THAILAND INDUSTRY OUTLOOK 2024-26

Road Freight Transportation Business



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Krungsri Research

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EXECUTIVE SUMMARY

The road transport industry can expect to see average annual growth of 2.0-3.0% over 2024 to 2026. Demand for transport services will be boosted by the gradual improvement in the outlook for investment, manufacturing and trade, as well as ongoing growth in the tourism sector. In addition, the industry will benefit from improved cross-border trade and the continuing strength of e-commerce. This will then underpin heavier demand for the transport of consumer and industrial goods, raw materials, and machinery.

Competition is tending to intensify within the industry because both Thai and overseas players are expanding their operations to encompass the intermodal transport of road, rail, and water. In addition, costs are rising, there is a growing need to invest in improving the standard of overall operations, and the importance of rail-based transportation is increasing. As such, profits will come under pressure, though given their weaker capital base, more limited scope of operations, relative inability to exploit new technology, and weaker commercial networks, SMEs will be particularly exposed to these risks and these players will find it increasingly hard to compete against large corporations.

Krungsri Research view

Krungsri Research sees the outlook varying across the different segments of the industry.

- **General road transport services:** Because they benefit from stable demand, **large players that are part of extended commercial networks should see turnover grow,** and these may in addition be able to generate further income from related businesses such as consultancy, transport management, and packing services. However, **for SMEs and independent operators, the outlook is less positive,** and conditions will tend to worsen due to the large number of players active in the market and the resulting difficulties that these face when attempting to expand their income base. Going forward, these companies will therefore need to sharpen their competitiveness by partnering with other businesses.

- **Oil and gas tankers, and the transport of other liquids: Income will grow solidly on strong demand for fuels** from households and the transportation sector. At the same time, because operating in this segment requires considerable expertise, players enjoy a strong negotiating position and are generally able to set rates themselves. The market is thus fairly stable and players typically negotiate long-term contracts, although income may fluctuate according to periodic variations in demand.
- **Temperature-controlled transport facilities: Growth in manufacturing and trade will lift income** for this segment, which will benefit further from the transition to La Niña conditions and with this, heavier rainfall and improved agricultural outputs. As elsewhere in the industry, the ongoing shift to e-commerce is further underpinning growth in demand. However, costs are rising and competition is stiffening, especially from large players, and this will put downward pressure on profits
- **Container haulage: Income will be boosted by the brightening outlook for trade, manufacturing, cross-border business, and e-commerce.** Government spending on infrastructure improvements, including the development of Laem Chabang and Map Ta Phut ports, the buildout of high-speed rail lines, and the establishment of transshipment hubs will support further growth in the segment.

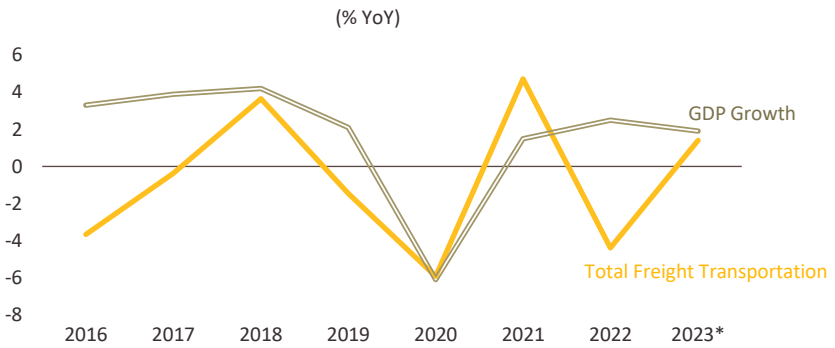


Overview

The freight transport industry plays a crucial role in distributing goods to domestic and international markets. Freight hauliers move goods through all stages of the supply chain, from upstream raw materials through intermediate goods in the mid-stream production and finally to the downstream distribution of finished products. The health of the industry thus rises and falls with the quantity of goods being shipped, and this is in turn dependent on the state of the economy (Figure 1).

Within Thailand, commercial transportation may be divided into five principal modes. (i) Road transportation naturally involves the use of a number of different types of trucks or lorries, including for example, pickups, and container and refrigerated trucks. **(ii) Rail transportation** is generally used for the movement of bulk, containerized, and industrial goods, though in Thailand, this is controlled by a single rail service provider, i.e., the State Railway of Thailand. **(iii) Distribution through pipelines** is used for liquids, such as water, oil, natural gas and some chemicals. **(iv) Water-based distribution** is typically used for heavier goods, this usually encompasses products such as cereals and bulk building materials. Inshore distribution is generally used to support import-export activities, with barges and feeder/cargo ships used to transfer goods from smaller wharfs to the major, deep-water ports. **(v) Air transport** is typically reserved for high-value items, items requiring special care, smaller and lighter goods, and goods for which delivery is time-sensitive or which spoil quickly. Examples of these include jewelry and precious stones, electronic parts and equipment, vaccines, cut flowers, and fashion items.

Figure 1: GDP & Total Freight Volume of Thailand



Source: Office of the National Economic and Social Development Council (NESDC), Ministry of Transport (MOT)

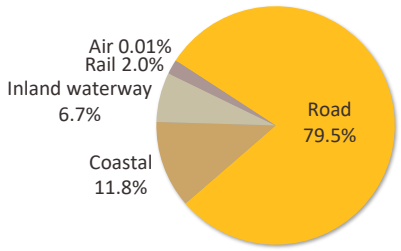
Note: Freight volume of Thailand includes both domestic and international of transportation

* Total freight transportation in 2023 evaluated by Krungsri Research

Road transport accounts for almost 80% of all domestic freight volume (data as of 2022) (Figure 2). This dominance stems from the fact that successive Thai governments have pursued a policy of prioritizing the road system over the development of the infrastructure required for alternative transport networks, and this has had the result that at present, roads account for 98.9% of the total distance covered nationally by the different transport modalities[1/]. In addition, road freight haulage also offers the advantage of door-to-door transport, which means that shippers may move goods from source or origin to recipient in a single stage. The ease and completeness of these connections between sender and recipient cannot be matched by any of the alternatives and so in the case of distribution by rail, water or air, the use of some kind of 'feeder' road transport is still required to complete the final leg of the journey. For these reasons, distribution of goods by road has the major role to play in the overall national goods distribution network, and this is reflected in the significantly greater expenditure on road transport than on other distribution modalities (Figure 3).

Figure 2: Thailand Domestic Freight Volume (2022)

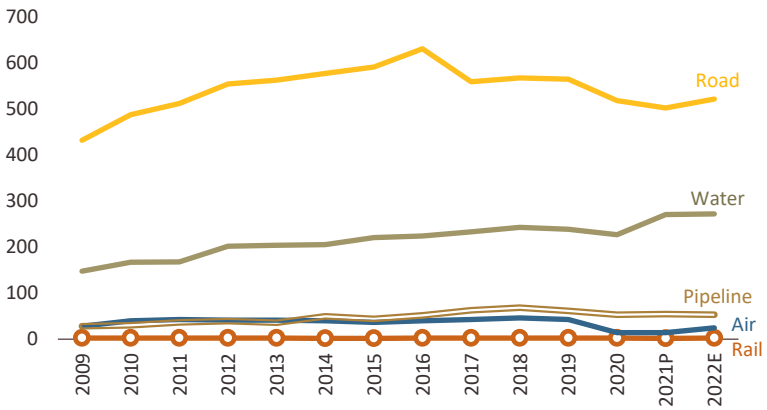
(% of total)



Sources: NESDC

Figure 3: Thailand's Transportation Cost by Mode

(THB, bn)



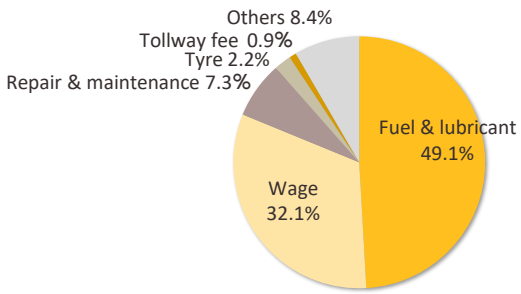
Source: NESDC
Note: Water mode include both inland water way and coastal way

1/ "Transport Infrastructure Annual Report 2022", published by the Office of Transport and Traffic Policy and Planning.

Road transport also benefits from the fact that unlike other modalities, distributing goods in a single stage does away with the need to make intermediate transfers, and this helps to reduce the loss or damage that would occur when transferring cargo between vehicles. However, with the exception of air transport, **moving goods by road is typically more expensive than the alternatives** due to the relatively high contribution of variable costs to overall business expenses. The most important of these are: ***(i) fuel and lubricants,*** which account for an average of 49% of all variable costs (Figure 4); ***(ii) labor,*** which represents a further 32% share of variable costs, though labor shortages mean that this is on an upward track; and ***(iii) other operating costs,*** such as the repair and maintenance of vehicles and the purchase of spare parts (another 19% of the total). However, in some parts of the country, the volume of traffic exceeds local capacity, resulting in significant problems with congestion. In light of this, officials have made long-term plans to strengthen the logistics sector by cutting costs and raising transport efficiency, in particular by enhancing the capabilities of the nation's rail and water transportation networks (e.g., through development of the double-track and highspeed rail systems, and the development of Laem Chabang and Map Ta Phut deep-water ports).

Figure 4: Variable Cost of Road Freight Transportation

(% of total)



Source: Department of Land Transport (DLT)
Note: Latest data, as of 2017

Box 1 **Goods typically shipped by road:**

1) **Agricultural goods:** This category includes livestock, agricultural produce, and animal feed. By weight, this accounts for 41.7% of all goods moved by road (as of 2019), though the exact quantity of agricultural goods shipped on Thai roads will naturally vary with fluctuations in seasonal outputs.

2) **Construction and industrial materials, and equipment:** Examples of these include plant and machinery, cement, steel, rock, earth, and sand. This comprises another 26.9% of all goods transported by road, though the types of goods moved will vary according to the location. Thus, in industrial estates, goods in this category will largely consist of raw materials and goods bound for export markets, while in urban areas, construction materials for use in the real estate sector will predominate.

3) **Fuels and ores:** 20.5% of road transport is accounted for by these goods, though most is moved over only short distances between areas where it is produced or processed to where it is consumed in downstream industries. In addition, most goods in this category are shipped in trucks operated by the owner of the goods or by a freight forwarder on contract to the owner.

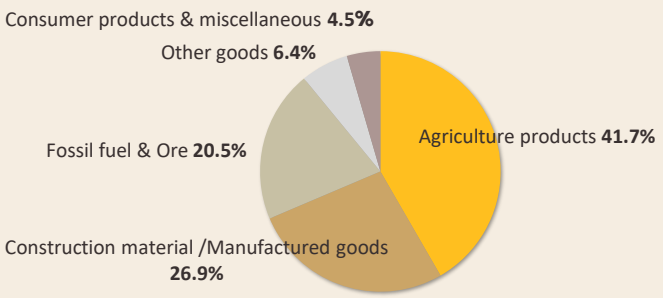
4) **Consumer goods and miscellaneous items:** Only 4.5% of the goods on Thai roads falls into this category, i.e., finished consumer/miscellaneous goods being moved to markets across the country. Goods may be moved in vehicles operated by the manufacturer or the commercial group to which the manufacturer belongs, or they may be shipped by a road haulier (i.e., from a distribution center to retailers).

5) **Other goods:** This includes dangerous substances, containerized goods, industrial waste, and so on. 6.4% of goods moved by road fall into this category. Transporting these items may involve the use of specialist transporters and operators may have to have particular expertise in the area and/or be particularly careful about shipping these substances.

Freight rates are typically calculated on the basis of the weight of the freight and the distance that it is to be transported. Goods in categories 1-3 above are generally heavy bulk products and so freight rates are usually calculated per vehicle, but for categories 4 and 5, rates may be given on the basis of the shipper taking all the space in a vehicle (so-called 'full truckload', or FTL) or of this being shared between more than one company (so-called 'less-than-full-truckload', or LTL). For more niche goods such as frozen food or dangerous cargo, shippers usually have to use specially equipped vehicles, and because this imposes additional overheads (e.g., for insurance), the cost of these services tends to be higher.

Share of Road Freight Transportation

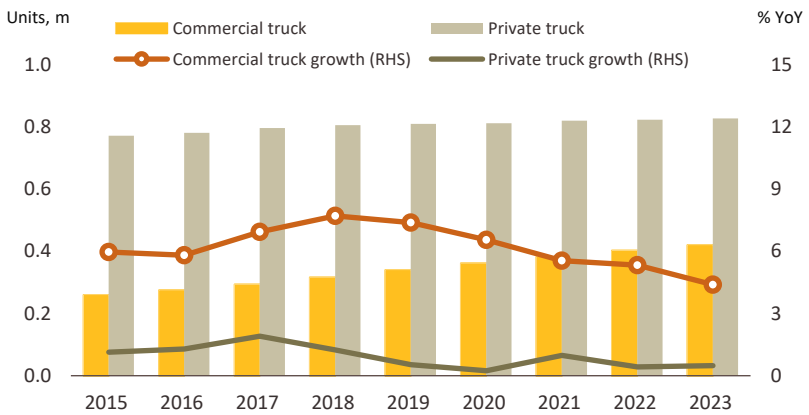
By Type of Goods, By weight



Source: MOT, data as of 2019 (latest)

The vehicles used by road hauliers can be split into two groups: (i) privately operated vehicles, which are used for the transport of an organization's own goods; and (ii) vehicles that offer non-scheduled freight services. As of the end of 2023, there were 1.2 million trucks of all types registered in Thailand (Figure 5), of which 0.83 million (66.4% of all registered trucks) were privately operated, with the remaining 0.42 million (33.6%) being used for commercial operations. Around 51% of the former were 6-wheel vehicles, while 60% of the latter were 10- or 12-wheel models (source: Department of Land Transport). Thai manufacturers thus tend to rely on in-house transportation facilities when distributing goods domestically. This has the advantage of giving manufacturers a greater degree of certainty and control over when their goods will be delivered, and also of reducing the risk of being faced with a sudden inability to access transport facilities. Despite this, though, over the period from 2020 to 2022, the number of commercial trucks registered with hauliers grew by 5.8% per year, compared to just 0.5% annual growth in the number of private trucks registered for their own use. This thus reflects the increasing trend among businesses and manufacturers to gradually outsource these services, a move that helps companies to: (i) cut business costs, including overheads related to administration and management, and other costs arising from vehicle repairs, insurance, and human resources; (ii) take advantage of the expertise and experience of commercial hauliers; and (iii) reduce the overheads involved in navigating the numerous official regulations governing the transport of goods. These include rules on the permissible weight of transported goods and trucks, the maximum size of trucks and of their loads, and the permitted speeds and travel times of goods vehicles (which may vary depending on whether the vehicle is in an urban area or elsewhere).

Figure 5: Number of Trucks Registered in Thailand



Source: DLT

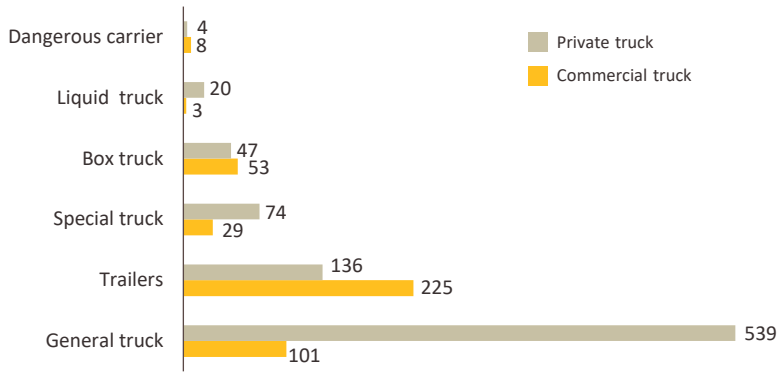
Haulage services may also be classified into a number of different groups according to the type of vehicles that they use[2/]. Business conditions for operators offering each of these services may then vary considerably, depending on the demand for the transport of particular goods, the number of vehicles that the business operates, the number of other operators offering similar services in the same segment, the types of vehicles that they use, and the kind of goods that they transport. Details of each of these vehicle types are given below.

2/ The issuing of permits to operate as a haulier and the registering of commercial transport vehicles is under the purview of the Department of Land Transport (DLT), which operates within the Ministry of Transport. The Department of Land Transport organizes and regulates the operations of these vehicles as laid out in the Law on Land transport.

- **General purpose trucks:** This segment is marked by the large and growing number of players on the supply side of the market. Income is dependent on the quantity of goods moved, but this is not tied to any particular product or season. Hauliers may therefore be hired to move agricultural goods during the harvest or general goods within particular areas, or to provide general haulage services. This segment is subject to significant competitive pressure, in particular over the speed and safety of delivery services, and this is impacting profitability. **In 2023, a total of some 0.64 million general purpose trucks were running. These comprised 51.7% of all trucks in the country**, and of these, 0.54 million, or 84.3%, were privately operated (Figure 6).

Figure 6: Number of Trucks Registered by Type (2023)

(Units, k)



Source: DLT

Note: Trailers includes semi-trailers, full trailers and drawbar trailers

- **Trailers/articulated lorries/semis:** Within this segment, income is primarily determined by changes in industrial output and in the outlook for business and construction. The goods that are transported in these vehicles are typically either large items, items moved in substantial quantities, or heavy bulk goods such as cassava, rubber and animal feed. These vehicles consist of a tractor unit or a truck attached to a trailer or container transporter, and these may be used to ship packages, industrial goods or inputs, large machinery, construction materials (e.g., long or rolled steel products) or containerized goods that are loaded and offloaded at wharfs, or container yards or inland container depots, while operators may sign contracts based on delivery schedules or the seasonality of production or exports**. In 2023, almost 0.36 million vehicles of this kind were registered in Thailand, these thus representing 29.1% of all Thai trucks.** Of this total, 62.3% (or 0.22 million vehicles) were operated by hauliers, while 37.7% (0.14 million vehicles) were owned and privately operated by businesses engaged in other activities.

- **Commercial vehicles for the transport of liquids, dangerous goods, and goods that have special handling requirements:** Operators in this segment are typically able to set their own prices, especially those that have domain specific knowledge relating to the transport of fuels, gasses, chemicals or other dangerous goods[3/]. These players may also operate other specialist vehicles, such as cement trucks, mobile disease testing units, car transporters, and trucks used to transport waste. The market for these services is relatively stable and therefore long-term contracts for the provision of transport services are often agreed, although turnover still fluctuates according to seasonal variations in the markets for the goods being transported. **In 2023, there were 0.14 million vehicles operating in this segment, or 11.1% of all trucks registered in the country.**

3/ The laws on transporting dangerous goods, e.g., the Hazardous Substances Act, and certificates confirming the company's ability to transport these specify that the transport of fuels is overseen by the Department of Energy, the transport of radioactive materials by the Office of Atoms for Peace, and the transport of explosives by the Ministry of the Interior and the Ministry of Defence.

- **Box trucks:** Income is broadly dependent on the outlook for the wholesale and retail sectors. Trucks in this category can be subdivided into two groups: (i) Temperature-controlled units/chilled and frozen containers are used for the distribution of fresh food and chilled and frozen prepared meals. The volume of goods shipped depends on the season and demand from particular consumer groups. (ii) General purpose trucks are used for the distribution of consumer goods and miscellaneous items. Hauliers may operate regular lines or have repeat customers, which will then help to reduce uncertainty over fluctuating income. Some players are also expanding their business operations beyond traditional activities, which emphasize the transport of large items or a large quantity of goods, by partnering with other businesses to offer express services focused on the shipping of smaller, more numerous goods. Reflecting these trends and ongoing growth in e-commerce, **there were 100,000 vehicles registered in this group as of 2023, up from 66,000 in 2020.**

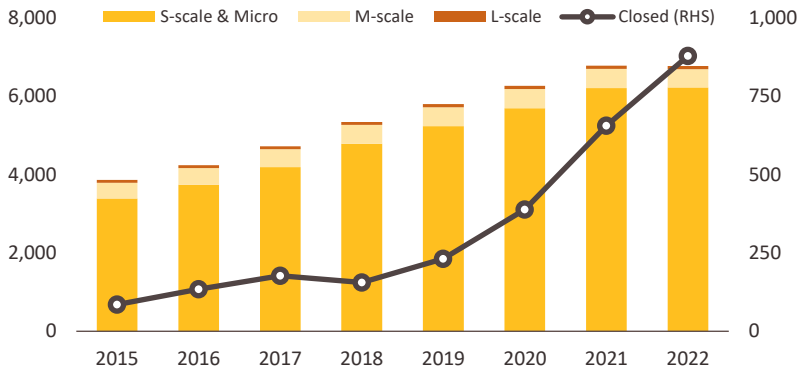
Only 8.8% of Thai road hauliers qualify as mid- to large-size operations (a total of 547 companies from the total of 6,218 registered businesses) but these account for 71.8% of the industry's income (data as of 2022) (Figure 7). These players enjoy advantages in terms of their better access to finance, their more efficient operations, their greater competitiveness, and their stronger negotiating position. This is generally a result of: (i) the large vehicle fleets that they keep on the road; (ii) the extended commercial groups within which they operate or the business partnerships that they have formed, which allows them to offer comprehensive, integrated services that combine different transport modalities (e.g., road-rail, road-air, road-sea, and road-rail-sea operations); and (iii) their modern management systems and technological infrastructure. Given this, large players are better able to expand the range of the markets within which they operate, the routes that they serve, and the transport services that they offer. **These players can be subdivided into the following sub-groups.**

- **Thai companies offering comprehensive haulage services:** These provide logistics services across air, land, sea and water and may be part of commercial groups, the operations of which extend into other countries in the region. Some of these are also the logistics arms of large manufacturers and distributors that also offer transport services to external customers. Notable examples of companies in this segment include Nim Si Seng 1988 Transport, PL Global Transport (part of PTT Global Chemicals), and SCG JWD Logistics.
- **Thai operators that have launched joint ventures with overseas players[4/]:** The majority of these are integrated logistics service providers that offer a wide range of logistics services transporting goods via land, water and air. These typically benefit from their access to a large capital base, the extensive commercial networks within which they are embedded, and their ability to provide comprehensive transport solutions, while these players are also increasingly offering last-mile delivery services. Major companies within this group include Best Logistics Technology (a Thai-Singaporean joint venture), Ninja Logistics (another Thai-Singaporean joint venture), and Kuehne+Nagel Transport (a Singaporean-Indian undertaking).

4/ The ASEAN Free Trade Agreement on logistics opened the way for overseas investors from ASEAN member states to own shares or engage in joint ventures based in other countries, though with the ceiling on the registered capital that they may hold set at a maximum of a 49% share. This is with the exception of road hauliers engaged in international road transport. In this case, companies from ASEAN member states may own up to a 70% share in these companies whereas for those from non-ASEAN member states, this is limited to a 49% share.

Figure 7: Road Freight Transportation Firms by Size

(Number of firms)



Source: Department of Business Development (DBD)

Alongside these major players, there are another 5,671 small companies active in the industry (91.2% of the total), though these tend to serve a limited customer base or to operate in a restricted geographical area. Operations might thus involve cross-border haulage linking Thailand to neighboring countries, though this will often entail establishing a joint-venture with a Malaysian, Chinese, or Cambodian partner. Alternatively, players may lay on short-distance transportation or express local deliveries, or they may operate within a larger commercial group by offering specialist services, e.g., running temperature-controlled vehicles between food processing units and ports, or contracting to provide connecting transport services, such as last mile or general deliveries in areas that are not served by the larger players. These companies are however often handicapped by their inability to invest in technology and personnel, and by their limited access to working capital.

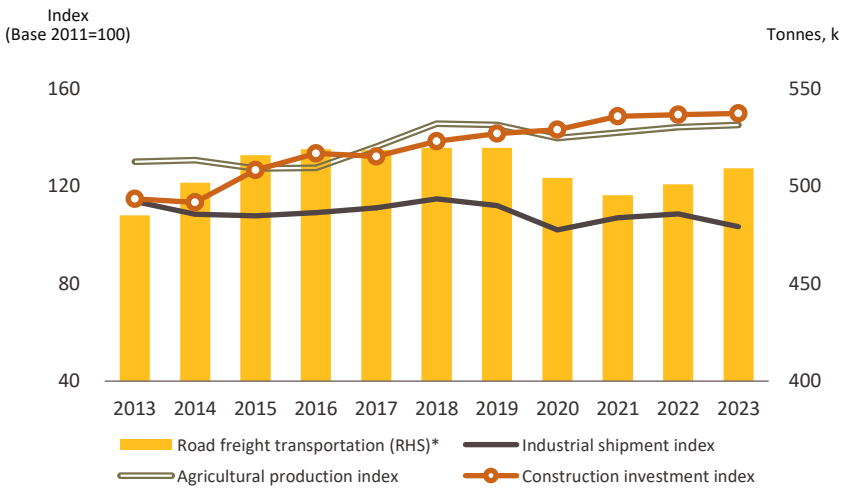
Beyond offering distribution services to meet demand from the domestic market, **operators are also able to develop their businesses by distributing goods produced by Thai manufacturers to markets in neighboring countries.** Several factors are helping to develop these export markets, including: (i) trade liberalization and a greater degree of cooperation in the ASEAN zone, including the partial merging of regional economies within the ASEAN Economic Community, the signing of free trade agreements with countries linked to Thailand by land (e.g., China, India, and the ASEAN zone), the creation of the Greater Mekong Subregion (GMS) and the Indonesian-Malaysian-Thai Growth Triangle (IMT-GT); (ii) Thailand's natural advantages in terms of its geographical location and its shared borders with a large number of other Southeast Asian nations, i.e., Lao, Myanmar, Cambodia and Malaysia, and its ability to engage in trade by land with Vietnam, India, Bangladesh, China and Singapore; (iii) progress on the development of transportation infrastructure linking Thailand to its neighbors, including the Asian Highway Network, the cross-border bridges or friendship bridges, the boundary posts, the opening of the Malaysia-Nong Khai-Lao containerized train line (Pedang Besar-Na Tha-Thanaleng), and connections to the China-Lao railway via cross-border bridges; and (iv) the forming of business partnerships in neighboring countries, which makes cross border transport significantly more convenient.

Situation

In 2023, growth in the volume of goods shipped by road increased 1.6%, up from 2022's 1.1% (Figure 8). Improvements in the business environment were due to a number of different factors. ***(i) The economy expanded by 1.9% YoY overall***, though private-sector consumption and investment were up by respectively 7.1% and 3.2% YoY, while the contribution of land transportation services to GDP climbed 6.5% YoY, a rise from 2022's 4.5%. ***(ii) Government stimulus measures helped to boost spending and tourism.*** These included the Shop and Refund scheme, phase 5 of the We Travel Together program, and in the second half of the year, the introduction of visa-free travel for arrivals from certain countries. ***(iii) Progress on public-sector infrastructure projects and private-sector residential housing developments*** lifted demand for the transport of construction materials (in 2023, the construction investment index edged up 0.4% YoY). ***(iv)*** Rising internet penetration rates (now at 88% of the population, or 63.2 million people[5/]), changing consumer behavior and strengthening demand for an easier shopping experience, and growing familiarity with ***online shopping are all continuing to boost e-commerce sales, and in 2023, these expanded by 11.0% from a year earlier*** (source: e-Conomy SEA 2023). **As a result of these influences, demand for transportation services for the delivery of construction materials, industrial and manufacturing products, and consumer goods all strengthened in the year.**

Nevertheless, a number of headwinds drawn to constrain growth across 2023. ***(i) Thailand's international trade contracted -2.4% YoY*** in line with only a 0.3% YoY growth in global trade. Cross-border trade shark -2.6% YoY (exports fell -4.6% YoY but imports climbed 0.2% YoY) due to the fragility of regional economies which was seen by a -4.9% YoY decrease in Industrial Shipment Index and the effects of drought on harvests a mere 0.7% YoY increase in agricultural outputs. ***(ii) Public-sector investment contracted -4.6% YoY***, and this then had knock-on effects on demand for intermediate goods and equipment and machinery. ***(iii) Global geopolitical tensions kept crude prices high on world exchanges***, and so these averaged USD 82/bbl, adding significantly to transport costs (almost 50% of total overheads).

Figure 8: Indicators of Freight Transport by Product Groups



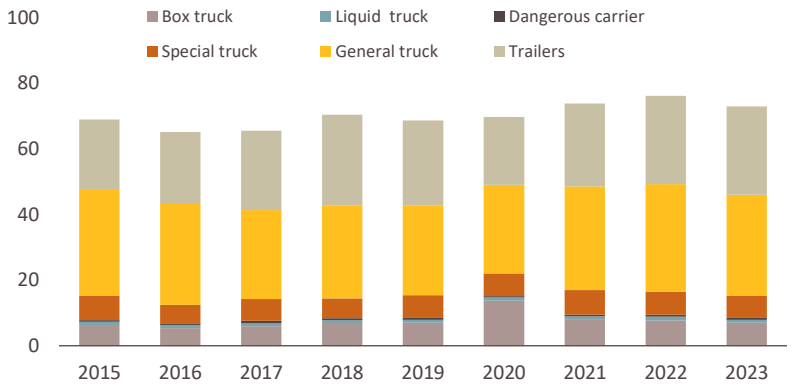
Sources: NESDC, Office of Industrial Economics (OIE), Office of Agricultural Economics (OAE)
Note: *Data of road freight transportation in 2023 estimated by Krungsri Research

5/ The 'Global Digital Report 2024' published by We Are Social and Meltwater.

Registrations of new trucks slipped -4.3% YoY in 2023 (Figure 9) on only slow growth in investment, manufacturing, and trade, though in addition, players had already moved to meet the rapid growth in e-commerce experienced over 2020-2022 during the COVID-19 pandemic by investing heavily in fleet expansion. The most declines in new registrations were tankers (down -24.7% YoY from growth of +11.2% in 2022), followed by pickups (down -6.1% YoY having grown 3.5% a year earlier), and trailers/articulated vehicles (down -0.1% YoY from 6.7% expansion in 2022). The only category to see a rise in registrations was vehicles used for the transport of dangerous goods, for which registrations rose 5.7% YoY, though this was still only roughly half of 2022's growth of 11.0%.

Figure 9: Number of New Trucks Registered By Type

(Units: k)



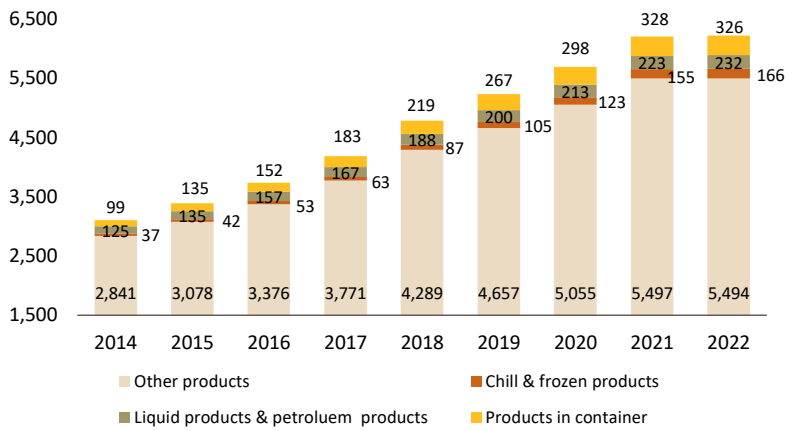
Source: DLT

The situation for individual segments of the road freight haulage market is described below (Figure 10).

- **Providers of general transport services:** There are 5,494 companies registered as providers of general transport services, and because the barriers to entry to this market are very low (over 2017-2022, an average of some 400-500 new players entered the market annually), as of 2022, 92% of these were SMEs or micro-operations (source: Department of Business Development). **In 2023, private-sector investment and consumption continued to strengthen, and together with strong growth in e-commerce, this buoyed demand for the express delivery of general and consumer goods or small parcels**.

Figure 10: Number of Road Freight Transportation Firms By Product Type

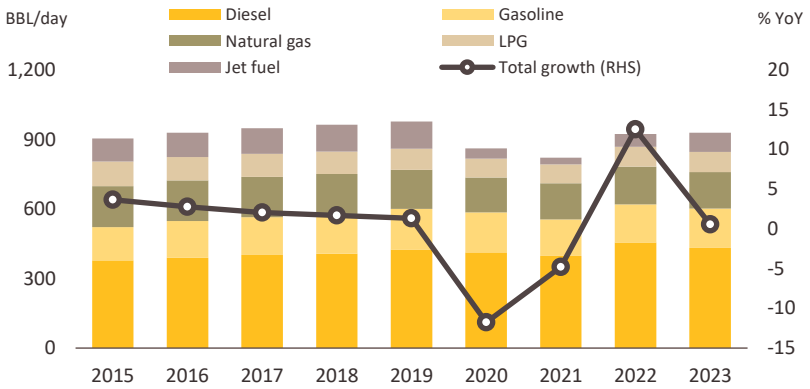
(Units: firms)



Source: DBD

- **Providers of tanker services (gas, petrol and other liquids):** 232 companies operate in this segment, 95% of which are SMEs and micro-operations. Unlike general transport services, significant safety concerns around the transport of fuels mean that the regulations governing this segment are tighter and so it is much more difficult to enter the market. One outcome of this is that competition is relatively relaxed and income tends to move in line with the conditions experienced by players involved in the oil industry (i.e., refineries, traders, and petrol stations) and in the production and distribution of chemicals. **In 2023, the segment benefited from the continuing rebound in the tourism sector,** and especially from the strong rise in foreign arrivals that then added to demand for travel services and in particular for jet fuel (+50.0% YoY) (Figure 11). However, weak growth in spending power and depressed conditions in export markets meant that overall domestic demand for fuels inched up just 0.5% YoY.

Figure 11: Consumption of Gas and Petroleum Products

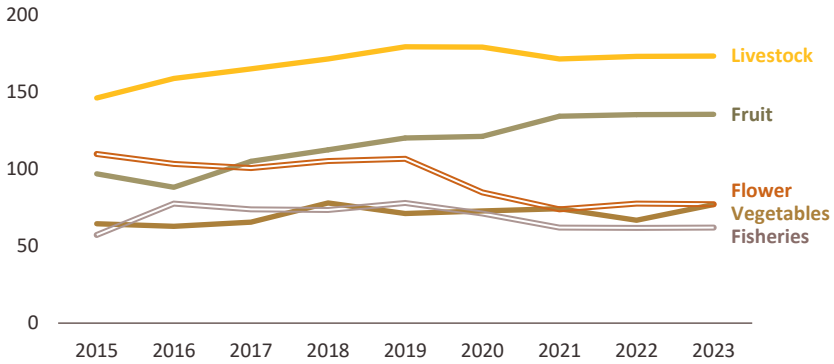


Source: Energy Policy and Planning Office (EPPO)

- **Temperature-controlled/chilled/frozen transport services:** 166 companies are registered to operate in this segment, with 99% of these recorded as SMEs and micro-operations. These companies transport perishable goods, such as fresh foods, fruits, dairy goods, drinks, cut flowers, and chilled and frozen processed products. However, transporting agricultural and fisheries products to be used as inputs into the food processing industry is often undertaken by these companies themselves. Recovery in domestic consumption and the rebound in the tourism sector, which then fed through into **an improvement in business conditions for companies in adjacent parts of the economy (e.g., restaurants and hotels), contributed to solid rates of growth for this segment through 2023.** In addition, consumers are increasingly at home ordering fresh, chilled and frozen food online, agricultural productions are rising steadily (Figure 12), and the unusually hot weather also helped to boost demand for food, drinks, and ready-to-eat and chilled and frozen meals. The need for temperature-controlled units for the transport of vaccines (e.g., for influenza and COVID-19) and medicines also remains a significant source of demand.

Figure 12: Agriculture Production Index

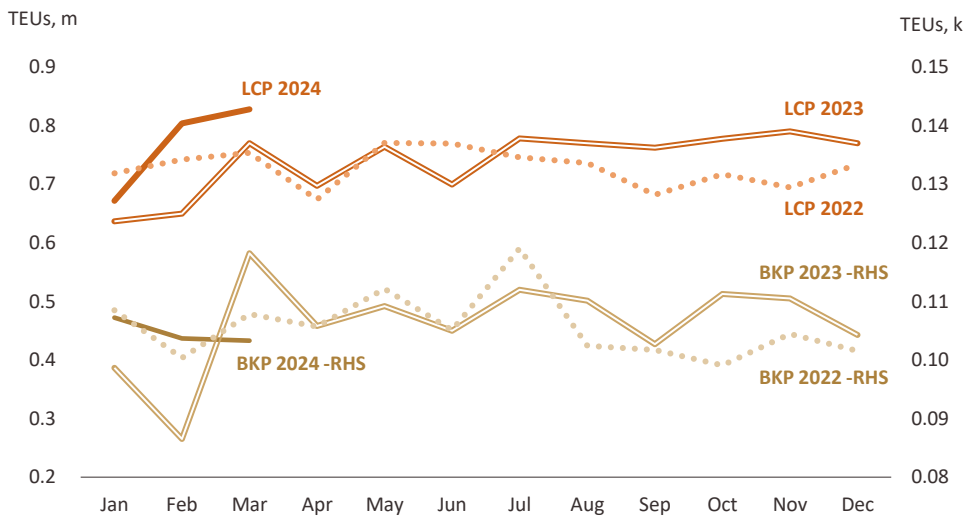
Base 2005=100



Source: Office of Agricultural Economics (OAE)

- **Containerized haulage services:** Some 98% of the 326 companies active in this segment are SMEs and micro-operations. Containers are typically used for the transport of industrial and consumer goods and so players' income is influenced by factors that include the state of the manufacturing and export sectors, the level of cross-border trade, and the extent of improvements to national infrastructure in Thailand and neighboring countries. Unfortunately, **these factors conspired against the industry in 2023,** and the sluggish performance of the Thai economy, weakness in key export markets, and worsening geopolitical tensions in many continents around the world all dragged on Thai exports through the year (these fell -1.5% YoY, with declines in export of border trade with Lao, Malaysia, Myanmar and Cambodia contracting by a combined -10.4% YoY). Nevertheless, border imports jumped 11.2% YoY and containers throughput volume (imports and exports combined) through Laem Chabang and Bangkok ports rose by respectively 1.5% and 0.5% from a year earlier (Figure 13), indicating that **demand for containerized haulage services remains solid**.

Figure 13: Container Throughput Volume at 2 Major Ports



Source: Bangkok shipowners and Agents Association (BSAA)
Note: TEU= 20-foot equivalent unit
LCP= Laem Chabang port
BKP= Bangkok port

Box 2 Implementing the ESG agenda within the road transport industry

Players in the road transport industry are increasingly aligning their operations with the ESG (environmental, social, and governance) agenda, especially environmental issues. This is being accomplished through the switch to EVs powered by clean energy, improved rates of use of recycled parts, the application of digital technology (e.g., artificial intelligence, Internet of Things (IoT), and augmented reality), and the deployment of smartphone applications and online platforms to support operations. These efforts can then help to cut emissions. Examples of technology being used to enhance the efficiency of service provision include the following.

- **Telematics solutions:** These take advantage of equipment such as AI-enabled cameras and door and temperature sensors to monitor driving, alert drivers to potentially dangerous conditions, and record and analyze driving data. This then helps to improve the overall efficiency of operations as well as to ensure that safety standards are enforced.
- **Transportation management systems:** These offer comprehensive management solutions that are integrated across operations, from the receipt of orders through checking conditions and route planning to the provision of real-time data analytics that can then be used to cut fuel consumption and carbon emissions. These systems also allow for better fleet management, in particular with planning for the return legs of empty trucks (i.e., 'backhaul').
- **Maintenance management systems:** These help operators manage vehicle maintenance and maintenance schedules, carry out checks on vehicles, equipment and staff (before and after shifts have been completed), issue reminders when scheduled checks and maintenance is due, and maintain service records. In addition to increasing the efficiency of operations, this contributes to emissions reductions.
- **Technology to cut downtime, waste and carbon emissions:** This includes the use of improved technology to manage the temperature in cargo holds and so cut spoilage rates, and better queue management systems to improve coordination of arrivals and departures from warehouses, thereby cutting wait times.

Thai road hauliers are recognizing the growing importance of ESG issues, and many players have responded to changing business conditions by rolling out their own environmental programs. Examples of these include preparing to offer net-zero transport services by 2030 and setting the goal of reaching full net-zero emissions from customer services by 2050. To this end, Yusen Logistics has made available an online calculator that helps customers assess the carbon emissions associated with the various services that the company offers and then choose the most appropriate. In addition, WICE and OR have partnered to test the use of long-distance electric trucks for the delivery of coffee beans from Chiang Mai to Ayutthaya, DHL Supply Chain is using an 18-wheel electric truck to deliver soy milk, thereby making emissions savings equivalent to around 60 tonnes of CO_2 annually, and GCM-PTA is importing electric trailers to use when transporting PTA acid.

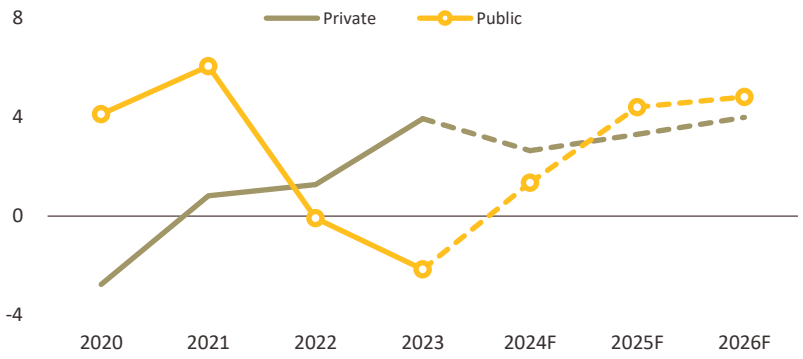
Outlook

Krungsri Research sees the volume of goods moved by road increasing by 2.0-3.0% annually over 2024 to 2026. The market will be lifted by the following factors.

1) **The Thai economy should continue to grow at the steady within a range of 2.4-3.2% per year,** and this will then push up domestic consumption and investment. The latter will include large-scale public projects and the development of industrial, commercial and residential properties by the private sector, and so over 2024 to 2026, spending on construction from public and private sources is forecast to grow by respectively 1.4-4.8% and 2.6-4.0% annually (Figure 14). Alongside this, the continuing recovery in the tourism sector will return arrivals to their 2019 level by 2025, and these trends will boost demand for the transport of raw materials, construction supplies, and industrial, intermediate and consumer goods.

Figure 14: Public and Private Construction Trend

(Growth, % YoY)



Source: 2024E-2026F by Krungsri Research

2) **The IMF forecasts global trade growing by 3.0-3.5% annually in the coming 3 years,** and international trade linked to Thailand will gradually benefit from this, thus adding to demand for the transport of goods being imported to and exported from Thailand by road.

3) **Regional economies will continue to strengthen, and the IMF sees those of the CLMV nations expanding by 1.8-6.3% annually in the coming period. This will add to demand for border and cross-border road freight transport services linking Thailand to its neighbors and on to China** (in 2023, the value of cross-border Thai-Chinese trade surged 44.1% YoY). Spending on new infrastructure in these countries, especially on rail transport, will also make the use of train-based transportation services more convenient (in particular the Lao-China and Thai-Malaysia rail links) and this will then lift demand for road-based feeder services that connect to rail, water and air networks. An example of the impacts of the Nong Khai-Vientiane rail link can be seen in the development of Na Tha station as a Intermodal Facilities Hub supporting the import and export of goods along the Thai-Lao-Chinese trade axis. This is scheduled to open in 2028, and the commencement of commercial services will help to boost business opportunities for players offering transshipment services moving containerized goods between road and rail modalities. In addition, the implementation of the ASEAN Customs Transit System (ACTS) is cutting transport costs and is expected to help to double the value of intra-ASEAN trade between 2017 and 2025. Moreover, Thai officials[6/] have now set a target of boosting the value of border and cross-border trade to THB 2 trillion annually by 2027, up from THB 1.7 trillion in 2023, or an average annual increase of 4.1%.

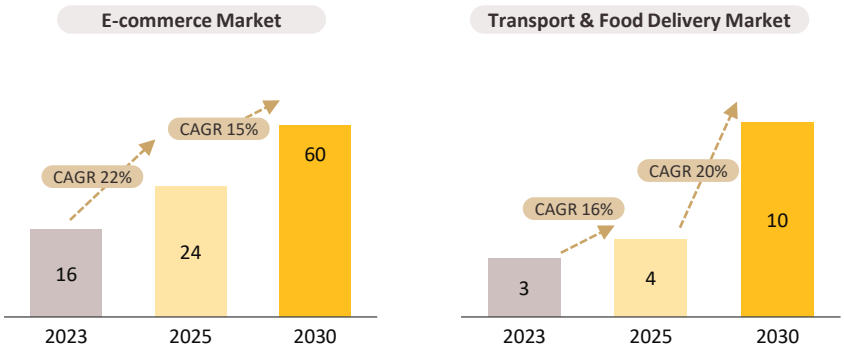
6/ Committee for the Promotion of Border Trade and Cross-Border Trade and Investment.

4) **Government policy is directed at supporting the transport sector, with additional help coming from the development of related infrastructure[7/].** This has included the development of Phase 3 at Laem Chabang Port (Terminal F) and Phase 3, Part 1 at Map Ta Phut Port, both expected to commence operations by 2027, and upgrades to roads connecting to agricultural and tourist areas. It is hoped that this will then crowding-in additional private-sector investment to nearby areas and to boost demand for the trucks and intermodal transportation services (on road, rail and water) that will be needed to support an intensification of economic activity in the area.

5) **E-commerce will remain popular and annual growth rates of 15.0-22.0% are predicted for the industry.** As such, uptake of B2B (business to business) and B2C (business to consumer) transportation services will grow, as will demand for last-mile logistics (i.e., completing the last stage of journeys to buyers' homes or workplaces). According to the 'e-Conomy SEA 2023' report, it is expected **that online purchases of goods and food will expand by 16.0-20.0% annually over 2024-2026** (Figure 15), lifting demand for ancillary goods, most obviously for vehicles that are equipped with temperature-controlled or chilled and frozen facilities.

Figure 15: Growth of Digital Economy in Thailand

(USD, bn)



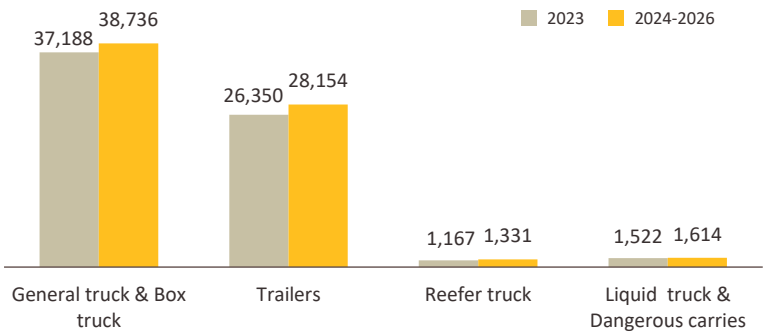
Source: e-Conomy SEA 2023 by Google, Temasek and Bain & company

7/ Current government spending on transportation includes investments in the Orange Line, Purple (Southern) Line and extensions to the Pink Line, the 3-airport high-speed rail-link (Suvarnabhumi-Don Muang-U Taphao), the intercity motorway system, extensions to the national highway system, phases 1 and 2 of the double-track rail lines and new double-track lines, phase 3 of the Laem Chabang Port development, upgrades and expansions to regional airports, and the construction of truck rest areas, intermodal facilities hub, and cross-border distribution centers. In addition, the government is also investing in upgrades and expansions to the road networks served by the Department of Highways and the Department of Rural Roads.

2024 new truck registrations are forecast to turn around from 2023's contraction of -4.3% to growth of 1.0-2.0%. However, demand for trucks will expand only slowly due to the sluggish overall growth in the economy. That will encourage operators to limit or postpone purchases of new vehicles as they transition to the use of EVs. Some players will also partner with other companies to manage the supply of new trucks and to better balance demand for transportation services with their delivery capacity (Figure 16). Nevertheless, **over 2025 and 2026, new truck registrations should rise by 2.0-3.0% per year** as the need to replace older vehicles increases, the economy expands, and demand for transport services gathers pace. Registrations will thus increase at an average rate of 1.4% for pickups and general cargo trucks, 2.0% for tankers and other vehicles used in the transport of dangerous goods, 2.2% for trailers/articulated vehicles, and 3.3% for temperature-controlled trucks.

Figure 16: Number of New Trucks by Type

(Unit per year)



Source: DLT, Krungsri Research (2024-2026)

Note: A reefer truck is used for carrying chilled and frozen products and is mostly modified from box truck and trailer.
Trailers include semi-trailer, full trailer and drawbar trailer

Competition is increasing across the road freight haulage industry as major players, both Thai and non-Thai, look to expand the scope of their operations to encompass road, rail and waterborne services, a broader range of goods (e.g., high-value and oversized cargo), and a more comprehensive menu of services (e.g., express deliveries, or deliveries scheduled for a particular time or to special areas) that extend across Southeast Asia. For their part, SMEs will tend to focus on subcontracting for major players or on partnering with other companies to distribute goods to different areas. Businesses will also look to expand their customer base by making greater use of technology to manage operations, expanding into new geographical regions, and cutting service fees, all the while hoping to maintain stronger standards of service delivery. **Krungsri Research therefore sees conditions developing as follows for individual market segments.**

- **General delivery services: Conditions will improve solidly on the back of an expansion in manufacturing output, a stronger outlook for trade and commerce**, and ongoing rapid growth in e-commerce sales, which is being further helped by the proliferation of online platforms. Growth will be particularly strong in the area of consumer-to-consumer (C2C) sales, which will then stoke further demand for delivery services targeting these smaller order sizes. The e-Conomy SEA 2023 report thus indicates that spending on Thai online platforms will rise from a total of THB 15 billion in 2022 to THB 24 billion in 2025 and THB 60 billion in 2027, and this will help to further underpin growth in demand within this segment.

- **Oil and gas tankers, and the transport of other liquids: Demand from households and the transport sector for gas and petrol will strengthen** on growth in manufacturing, commerce, and tourism and the anticipated 1.0-2.0% annual increase in the number of vehicles of all types on Thai roads. Given this, sales of oil-based fuels will rise, especially for jet fuel (up 50.0% in 2023), while through 2024 to 2026, demand for all refined products should strengthen by 3.0-3.5% annually, having grown by just 0.5% in 2023.
- **Temperature-controlled/chilled/frozen transport services: Business conditions will improve on strengthening demand for transport services that prevent temperature-related spoilage**, which will itself be lifted by several tailwinds. ***(i) The transition to La Niña conditions and the resulting increase in the availability of water for agricultural uses will raise outputs***. **(ii) Demand for processed foods (e.g., chicken, seafood, ready-to-eat chilled and frozen meals, and chilled and frozen fruits) will benefit from the ever-growing reach of modern trade retailers and the increasing use of online channels** to connect to consumers directly. In addition, following 2023's El Niño and the adverse effects of this on access to food, global demand for foods is rising as countries look to shore up their food security. The Ministry of Commerce thus estimates that exports of food from Thailand will increase by 6.5% in 2024. ***(iii) Deepening consumer interest in preventive healthcare is adding to the demand for medicines and medical supplies***, while communicable illnesses continue to spread (the Department of Disease Control predicts that in 2024, there will be 6 outbreaks qualifying as epidemics and a total of 12 diseases under surveillance), while ongoing climate disruption will likely add further to rates of illness and the resulting demand for pharmaceuticals and medical treatments.
- **Containerized haulage services: This segment will benefit from rising levels of consumption and an increase in overall economic activity** (in 2024, imports and exports were up by respectively 4.2% and 1.8% from a year earlier, and these should continue to grow through 2025 and 2026). In addition, demand will be buoyed by anticipated 3.0-3.5% annual growth in the construction sector and the continuing strength of e-commerce sales. This will then add to the uptake of transport services for the delivery of construction supplies, machinery, and consumer, industrial, and other goods.

Nevertheless, the industry will face a range of challenges. ***(i) Costs are tending to rise,*** both for transport fuels and for the wages paid to skilled staff (e.g., drivers of specialist vehicles or drivers on cross-border routes). ***(ii) Players are having to invest more heavily in improving business efficiency,*** for example by spending on the technology needed to assist with operations management (e.g., to reduce the number of empty-backhaul trucks and to help with human resource training and management) and the transition to clean energy (i.e., using trucks that run on LNG[8/] and EVs) and so meet industry commitments to begin offering carbon neutral services by 2030. ***(iii) The role of rail in the commercial transport mix is rising*** since this is around only half as expensive as moving goods by road and can be considerably quicker too. For example, use of the Laos - China line is attracting growing interest because this cuts ship time from 2 days (when moving goods by road) to just 10 hours. ***(iv) The industry is seeing a growing number of mergers and joint ventures*** involving major players offering logistics services and overseas operations that have ready access to capital, technology, and network partnerships. This is then adding to the pressure on smaller players and those that do not operate within wider commercial groups. Given the above and in light of their narrow capital base, limited area of operations, restricted access to technology and lack of effective business partnerships, SMEs will find it increasingly difficult to compete against the dominant players and as such, their profits and market share will be increasingly threatened.

8/ Relative to diesel, use of liquified natural gas (LNG) helps to reduce emissions of greenhouse gases by 30%, nitrogen oxides (NOx) by 95% and particulate matter (PM) by 80% (source: Kiattana Transport PCL).

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