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Kearney, Chicago

# Executive summary

CSCMP'S ANNUAL
STATE OF LOGISTICS REPORT®

AUTHORED BY KEARNEY

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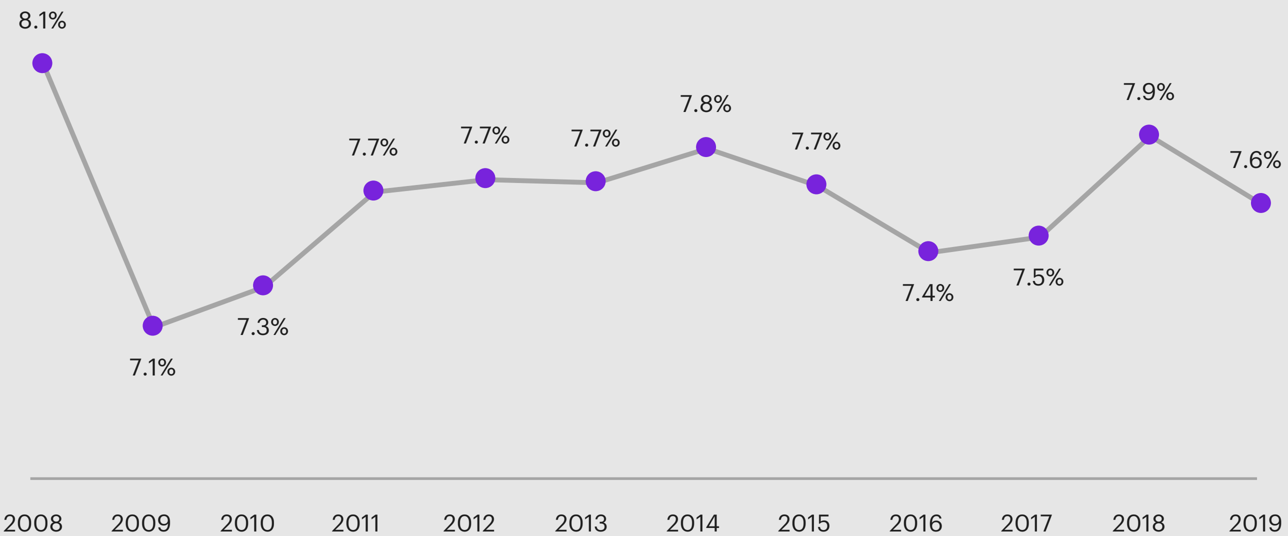
## Steady performance, a crash, and resilience tested

At the close of 2019, the state of the US logistics industry was an unrecognized last hurrah of the "old normal." The national economy completed a solid year with 2.3 percent growth, taking the US economy to $21.43 trillion in GDP. The logistics industry supporting that economy grew as well, to $1.63 trillion in expenditures. This represented 7.6 percent of GDP, down from 7.9 percent the previous year. However, 2018's fast GDP growth and capacity shortages had driven logistics costs to the highest percentage of GDP since 2008—so 2019 felt like a return to normal (see figure 1).

Then came the COVID-19 pandemic. As this report is released, the IMF GDP forecasts for 2020 are at −5.9 percent and at 4.7 percent for 2021. Globally, countries are grappling with halting recoveries of supply, ongoing demand destruction, and secondary waves of infection—and the US is no exception. This painful and chaotic period is causing logisticians, and all who depend on them, to adapt and evolve. As they fight to survive, to operate, and then to win anew, both shippers and carriers will depend on more quickly adapting logistics capabilities.

Figure 1

**In 2019, USBLC represented 7.6% of GDP—a return to normal for the industry**




Notes: USBLC is United States business logistics costs. Revised or updated data sources may result in figures that differ from previous reports; see Appendix for details.

Source: Kearney analysis

Logistics leaders are normally unflappable, being accustomed to fluctuations, volatility, and even crises. But as the pandemic violently wrenched supply chains across the world, these leaders were tested by new extremes. In our view, the experience will lead to a new emphasis on supply chain resilience, which is to say that logistics will build in more options and suppleness. The pendulum that once swung toward ultra-efficient, single-source, just-in-time, and heavily cost-focused supply chains will swing back in favor of flexibility and reserve capacity to cope with uncertainty and risk. The pandemic starkly brought risks to life. That transformed the way companies think about supply chains—and the logistics that enable them. Catalyzed by ongoing trade tensions, this new resilience bias will spur reshoring and multishoring efforts and make new demands on the providers and managers of logistics capacity. The adaptations are already under way.

## 2019 costs increase at a slower pace overall

United States business logistics costs (USBLC) rose 0.6 percent in 2019, far less than the 2019 inflation rate of 2.3 percent (see figure 2). Although transportation costs grew by 2.5 percent, inventory carrying costs fell by 4.6 percent. This reduction in carrying costs resulted from a 16 percent reduction in the weighted average cost of capital (from 7.0 percent in 2018 to 5.9 percent in 2019). The 2.5 percent growth in transportation costs was slightly over one-quarter of 2018's 9.2 percent growth, and below its five-year compound annual growth rate (CAGR) of 3.2 percent (see sidebar: Highlights of 2019 on page 5).

Within transportation, costs rose for motor, parcel, water, and pipeline, and fell for rail and air. Where costs fell, it was generally due to volume declines in a slowing economy, plus some easing of prices as carriers tried to sell that now-excess capacity. Where costs rose, it was often momentum from 2018 carrying over into early 2019. Some shippers signed contracts early, to avoid the premiums they'd faced among tight times in previous years. Some carriers were able to enforce pricing discipline.

Figure 2

**Transportation costs fell in 2019, but were still above the five-year CAGR**

| US business logistics costs ($ billion) | | 2019 | YoY 2019/2018 | 5-year CAGR |
|---|---|---|---|---|
| Transportation costs | — Full truckload | 306.7 | 1.4% | 2.1% |
| | — Less-than-truckload | 65.4 | 1.3% | 1.9% |
| | — Private or dedicated | 308.2 | 5.0% | 3.5% |
| | Motor carriers | 680.4 | 3.0% | 2.7% |
| | Parcel | 114.4 | 8.5% | 8.8% |
| | — Carload | 61.4 | −0.2% | −2.3% |
| | — Intermodal | 22.5 | −4.3% | 3.7% |
| | Rail | 83.9 | −1.4% | −0.9% |
| | Air freight (includes domestic, import, export, cargo, and express) | 75.2 | −9.7% | 2.8% |
| | Water (includes domestic, import, and export) | 47.9 | 3.1% | 1.3% |
| | Pipeline | 57.4 | 9.5% | 11.4% |
| | **Subtotal** | **1,059.1** | **2.5%** | **3.2%** |
| Inventory carrying costs | Storage | 149.6 | 6.6% | 5.2% |
| | Financial cost (WACC x total business inventory) | 168.6 | −12.7% | 2.6% |
| | Other (obsoloscence, shrinkage, insurance, handling, others) | 136.4 | −4.6% | 3.8% |
| | **Subtotal** | **454.6** | **−4.6%** | **3.8%** |
| Other costs | Carriers' support activities | 59.7 | 1.9% | 5.0% |
| | Shippers' administrative costs | 56.4 | 8.5% | 5.7% |
| | **Subtotal** | **116.1** | **5.0%** | **5.3%** |
| **Total US business logistics costs** | | **1,629.77** | **0.6%** | **3.5%** |

Notes: YoY is year-over-year. WACC is weighted average cost of capital.

Sources: CSCMP's 30th Annual State of Logistics Report (see report appendix); Kearney analysis

Among the sectors with the biggest changes:

— Air freight, down 9.7 percent, faced slowing industrial volumes, especially in the automotive industry.

— Pipeline, up 9.5 percent, was driven by pricing lags and larger volumes thanks to increased domestic oil and gas production.

— Shippers' administrative costs, up 8.5 percent, reflected a tight overall labor market and high wages.

— Parcel, up 8.5 percent, was driven by a surge in e-commerce.

In other sectors, motor carriers grew 3 percent, driven primarily by growth in private and dedicated fleets. Rail was down 1.4 percent, driven by declining volumes, especially in intermodal. Water transport grew by 3.1 percent, as pricing discipline kept rates healthy. Inventory storage costs grew 6.6 percent, as warehousing capacity remained tight. Carrier support activities likely became more efficient but also were cut back with the drop in motor carrier volumes.

**Within transportation, costs rose for motor, parcel, water, and pipeline, and fell for rail and air.**

## Highlights of 2019

In 2019, the logistics industry exhibited very good fundamentals. Although almost nobody saw the COVID-19 crisis coming, the state of the industry in 2019 suggests that it could recover quickly.

— Logistics accounted for a reduced percentage of GDP (7.6 versus 7.9 in 2018), reflecting better overall productivity.

— Parcel and last-mile delivery saw continued growth and significant innovation.

— Road freight capacity improved, benefiting shippers.

— Railroads achieved reduced costs and increased profitability.

— Dramatically improved pipeline capacity removed bottlenecks to increased domestic oil and gas production.

— Warehouses delivered the highest square footage completed in a single quarter on record—and the market quickly swallowed it up.

## Diverging by sector

Ever-rising e-commerce is redrawing the historic roles of stores, distribution centers, and the parcel delivery sector, which is evolving faster than ever. It's also forcing companies to accelerate automation. A last-mile sector now includes delivery of groceries, meals, and other items not included in the USBLC parcel figures. COVID-19 sheltering in place accelerated US consumers' desire for click-and-collect and home delivery. Those consumers' rising expectations drove shippers to devise strategies to first enable increased service levels and then minimize total cost per package. Successful shippers and 3PLs are improving asset utilization, needed to lower costs at these service levels, by segmenting products and customers with differing service-level requirements; for example, one to two hours for urban groceries versus same-day for urban apparel versus five days for rural furniture. The insights gained in this sector will advantage the leaders as they find new sources of value to move omnichannel supply chains toward profitability, leaving followers bleeding cash.

**"...I view the highway as a critical competitor for growth, given the market share that trucks represent across North American freight."**

**—Rail executive**

Road freight, the biggest segment of US logistics spend, was already slowing down in 2019 after a torrid 2018. After two years of scarce capacity and increasing rates, the 2019 market balance tipped in favor of shippers. They regained buying power, negotiated lower rates, and secured capacity. Carriers, meanwhile, saw reduced profits and ordered fewer new Class 8 trucks. Beyond the resumption of a boom-and-bust cycle now exacerbated by COVID-19, big carriers are looking to technology investments that promise to raise efficiency. Smaller carriers, especially those in highly affected industries, must look to app-based solutions and brokers to provide access to better fit routes and backhauls.

Railroads continued to improve operations to raise profitability despite declining 2019 volumes. However, the COVID-19 pandemic slashed volumes by another roughly 25 percent, and railroads face high fixed costs to maintain their networks in their core carload business. The intermodal sector is particularly intriguing here: this year's decline follows two years of substantial growth, probably because intermodal is sensitive to price competition—in a weak year for over-the-road carriers, railroads effectively ceded a declining market. High numbers of touches and a low level of automation in intermodal keep costs high and profitability low. Given intermodal's cost and carbon-footprint benefits, shippers are keen for better prices and reliability. The railroads have noticed, with one rail executive stating, "...I view the highway as a critical competitor for growth, given the market share that trucks represent across North American freight."

Ocean shipping faces continual disruption. In late 2018, volumes soared in anticipation of tariffs, so shippers entered 2019 with excess inventory that reduced ocean freight needs. Then the IMO 2020 sulfur regulations, implemented on January 1, created cost anxieties and pricing uncertainty. COVID-19 has now led to planning chaos. Ship and container imbalances and capacity uncertainty have driven up spot-market prices and suspended normal contracted rate negotiations as the demand picture remains clouded. While this has meant pain for the carriers, it will aid the sector's consolidation trend, which will lead to higher prices in the long term. Meanwhile, ports began 2020 seeing growing volumes and improving efficiencies, but the pandemic left them with reduced volumes, congestion, and hundreds of thousands of boxes stranded at terminals.

The pandemic dragged down air freight like no other segment. Before governments subsidized them with national stimulus packages, it was feared that most world airlines would be bankrupted. As some 48 percent of air cargo is carried by passenger planes, the effects could be dramatic. With about 90 percent of passenger routes cancelled in March and April, capacity was severely curtailed and spot rates jumped 20 to 300+ percent. But after steady declines through 2019, even more revenue per kilogram can't compensate for precipitous drops in demand. The longer-term picture is brighter: if future supply chains need to be more resilient and agile, they will likely rely more on air cargo, the most agile transportation mode.

The warehousing market continues its growth. In 2019, rents kept rising and vacancy rates stayed near historic lows. E-commerce continued to drive growth, especially in smaller, high-amenity urban warehouses. The fourth quarter of 2019 represented the highest square footage completed in a single quarter on record—and the vacancy rate barely budged. In 2020, the disruption of consumer supply chains caused by the coronavirus pandemic is expected to drive a new surge in warehousing demand, especially for temperature-controlled warehouse space, as more consumers order food online. Pandemic e-commerce is leading to an expected increase in adoption of warehouse automation solutions to keep costs and operational complexity in check even further; for example, sales of autonomous mobile robots (AMRs) are estimated to double to $27 billion by 2025, according to LogisticsIQ. Overall, it is estimated that a 5 percent bump in safety-stock inventory will require about 750 million square feet of industrial space as companies soften their lean-inventory strategies. The rise in stock levels should spur industrial activity, given the expectation that the warehouse construction pipeline will remain full and warehouse availability will remain tight.

In freight forwarding, challengers continued to bring out new technology-enhanced offerings featuring better visibility and transparency while incumbents accelerated their adoption. In a business that one major shipper described as "designed for inefficiency with constant change and handoffs," the leading players are striving intensely to improve the user experience and lower costs.

The pandemic tested 3PLs abruptly, with sudden stops or surges depending on the industries that they served. Most heavy manufacturing, the automotive industry, and important segments of basic chemicals came to a halt as factories closed and demand withered. The 3PLs and supply chains serving the hospitality and restaurant industries mostly stopped cold. High-tech products such as microprocessors continued to fly across the globe, still needed as inputs to crucial computers, servers, and military products. CPG and grocery demand surged as people hoarded and then shopped during shelter-at-home orders. 3PLs reported that they were able to redeploy some people and assets from the arrested to the surge-hit industries. Most shippers we spoke with reported that their 3PLs had a "we're in this together" attitude rather than invoking *force majeure* clauses. That said, 3PLs need to keep investing and sharpening their expertise. Some shippers told us that advances in technologies (warehouse management systems, transportation management systems, track and trace) make the insourcing decision easier to take. Those shippers committed to buying talent and innovation from 3PLs reported that they were seeing incremental improvements in creativity, such as the campus model for 3PLs where multiple shippers are served from the same group of facilities, or the buildup of 3PL last-mile networks and extra cross-dock capacity that can help shippers with surges.

**Consumers' rising expectations drove shippers to devise strategies to first enable increased service levels and then minimize total cost per package.**

In the pipeline sector, growing capacity came online just in time for the volumes that would fill it to vanish. Both oil and gas pipelines will see massive overcapacity in 2020 as low oil prices depress US output.

5G infrastructure promises a meeting between favorable economics and rising demand for visibility into supply chains. Within a few years, logistics providers will be able to meet that demand by automatically labelling, tracking, and recording all logistical elements, including an item's location, temperature, humidity, g-forces, and more. More users will be able to see incidents and make contingency plans. 5G-enabled automation will reduce losses and improve asset utilization through better tracking and anticipation.

The implications of the COVID-19 crisis have reemphasized the value of technology in logistics. Even providers previously hesitant to invest in shipment location tracking or electronic signatures, claiming such digital technologies were unnecessary, are now embracing them as table stakes. With rising labor costs, and despite the COVID-19-induced recession, shippers and 3PLs are looking to automation and robotics to make logistics more efficient. While serious uptake of autonomous trucking is still five to 15 years away, legions of mobile robots are already working alongside humans in warehouses. In general, winners will emerge from this crisis with more digitally savvy logistics operations, especially in the areas of creating transparency and interfaces while reducing needs for physical labor across modes and nodes.

This year's report is linked to two new deep dives, examining the state of logistics specifically for the retail and automotive sectors of the economy. Although they are not compiled as part of the physical report, you should not miss them.

Over the past three years, these State of Logistics reports have chronicled an industry that accelerated into uncertainty and then climbed a steep grade to achieve a vista offering new ways of working to create more value. The COVID-19 pandemic recapitulates this journey in a few short months, from extreme uncertainty to hard work to new possibilities. Although few anticipated the crisis, carrier and shipper behaviors have almost universally been described as exemplary. Logisticians rolled up their sleeves instead of hiding behind their contracts. People across the industry—indeed, across the world—are coming together to face this dramatic crash and rebuild from it. Players in the logistics industry are seeing the rewards of collaboration, which now motivate them to go further with bold new solutions.

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