

REVIEW OF THE EMPIRICAL EVIDENCE ON LAST-MILE DELIVERY FACILITIES IN NEW YORK CITY

AN ASSESSMENT OF TRAFFIC AND WORKER SAFETY FINDINGS IN THE
NYC COMPTROLLER'S "FAST SHIPPING" REPORT

JUNE 2026

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June 2026

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EXECUTIVE SUMMARY

Oxford Economics was commissioned by Five Borough Jobs to assess whether the empirical claims in the NYC Comptroller's report, *Fast Shipping. Slow Justice* (hereafter "Fast Shipping")¹, support the recommendation that last-mile delivery facility operators be required to directly employ workers performing core delivery services, effectively restricting the use of third-party contractor or delivery partner models. Our review focuses on the report's statistical design, counterfactual assumptions, treatment of uncertainty, and interpretation of causality.

Our review finds that while the *Fast Shipping* report raises important public policy issues, the limitations of its empirical analysis mean that it does not establish that last-mile delivery facilities or third-party contractor operating models caused any of the harms described. Furthermore, it does not demonstrate that mandating a direct-employment model would reduce crashes or workplace injuries.

The key methodological findings are as follows:

- **The *Fast Shipping* analysis is descriptive, not causal.** It describes changes near selected facilities and differences across selected groups, but it does not show that those changes were caused by last-mile facility openings or DSP-based business models.
- **The counterfactual is not adequately specified.** For traffic safety, the relevant comparison is not simply the same area before and after a facility opened. It is essential to control for broader traffic trends in the area and the city more generally. For worker safety, the relevant comparison should be with local, like-for-like operations that face similar risk exposure and reporting requirements. Broad industry benchmarks can be useful descriptive comparators, but they are not sufficient to isolate the effect of last-mile facility operations or contractor-based delivery models.
- **Small samples and data limitations constrain the strength of the findings.** The traffic safety analysis is based on a limited facility sample, while the worker safety analysis depends on OSHA reporting data and manually identified DSP entities with unknown precision and representativeness. These data can be useful for identifying issues warranting policy attention, but they are less well suited to drawing firm conclusions about operator performance or employment models.
- **The report does not consistently test whether observed differences are statistically significant.** Without formal treatment of uncertainty, particularly given the small sample sizes, descriptive differences can be misinterpreted as meaningful evidence of underlying group differences.

Taken together, these limitations imply that the *Fast Shipping* analysis does not provide a sufficient evidence base to justify the proposed direct-employment requirement. A more robust assessment is required that would include the use of appropriate control groups, local and like-for-like benchmarks, formal statistical testing, clearer operator classification, and direct analysis of whether the employment model affects the relevant safety outcomes.

¹ New York City Comptroller, "[Fast Shipping. Slow Justice: Traffic, Worker, and Climate Hazards in Last Mile Delivery](#)," November 17, 2025. Last accessed May 2026.

OUR REVIEW OF THE *FAST SHIPPING* REPORT

INTRODUCTION AND SCOPE

The *Fast Shipping* report examines the growth of last-mile delivery facilities in New York City and presents descriptive claims on traffic crashes and workplace injuries. Based on its analysis of traffic crashes and workplace injuries, the report recommends that last-mile facility operators be required to directly employ workers performing delivery services. This would restrict the use of third-party contractor or delivery partner models, such as Amazon's Delivery Service Partner (DSP) program, as well as some programs like FedEx Ground and other last-mile operators.

Our review assesses whether the traffic-safety and worker-safety methodology used in *Fast Shipping* provides a sufficient basis for that policy recommendation. It does not seek to minimize the importance of street safety or worker safety. Rather, it examines whether the report's evidence is designed to answer the policy question it is being used to support.

COUNTERFACTUAL AND BENCHMARK CHOICES

A central limitation of the *Fast Shipping* analysis is that it does not consistently use a comparison appropriate for the policy question it seeks to answer. The report recommends requiring last-mile facility operators to directly employ workers performing delivery services. To support that conclusion, the evidence would need to show that the outcomes identified (traffic crashes or workplace injuries) were caused by last-mile facility operations generally, or by contractor-based delivery models specifically.

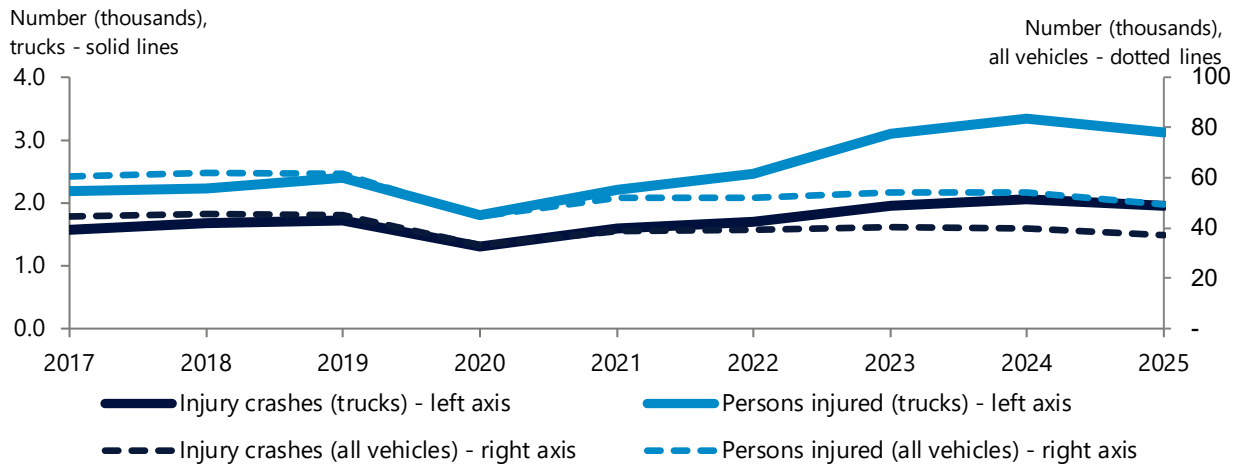
A before-and-after comparison can show that outcomes changed over time, and an industry benchmark can show that rates differ across groups. But neither comparison, on its own, shows that last-mile facilities or DSP-based models caused the observed outcomes. A policy recommendation about employment structure should be based on evidence of the effect of that structure relative to the relevant alternative. We will elaborate on the considerations relevant to the traffic and worker safety analyses below.

CONSIDERATIONS FOR THE TRAFFIC SAFETY ANALYSIS

For traffic safety, *Fast Shipping* compares crashes and injuries near delivery centers before and after those facilities opened. This comparison is descriptive and **does not account for other changes occurring across New York City during the same period.**

Figure 1 shows that street-safety outcomes changed materially across New York City during the period examined, including a sharp fall in 2020 and partial rebound thereafter. That is an important limitation because the relevant period included the Covid-19 pandemic, sharp changes in traffic volumes, a subsequent rebound in travel activity, rapid growth in e-bikes and mopeds, and possible changes in collision reporting and enforcement. Each of these factors could affect measured crash and injury trends across the city, regardless of whether a new delivery facility opened nearby. A simple before-and-after comparison around facility openings therefore risks capturing broader citywide trends rather than a facility-specific effect.

Figure 1: Injury crashes and injuries in New York City, 2017–2025



Further, proximity does not establish that a facility is responsible for a collision. A collision occurring within a specified distance of a delivery center is not, by virtue of that distance, related to facility activity. A proximity-based analysis can identify local patterns; it cannot show whether those patterns are caused by facility-related activity or by other factors affecting the surrounding area.

A related issue is the definition of the area around a facility. Results can be sensitive to the radius used to define “near” a facility and to the time window used to define before and after opening. A finding that depends materially on the choice of distance band or time period should be interpreted as a descriptive association rather than a stable facility-specific effect. A methodological enhancement would have been to use robustness checks across alternative radii and time windows to assess the sensitivity of the statistical results and conclusions to these design choices.

In addition, the relevant counterfactual is not simply “facility versus no facility.” For the policy question, the more relevant issue is whether the same delivery demand would otherwise have been served in a way that produced lower traffic and safety risks. Deliveries could be displaced to other parcel networks, store-based freight movements, consumer shopping trips, or different delivery models. *Fast Shipping* does not assess these alternatives or estimate their implications for vehicle activity or crash exposure. As a result, it cannot determine whether observed local changes around facilities represent a net increase in traffic-safety risk across New York City or a redistribution of activity from other parts of the transport system.

The methodological implication is straightforward: evidence that crashes or injuries increased within a half-mile of selected facilities after opening is not sufficient, on its own, to establish that those facilities caused the increase. Nor is it sufficient to infer that the employment model associated with any subset of facilities caused the observed pattern. To support that inference, the analysis would need to compare observed outcomes with a credible estimate of what would have happened in the absence of the facility opening or in the presence of an alternative operating model.

CONSIDERATIONS FOR THE WORKER SAFETY METHODOLOGY

Fast Shipping’s worker-safety analysis relies on OSHA Injury Tracking Application data and compares reported injury rates at last-mile facilities and DSPs with wider industry benchmarks. The principal measures are the Total Recordable Incident Rate (TRIR)², which measures OSHA-recordable workplace injuries and illnesses per

² TRIR, or Total Recordable Incident Rate, measures the number of OSHA-recordable workplace injuries and illnesses per 100 full-time equivalent workers.

100 full-time equivalent workers, and the Days Away, Restricted or Transferred (DART)³ rate, which measures recordable cases resulting in days away from work, restricted work activity, or job transfer, also expressed per 100 full-time equivalent workers.

Broad NAICS benchmarks can be useful for context, but they are not strictly comparable to last-mile parcel delivery services. The Couriers and Messengers category, NAICS 492, includes a wide range of activities. A narrower local benchmark, such as New York City Couriers and Express Delivery Services, NAICS 4921, is more closely aligned with last-mile delivery activity and operating conditions, although it is still not a perfect like-for-like comparator. In some cases, relevant operators may be classified elsewhere, such as NAICS 484110, General Freight Trucking, Local. Differences in NAICS coding can therefore affect the interpretation of reported injury rates. The relevant methodological point is that the report's conclusions depend on whether the comparison group is sufficiently similar to the facilities or operators being assessed.

The core methodological issue is attribution. If DSP injury rates differ from a broad industry benchmark, that difference does not by itself establish that the DSP operating model caused the difference. Last-mile parcel delivery involves activities that may differ materially from those of other operators in the industry, including lifting heavy packages, vehicle ingress and egress, and exposure to weather and traffic. To attribute harms to the DSP operating model, the appropriate statistical test would be to compare outcomes of DSP-operating providers to non-DSP operators performing the same activity.

DATA AND STATISTICAL LIMITATIONS

Building on those counterfactual and benchmarking concerns, this section identifies additional data and statistical limitations that further limit the weight that can be placed on the report's findings. Our review identified additional methodological considerations that constrain operator-level comparisons in the *Fast Shipping* analysis.

First, the available sample limits the strength of the conclusions that can be drawn from the data. The traffic safety analysis is based on 18 facilities, while the worker-safety analysis starts from a 50-facility sample, of which 38 facilities reported injuries in OSHA's Injury Tracking Application data. The DSP analysis is based on 36 to 42 DSPs identified through desk research. These data can be useful for identifying issues that warrant policy attention, but they are less well suited to drawing firm conclusions about differences between specific operators or employment models. Once the sample is divided by operator group, time period, geography and outcome measure, the number of observations in each comparison is very (statistically) small. As a result, measured differences may reflect natural variation in the data rather than reliable differences between groups. Our testing indicated that the differences identified in the *Fast Shipping* report are not statistically significant and therefore do not support the report's policy conclusions.

Second, the 50-facility sample used as the starting point for the worker safety analysis is not random. It is drawn from a Department of City Planning list and is likely to capture larger and more visible operators more consistently than smaller or less visible ones. It, therefore, should not be considered a representative sample of all last-mile activity in New York City.

Third, DSP identification is manual. The *Fast Shipping* methodology identifies DSPs using company websites, job postings, LinkedIn, Indeed, Warehouse Ninja, and OSHA records. This approach may introduce classification error, particularly where a company is assumed to work exclusively for Amazon or FedEx unless contrary evidence is found. Any operator-level comparison based on this classification therefore carries an unknown error rate. The list of DSPs used in the analysis is not provided in the report.

³ DART, or Days Away, Restricted or Transferred rate, measures the number of recordable cases that resulted in days away from work, restricted work activity, or job transfer, also expressed per 100 full-time equivalent workers.

Finally, OSHA ITA data do not cover all establishments equally. Reporting obligations depend on establishment size and industry classification. If the DSP sample and the benchmark group differ in reporting coverage, establishment size, or NAICS coding, differences in reported injury rates may partly reflect reporting coverage rather than underlying safety performance.

CONCLUSION

Our review of the analysis contained within the *Fast Shipping* report indicates that it does not provide a sufficient empirical basis to justify the associated policy recommendations. The empirical analysis does not establish that last-mile delivery facilities or third party/contractor operating models caused any of the harms described. In addition, it does not demonstrate that mandating a direct employment business model would reduce crashes or workplace injuries.

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