systems and tariff structures in the various markets, as well as variations in the customs clearance processes. Different shipping routes and markets require different sets of documents. Sometimes requirements change without prior announcement. The logistics infrastructure enables us to ship

our parts to the markets within hours, but then it sometimes may take days to obtain customs clearance."

"Although container flows are generally smooth, document accuracy is always an issue that is associated with customs clearance in Asia. TNT Logistics ensures accuracy through our visibility platform. We track parts through multiple stages, which are shipping, customs, domestic warehousing, and sequencing," says Burrell.



Car-carrier company EUKOR is financing the expansion of two terminals at the Port of Pyungtaek in South Korea

### Getting to grips with multiple customs systems

Another problem for BMW is constantly tightening regulations for the transport of dangerous goods, which require special storage facilities, leading to increased restrictions and less transportation flexibility and frequency. Schneider says that more stringent security checks at airports and seaports sometimes lead to delays because shipments miss their scheduled flights.

Frost & Sullivan's Manda says that for landlocked countries, the border crossings typically involve delays and costs arising from the inefficient application of national regulations, difficulties in cargo and document clearance, unnecessarily long storage, high insurance premiums, and long waiting times.

### Inbound logistics developments

In Southeast Asia, TNT Logistics focuses primarily on inbound logistics. It operates four main centres that serve the automotive sector – a regional parts distribution centre in Singapore, and inbound cross-docks in Malaysia, Indonesia, and Thailand. About 20 facilities support the automotive sector in these three countries.

One of Thailand's two main automotive centres is in Rayong, where TNT Logistics provides inbound logistics for VMs that include GM, as well as AutoAlliance Thailand (AAT), a joint venture between Ford and Mazda. For GM as well as other VMs, TNT Logistics arranges pick up, transportation, unloading at the factory, and delivery to line side. The other automotive base is in Chachoengsao, where Isuzu and Toyota plants are located.

Burrell says that the greatest growth in automotive logistics is for inbound milkruns. According to him, three years ago, only one VM had a milkrun, namely Toyota. Since then, the

vast majority of VMs have followed suit. The first and second tier suppliers are now geared to manage parts in milkruns.

At Mitsubishi Motors Thailand, based in Laem Chabang, Sukumaporn Pantarakpong, Acting General Manager, Logistics Control says that with more than 200 pick-up truck options and four different car models, achieving inbound logistics efficiency is a challenge. "Our objectives are to maintain on-time delivery with low inventory and low logistics costs. To achieve these objectives, we have implemented a milkrun system which has the participation of about 40 per cent of inbound suppliers. This system will enable us to reduce storage requirements by more than 30 per cent," she says.

Pantarakpong points out that for overseas suppliers, its ocean freight and airfreight is under Mitsubishi Japan's centralised control to obtain competitive prices from volume consolidations: "Since our plant is located about 5km from the port, it is a competitive advantage for inland transport. From Malaysia, we use either rail or truck for parts, depending on cost and schedule. The delivery time for these shipments is flexible since we maintain buffer stock."

Changes are also underway in exporting CKD parts from Southeast Asia. Within the past year, Mitsubishi Japan centralised its CKD parts delivery from Southeast Asia to countries outside of the region to reduce logistics costs, according to Pantarakpong. Says Burrell, "As VMs become mature, the next wave of lean manufacturing is being sought. One of the greatest growths in demand is for KD packing services. VMs have changed their strategy from sourcing in Japan to Thailand. First and second Tier suppliers can now supply larger volumes, so they move their entire KD packing from Japan to Thailand."

### Logistics infrastructure challenges

Customs-related issues are only one of many of Southeast Asia logistics challenges. Says Manda, "The low level of technology implementation, especially in some countries, eventually leads to incomplete information, causing delays in production and storage. Most warehouses are not sufficiently modern as regards equipment and labour. Difficulties also arise when foreign cargo carriers are not granted adequate access to existing warehouses owned by domestic logistics companies."

The quality of transport infrastructure varies throughout the region. Manda says that it is moderate to advanced in Malaysia and Thailand, moderate in Indonesia and Philippines, and underdeveloped in Cambodia, Vietnam, and Laos. "Many parts of these countries have inadequate and inefficient port and shipping facilities, transport services, and infrastructure. Poor rural roads cause long transport times and high transport costs, which in turn hamper the development of domestic markets and lead to substantial intra-regional price differences, particularly in Vietnam, Indonesia, and the Philippines," he says.

Burrell agrees that the still-developing inland transport infrastructure creates challenges in achieving consistent supply. He explains, "Trips that take 15 minutes in the US



TNT Logistics's automotive growth is more prevalent in Thailand because of the country's greater maturity, drive, and focus than some other countries in the region, says TNT's Kevin Burrell

resulted from an increased demand for motor vehicles. Rail in Southeast Asia is nowhere near as developed as in the West. Transit time is slower and consistency is lower. However, the automotive sector does use rail from Singapore to Thailand."

### Supporting the expanding FV sector

The rapid growth of the Port of Tanjung Pelepas is due largely to its connectivity to the road, rail, air, and sea transport modes, according to Aarthi Nandakumar, Research Analyst at Frost & Sullivan. She says that connectivity advantages

"The challenges lie in the differences among customs systems"

— Bernhard Schneider, BMW Asia Pacific



have also been a major factor in attracting companies such as BMW, Schenker Logistics, Maersk Logistics, and Kenwood Logistics to set up operations the port.

Southeast Asia's ports are relatively efficient. TNT Logistics uses the container ports of Laem Chabang and Map Ta Phut in Thailand; Tanjung Priok (Jakarta), Indonesia; Kuala Lumpur, Malaysia, and Singapore. BMW Asia operates a finished vehicle logistics centre in Singapore, which serves to trans-ship cars to some of the smaller markets in the region.

Pantarakpong says that the Thailand's expansion plan for Laem Chabang is designed to support the country's growing finished vehicle export business. An advantage is that Mitsubishi's finished vehicle terminal is located 5km from the plant. However, the port of Laem Chabang still faces infrastructure instability due to unexpected traffic jams.

As regards air transport, Nandakumar says that the new Suvarnabhumi International Airport in Bangkok is a key component in enabling Thailand to establish a regional logistics advantage. The airport was expected to open fully by October and will have a cargo capacity of 1.46 million tons per year, double the capacity of Bangkok's current international airport. ●●●