

THE 2024 PROBLEM IN LOGISTICS

— EFFORTS TO AVOID A LOGISTICS CRISIS —

Katsuhide Takashima
Industrial Research Dept., Industrial Studies Div.
Mitsui & Co. Global Strategic Studies Institute

SUMMARY

- The logistics industry is facing an impending challenge known as the “2024 problem.” Along with a shortage of drivers, this problem is heightening concerns about logistics delays.
- Prime Minister Fumio Kishida recently announced that he will take measures to address the 2024 problem in logistics, but even before that, relevant ministries and agencies had been working to find ways to prevent the outbreak of logistics problems.
- At the corporate level as well, logistics companies are working to streamline transportation and secure truck drivers and other personnel. They are also collaborating with other businesses both inside and outside of the logistics industry and working to promote standardization and visualization.
- The recruitment and training of female drivers and the use of foreign nationals should be considered to fill the shortage of personnel, and the processes involved could also create business opportunities.

The “2024 problem” in logistics refers to the logistical delays that are expected to result from two regulations related to truck driver working hours, both set to take effect in April 2024. The first regulation that could be responsible for this issue is the Act on the Arrangement of Related Acts to Promote Work Style Reform, which was enacted in 2018. The Act imposes an annual cap of 720 hours on overtime work, with penalties for violations. It has applied to major companies starting in April 2019, and to small and medium-sized companies from April 2020, with special exceptions: the transportation industry—along with certain types of businesses, including construction—will be subject to the Act from 2024. In addition, the cap is set at 960 hours, which is relatively lenient compared to other types of businesses, although it will eventually be brought in line with the general rule. This exception period has been granted because the driver shortage was considered too severe to apply the same limitations as in other industries. The reality is that avoiding logistical delays inevitably relies on existing drivers to work long hours.

The second regulation is the revised Notice of Improvement Standards, aimed at improving working hours and working environments for truck drivers. The current version, enacted in 1997, was revised in December 2022 for the first time in 25 years, and it is scheduled to take effect in April 2024 (Figure 1). Under the revision, truck drivers will be able to operate for fewer hours due to longer rest periods and a reduction in the total number of allowable hours on the job. Logistics companies are required to comply with both the Act on the Arrangement of Related Acts to Promote Work Style Reform and the Notice of Improvement Standards, while also facing the challenge of driver shortages.

Nomura Research Institute analyzed the situation under these two regulations in comparison with projections of what would happen if they were not implemented. In January 2023, the institute released its results showing that, by 2030, these two regulations could reduce the volume of transportable cargo by roughly 35% nationwide. In November 2022, NX Logistics Research Institute and Consulting (formerly Nittsu Research Institute and

Consulting) estimated that the volume of transportable cargo will drop by approximately 400 million tons, equivalent to roughly 14% of Japan's entire transportation capacity, by 2025, and fall by about 940 million tons, equivalent to 34%, by 2030. As two independent research institutes have now published similar results regarding the likelihood and extent of logistical delays, their projections are considered highly credible, increasing the sense of urgency for possible logistical delays beginning from April 2024.

Figure 1: Comparison of truck drivers before and after revision of the Notice of Improvement Standards

| | | Current version (from 1997 to end of March 2024) | Revised version (from April 2024) |
|---------------------------------------------------------------------------------------------------------------------------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Total hours spent on the job from start to finish (including waiting time and incidental tasks other than driving) | Per day | Up to 13 hours (max of 16 hours), 15 hours may not be exceeded more than twice a week | Up to 13 hours (max of 15 hours), 14 hours may not be exceeded more than twice a week |
| | Per month | Up to 293 hours (max of 320 hours) | Up to 284 hours (max of 310 hours) |
| | Per year | Up to 3,516 hours | Up to 3,300 hours (max of 3,400 hours) |
| Rest time | | 8 or more continuous hours | 11 or more continuous hours as a general rule. 9 continuous hours at the bare minimum |
| Driving time | | Up to 9 hours per day, averaged over 2 days. Up to 44 hours per week, averaged over 2 weeks | Same as under the current version |
| Continuous driving time | | Up to 4 hours (each pause in driving must be at least 10 consecutive minutes, for a total of at least 30 min before 4 hours have elapsed) | Up to 4 hours (In principle, any pauses in driving are considered rest time. Pauses should generally be for at least 10 consecutive minutes, for a total of at least 30 min. No more than 3 consecutive pauses in driving of less than 10 min) |

Source: Compiled by MGSSI based on materials from the Ministry of Health, Labor and Welfare

1. GOVERNMENT RESPONSE

Relevant ministries and agencies have been working to find ways to prevent the outbreak of logistics problems, as covered in sections 1-1 and 1-2 below. Most recently, Prime Minister Fumio Kishida announced on March 27, 2023, at a meeting of the Budget Committee of the House of Councillors that a ministerial meeting would soon be held to discuss the 2024 problem in logistics and that he intends to implement cross-governmental measures. This announcement symbolized the fact that this is a problem affecting the entire nation.

1-1. Study group for the realization of sustainable logistics

In September 2022, the Ministry of Land, Infrastructure, Transport and Tourism (MLIT), the Ministry of Agriculture, Forestry and Fisheries (MAFF), and the Ministry of Economy, Trade and Industry (METI) established a study group focused on achieving sustainable logistics, which continues to this day¹. The study group is working to develop strategies to ensure sufficient driving hours through measures such as shortening waiting and cargo handling times, reducing the number of deliveries, and extending lead times. The strategies also aim to improve operational efficiency to meet logistical demands with limited transportation and supply capabilities.

The study group is using energy policy-oriented regulations (the Act on Rationalizing Energy Use) as a reference to discuss a means of requiring shippers, receivers, and logistics companies to prepare medium- to long-term plans for logistical improvement and to issue progress reports. In the existing legal framework, the Act on Rationalizing Energy Use has established a similar approach, which provides a helpful guide for systemizing logistics policies. The aim of regulating three parties (i.e., shippers, receivers, and logistics companies) is to resolve issues that arise in the course of transporting goods from upstream to downstream within the supply chain.

In addition, the study group is considering ways to promote the proper collection of transportation charges by mitigating the adverse effects of the trucking industry's multi-tiered subcontracting structure and clarifying

¹ As of May 12, 2023.

contract terms. With the existing Construction Business Act as a reference, the study group is attempting to formulate effective regulatory measures for the logistics industry in regard to subcontracting and clarification of the contract terms.

The above was released as an interim summary in February 2023 and is scheduled to be materialized by the summer of 2023.

1-2. Council for the realization of Physical Internet

In October 2021, the MLIT and the METI launched a council for realizing Physical Internet², which continued to meet until March 2022. The Physical Internet is being promoted to increase efficiency in the logistics industry, which is under pressure, especially from the 2024 problem and the shortage of logistics personnel.

The roadmap released in March 2023, which aims to realize the Physical Internet by 2040, presents a series of processes leading from the current state of logistics through to completion in six categories: governance, logistics and commercial data platforms, lateral coordination, vertical integration, logistics hubs, and transportation equipment.³

The council simultaneously formulated an action plan up to 2030 toward the realization of the Physical Internet in the consumer goods (processed foods and daily necessities) industry. The action plan aims to streamline logistics through standardization and visualization, centered on the following four points: standardization of code systems in commercial distribution and logistics, standardization and operation of logistics materials, examination of business practices to ensure transparency in transactions, and data sharing.⁴

2. CORPORATE INITIATIVES

While the imminent 2024 problem is currently the center of attention, the logistics industry has long been working at the corporate level to streamline transportation and to secure truck drivers and other personnel.

2-1. Transportation streamlining

As shown in Figure 2, efforts to streamline transportation include reviewing transportation conditions and methods, as well as reducing waiting and cargo handling times.

Extension of lead times, which is classified as a transportation condition, has been proposed, most notably by the Japan Processed Foods Wholesalers Association. Allowing an extra day for delivery will reduce the amount of nighttime driving and sorting operations by truck drivers, which means improved working environments for them and improved operational efficiency. Similarly, the National Federation of Agricultural Cooperative Associations (ZEN-NOH) has also taken steps to extend lead times in order to comply with the aforementioned Notice of Improvement Standards. Extending lead times was once considered to be more

Figure 2: Examples of efforts to streamline transportation

| Category | Initiatives |
|---------------------|-------------------------------------------------------------|
| Transport condition | Extension of lead times |
| | Wave leveling |
| | Consolidation of pickup/delivery locations |
| Transport methods | Joint delivery |
| | Larger vehicles |
| | Long-distance docking transport |
| | Consolidation of freight and passengers |
| | Modal shifts |
| Waiting time | Drones |
| | Berth reservation system |
| | Flexible time specifications |
| Cargo handling time | Palletization |
| | Reduction of incidental operations time (inspections, etc.) |
| | Separation of loading and delivery |

Source: Compiled by MGSSI based on materials from SENKO Group Holdings Co., Ltd. Management Research Institute

² The term Physical Internet refers to a global logistics system based on an interconnected logistics network. Its purpose is to improve efficiency and sustainability, and it is expected to enable resource sharing and integration through the use of standardized modular containers, logistics nodes, and protocols. The term was defined in 2011 by Montreuil, Ballot, and Meller. The idea was inspired by Internet communications, which became prevalent around 2000.

³ https://www.meti.go.jp/shingikai/mono_info_service/physical_internet/pdf/20220308_1.pdf

⁴ https://www.meti.go.jp/shingikai/mono_info_service/physical_internet/pdf/006_03_02.pdf

difficult for agricultural produce and other food products than for other commodities in terms of quality control and cost. However, advancements in technologies aimed at maintaining freshness, such as vacuum pre-cooling immediately after harvest, have made this feasible.

Examples of larger vehicles, listed as a transport method, include the tandem trucks (Photo 1) operated by the general logistics company SENKO. These are Japan's first-ever tandem trucks linking two 10-ton trailers, and they enable a single driver to transport that volume over long distances away from main transportation lines (expressways). They can be split into two vehicles at a detaching station, with each continuing on to a different delivery destination. An outline of the company's operations is provided in Figure 3. In comparison with a mixed-loading system, these larger vehicles facilitate the simultaneous transportation of cargo from shippers in different industries with different merchandise, such as those of a housing manufacturer and a machinery manufacturer. Other expected benefits include improved loading/unloading rates and reduced CO2 emissions. However, some issues remain to be resolved, such as coordination of cargo handling times with the shipper companies, a lack of rest areas due to the extraordinary size of the vehicles, and personnel development in terms of driving techniques.

Palletization, which is categorized into cargo handling time, is another aspect of the government's efforts to promote standardization. Using pallets enables cargo to be handled by forklift trucks, reducing the time required for cargo handling in warehouses and for loading/unloading trucks. Logistics company F-LINE operates in the area between manufacturers and wholesalers, providing an example of promoting the use of general-purpose pallets (T11 type) to improve efficiency in warehouse operations. F-LINE was established and funded by five major food product manufacturers, including Ajinomoto and Kagome. Ajinomoto is currently in the process of renovating its warehouses to accommodate these pallets. As an example of a company operating between wholesalers and retailers, Nippon Access, in its efforts to streamline logistics, has begun construction of its Frozen Mother Logistics Center with the goal of achieving complete palletization of frozen logistics (Photo 2).

2-2. Securing Drivers

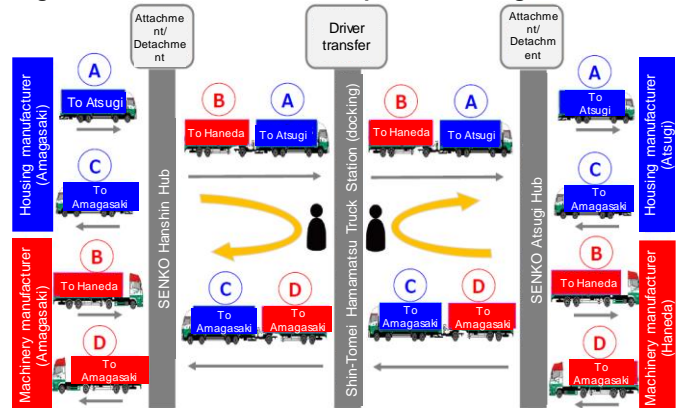
According to a survey released by Tokyo Shoko Research in February 2023, around 80% of trucking companies are experiencing a shortage of labor. The situation is expected to become even more difficult after April 2024, and efforts are being made to overcome this situation, as shown in Figure 4.

Photo 1: A tandem truck used by SENKO



Source: SENKO Group Holdings Co., Ltd. Management Research Institute

Figure 3: Overview of SENKO's operations using tandem trucks



Source: SENKO Group Holdings Co., Ltd. Management Research Institute

Photo 2: Inside Nippon Access's Frozen Mother Logistics Center



Source: The Japan Food Journal dated September 29, 2022 (<https://news.nissvoku.co.jp/news/shinoda20220921123239570>) accessed May 11, 2023

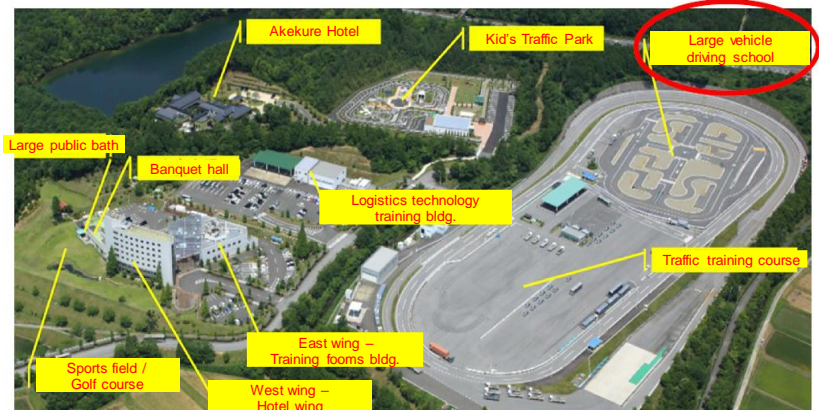
The SENKO Group trains both drivers and staff in-house, rather than outsourcing these positions, and works to recruit and retain drivers through training at the large vehicle driving school at Crefeel Koto, the group’s traffic safety training facility (Higashiomi City, Shiga Prefecture) (Photo 3). The group also owns Procure, a company operating daycare centers and nurseries, and promotes the employment of women by operating in-house daycare centers within its logistics centers in various locations.

Figure 4: Examples of efforts to secure logistics personnel (drivers and logistics center personnel)

| Category | Initiatives |
|----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Training system development | Operation of driving schools |
| | Education and training facilities |
| Diversity (promoting the employment of women, young adults, senior citizens, and foreigners) | Establishment of daycare centers and nurseries |
| | Reduction of physical burdens |
| | Dispatch of foreign personnel |
| Turnover prevention | Reduction of overtime work |
| Wage level optimization | Provision of job allowances (for mobile crane operators, slinging technicians, etc.) |

Source: Compiled by MGSSI based on materials from SENKO Group Holdings Co., Ltd. Management Research Institute

Photo 3: The SENKO Group’s traffic safety training facility (Crefeel Koto)



Source: SENKO Group Holdings Co., Ltd. Management Research Institute

3. CONCLUSION

Efforts to streamline logistics to avoid potential stagnation—otherwise known as the 2024 problem—are expected to accelerate further. However, it is unclear whether streamlining alone will be enough to ensure that supply capacity can meet demand, and a drastic solution to the existing shortage of truck drivers will be needed. While solutions that reduce or eliminate the need for personnel through automated driving systems, drones, and similar means hold promise, implementation is expected to take time. As a further measure to make driving positions accessible to a broader range of candidates, it is essential to recruit and train female drivers, who currently account for less than 5% of all truck drivers. In this regard, it will also be important to emphasize the ease of working for women. Meanwhile, the industry is entering a phase in which companies are seriously considering the use of foreigners. For example, the use of the Technical Intern Training Program for foreign nationals is under consideration for truck drivers. The program itself has already been introduced by construction, agriculture, and other industries. The process of recruiting and training drivers could also generate new business opportunities, not only for shippers and logistics companies but for third parties as well. It is also believed that the use of technology will provide a boost to overcome language barriers and difficulties in understanding traffic laws, while ensuring safety. In any case, the 2024 problem is a major challenge that the public and private sectors must address together from various angles as a social issue affecting Japan's logistics industry and economic activities.

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