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IRFAI

INDIAN RAILWAY FREIGHT ACTIVITY INDEX

Q2 2024

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The Indian Railway Freight Activity (IRFA) Index

At a time when the government aims to boost the railway freight modal share; adopting an index-based approach that captures the user's opinion about the Indian railway freight activity can be useful for the various stakeholders in the railway freight supply chain.

It is in this context that Dun & Bradstreet in association with Jupiter Wagons created the Indian Railway Freight Activity (IRFA) Index to monitor rail freight activity pan-India at a quarterly frequency. The index provides a comprehensive assessment of the Indian railway freight activity during the quarter and expectation of users for the upcoming quarter from the perspective of the railway freight users who may also use other modes of transport.

The IRFA Index is composite of two sub-indices: Freight Activity Experience sub-index and Freight Activity Optimism sub-index based on the survey responses of Indian Railway freight users. The Freight Activity Experience sub-index reflects freight users' experiences for the current quarter and Freight Activity Optimism sub-index captures the freight users' expectations for the next quarter for freight demand, supply, and operational efficiency of railways. The index attempts to capture the railway freight dynamics across the five railway zones i.e. Central, Western, Eastern, Northern and Southern railway zones.

This qualitative feedback ensures that the index reflects real-world experience of those using railways for freight transportation, both EXIM and domestic. This approach ensures a thorough assessment, a first of its kind, to monitor the dynamics of Indian Railway freight activity.

A ready reckoner for policymakers and users alike, the IRFA Index is a pivotal tool for monitoring and leveraging Indian Railway Freight Activity. We hope that the authorities, policy makers and stakeholders would find the IRFA Index report useful in their discussions and deliberations to address challenges across the supply chain, enabling stakeholders to make data-driven timely decisions.

The current report captures the Freight Activity Experience regarding freight demand, supply, and operational efficiency of rail freight users for Q2 2024 and their expectations for the same in Q3 2024.

Highlights

IRFA index for Q2 rises by 3.3% - The IRFA index, a key measure of railway freight activity across India, increased by 3.3% in Q2 2024 as firms grew more optimistic about freight activity in the upcoming quarter.

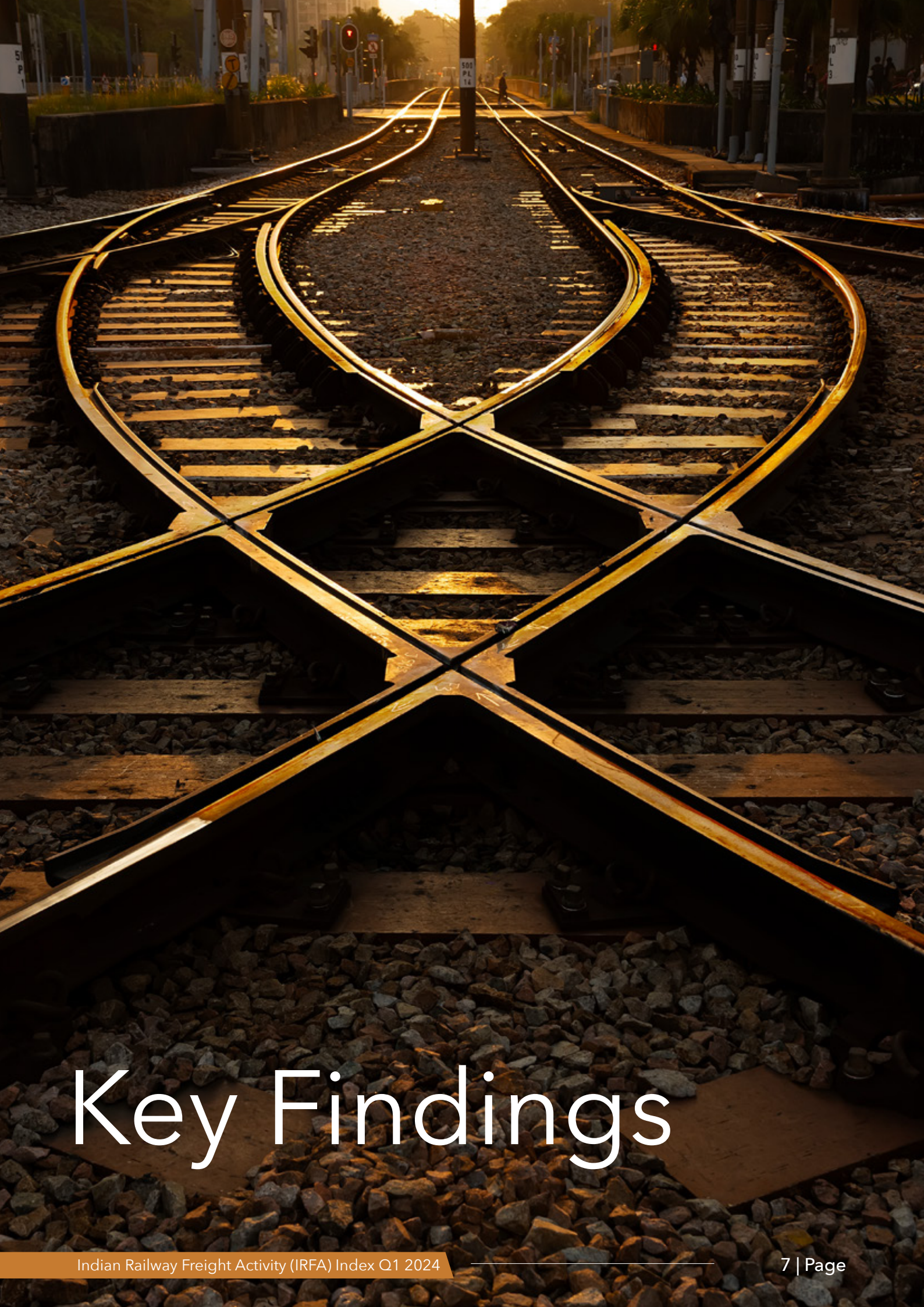
Improved optimism for freight activity for Q3 - Despite the challenges faced in Q2, firms expressed greater optimism for Q3, particularly for EXIM (export-import) freight movement. This positive outlook was seen across different firm sizes, with overall optimism rising by 7.7% for Q3 over Q2.

Higher demand expectations for containers and wagons - Firms displayed highest optimism for the demand of containers compared to other resources for Q3, with large firms leading the demand, followed by medium-sized firms. Optimism for wagons improved the most in Q3 from Q2 followed by rakes and labour, indicating firms' expectations of higher demand for these resources.

Optimism for EXIM freight movement varied by firm size - While medium and small firms showed an increase in confidence in EXIM (export-import) freight in Q3 from Q2, large firms' optimism dropped sharply, from a score of 57 in Q2 to 27 in Q3 (a reading below 50 indicates deterioration over the same quarter last year). This reflects a divergence in expectations for Q3 among different firm sizes.

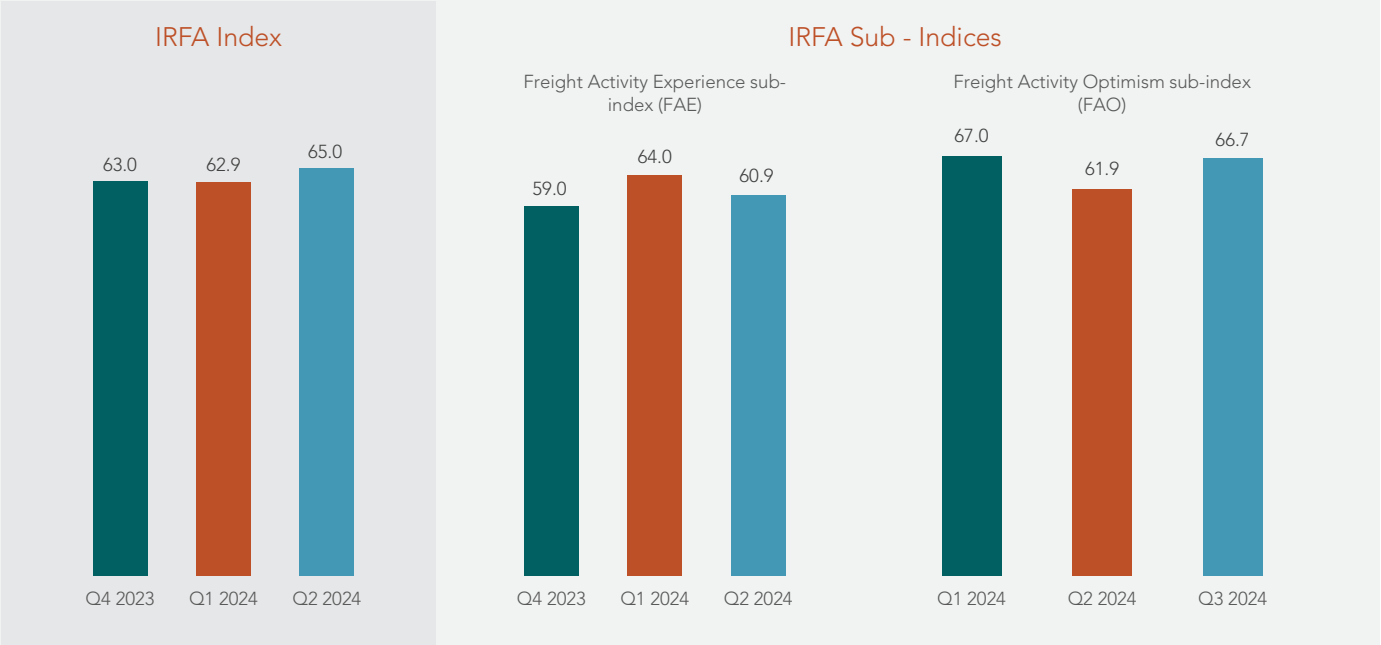
Regional optimism led by the northern and western regions - The western region showed the highest optimism for domestic freight activity. In contrast, the eastern region remained the least optimistic for both domestic and EXIM trade. Optimism for EXIM freight in Q3 was higher than domestic trade across the regions.

Rising freight costs expected in Q3 - Despite a generally positive outlook for Q3, there was a widespread expectation of rising freight costs as firms navigate ongoing challenges like resource availability and delays in transit times.



Key Findings

IRFA index rises by 3.3% as freight optimism grows for Q3, despite Q2 slump in freight activity and increasing delays in transit time



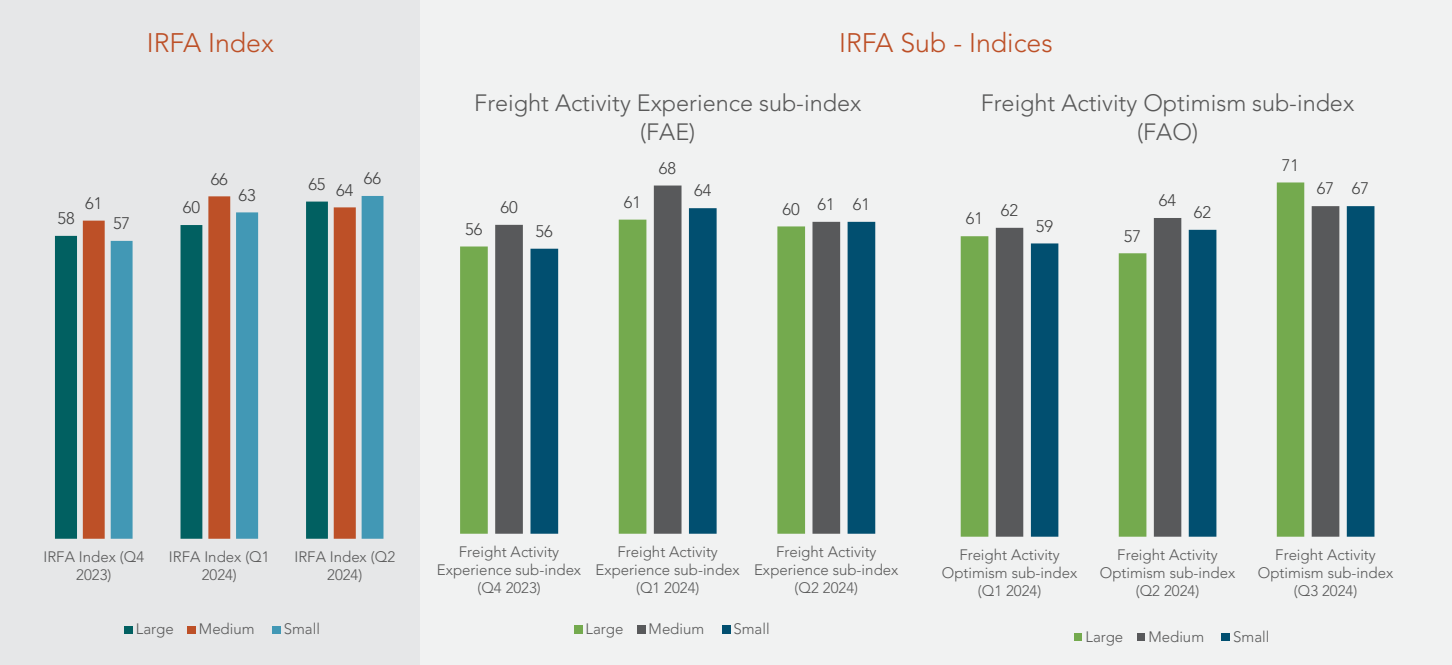
Note: The index ranges from 0 to 100. Higher the index value, higher is the level of activity and optimism.
Source: Dun & Bradstreet and Jupiter Wagons Indian Railway Freight Activity Index survey, April -June 2024

- The IRFA index, a key measure of freight activity through railways across India, reflected a 3.3% increase as firms grew more optimistic about the upcoming quarter.
- Optimism rose by 7.7% for Q3, even though freight activity dropped by 4.9% in Q2 compared to Q1
- The downturn in Q2 was largely driven by a combination of factors. Firms reported a significant decline in the movement of both domestic and EXIM (export-import) freight. Compounding this issue was a noticeable increase in indirect and incidental costs, which weighed upon operations.
- Adding to the challenges, transit delays became more common in Q2. About 40% of respondents experienced delays, a rise from 33% in Q1 and 23% in Q4 2023. Large firms were hit the hardest, with 55% reporting longer transit times. Still, railways remained a reliable option for many, as 57% of respondents, mostly small firms (60%), stated that their shipments arrived within expected timelines.
- Improvement in first and last mile connectivity, dwell time and network connectivity was lower in Q2 compared to Q1. The most significant drop was noted in loading and unloading time.

- Similarly, the availability and turn-around times for resources - wagons, containers, labour, and machinery for cargo handling - were also lower in Q2 compared to Q1.
- Despite these hurdles, the outlook for Q3 remained bright. Firms expressed greater optimism, particularly for EXIM freight, while expectations for domestic freight were more tempered.
- Demand and supply for wagons, containers, and rakes were also expected to improve in Q3 from Q2 2024.
- Yet, even with this positive outlook, there was a widespread expectation that freight costs would rise in Q3, as firms continued to navigate a complex and shifting landscape.

IRFA Index – By Size of Firms

Large firms exhibited lower optimism for EXIM, whereas medium and small firms were more optimistic in Q3 compared to Q2



Note: Bucketing the size of firms by their revenue. Large Firms = Revenue above Rs 1000, Medium firms = Revenue Rs 250 crore – Rs 1000 crore, Small firms = Less than Rs 250 crore
Note: The index ranges from 0 to 100. Higher the index value, higher is the level of activity and optimism.
Source: Dun & Bradstreet and Jupiter Wagons Indian Railway Freight Activity Index survey, April -June 2024

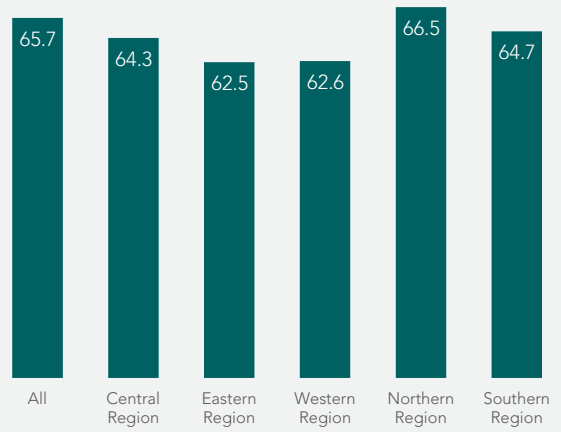
- Despite a drop-in freight activity and operational difficulties in Q2 compared to Q1, firms expressed optimism for Q3.
- The IRFA index rose for large and small firms in Q2 compared to Q1, while it declined for medium firms. Although the freight activity index decreased across all firm sizes in Q2 from Q1, optimism for Q3 increased compared to Q2.
- In the second quarter, freight activity for large firms experienced a notable decline, both in domestic and export-import (EXIM) movements.
- Additionally, they reported a rise in both direct and incidental freight costs compared to Q1. The slowdown wasn't limited to large firms alone—firms of all sizes, including medium and small firms, saw a drop in domestic freight movement during Q2, according to our survey.
- While large and small firms experienced a decline in EXIM freight in Q2 from Q1, medium-sized firms reported a slight increase in EXIM freight movement during this period.

- Interestingly, large firms bore the brunt of rising freight costs, while medium and small firms indicated reduction in freight costs in Q2.
- Across firms of all sizes, improvements in key operational areas were sluggish. Firms reported that their experience with first and last mile connectivity, dwell time, network availability (except for large firms) and loading and unloading times worsened in Q2 compared to Q1.
- Firms reported weaker improvements across all five key performance variables, pointing to operational difficulties. The availability and turnaround times for critical resources—such as wagons, containers, labor, and machinery for cargo handling machinery —were notably lower in Q2 compared to the previous quarter across large, medium and small firms.
- Looking ahead in Q3, the optimism for EXIM freight varied. Large firms were far less hopeful, with optimism dropping sharply from 57 in Q2 to 27 in Q3. In contrast, medium and small firms showed a surge in confidence, with optimism scores rising to 69, from 56 (medium firms) and 64 (small firms) reflecting greater confidence for Q3 (Reading above 50 indicates improvement over the same quarter last year, reading below 50 indicates deterioration over the same quarter last year).
- In terms of demand, all firms displayed a higher optimism for containers in Q3, with large firms leading the charge (86), followed by medium (82), and small firms (62).
- However, the optimism improved the most for demand for wagons in Q3 over Q2, particularly among large firms.
- Optimism in demand in Q3 for medium-sized firms saw across-the-board improvements in areas such as wagons, containers, rakes, labor, and cargo-handling machinery. Large firms also experienced improved optimism across the board, except for machinery, while small firms saw a slight dip in demand optimism for wagons, rakes and cargo-handling machinery.
- As for supply, large firms were the most optimistic regarding wagons, containers, and rakes, with medium firms close behind in Q3 over Q2. Small firms, however, showed decline in optimism for the supply of wagons, rakes, labor and machinery suggesting a more cautious outlook for small firms the next quarter.

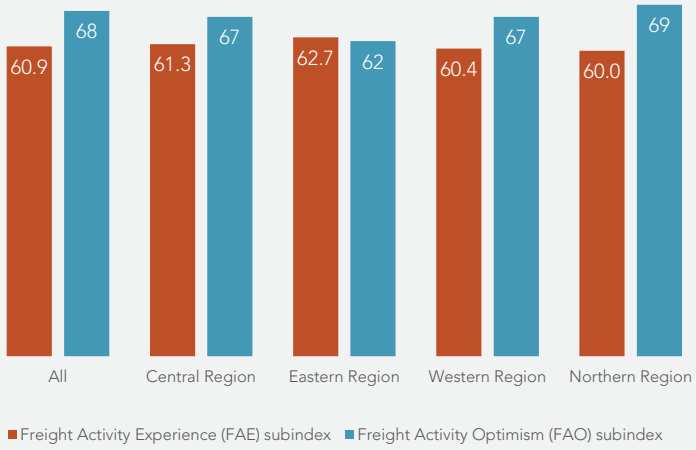
Region-wise IRFA

Northern region leads in freight optimism in Q3, eastern struggles despite improved freight activity in Q2; rising costs and mixed confidence in resource availability for Q3 observed across regions.

Region-wise IRFA index (Q4 2023)



Region-wise experience and optimism sub-indices



Note: The index ranges from 0 to 100. Higher the index value, higher is the level of activity and optimism.
Source: Dun & Bradstreet and Jupiter Wagons Indian Railway Freight Activity Index survey, April -June 2024

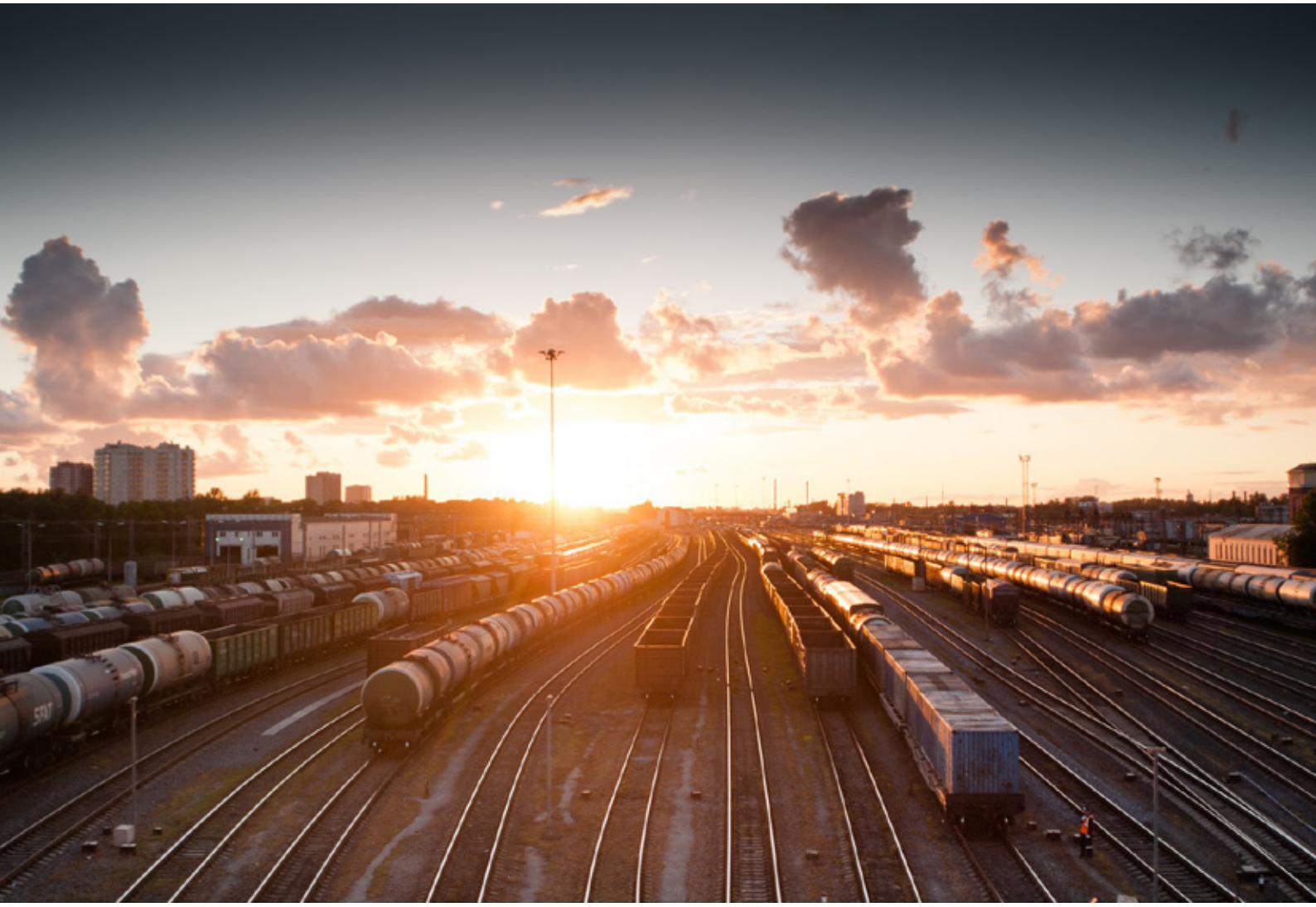
- The northern region stood out with the highest IRFA index, expecting highest freight activity in Q3 over Q2 compared to the other 4 regions. The northern region, however, reported the lowest freight activity in Q2 over Q1 among all five regions.
- In contrast, the eastern region lagged behind, with the lowest IRFA index. Their optimism for freight movement for Q3 was the lowest. Interestingly, the eastern region recorded the highest freight activity in Q2, despite facing challenges in other areas such as delay in transit time and dwell time.
- With a domestic freight activity index of just 30 in Q2, firms in the northern region indicated a significant deterioration compared to the same quarter last year, as any reading below 50 signifies a decline. In contrast, the central (67) and southern (64) regions demonstrated robust domestic freight activity, followed by the western region at 59.
- When it came to EXIM freight movement, the eastern region faced challenges, registering an index of 43. The northern region also

witnessed a deterioration recording an index of 48, while the Western (70) and Southern (60) regions showcased stronger EXIM performance compared to other regions.

- Freight costs increased across all regions, with the southern region experiencing the most increase in direct costs, while the Eastern region saw the highest increase in incidental costs.
- Regarding transit time, firms in the central (75%) and northern (65%) regions reported that their freight moved with expected timelines. In contrast, firms in the eastern (47%) and western (48%) regions faced higher delays.
- As for operational improvements, the eastern region faced challenges regarding loading (30) and unloading times (30) in Q2 2024. However, both the northern and southern regions reported significant enhancements in first and last mile connectivity, recording an index of 70 and 69 each during this period: Reading above 50 indicates improvement over the same quarter last year, reading below 50 indicates deterioration over the same quarter last year.
- When assessing availability and turnaround times, firms in the western region expressed the least optimism regarding resources such as wagons (35), containers (26), labor (46), and machinery (43) in Q2. The availability and turnaround time for all deteriorated from the previous year. In contrast, the Southern region was most positive, especially regarding the availability and turnaround of machinery (69) and containers (67) in Q2.
- For Q3 i.e. July-September 2024, expectations for freight activity varied by region. It was noted that optimism for EXIM freight in Q3 was higher than domestic freight activity across the regions. The eastern region exhibited the lowest optimism for domestic freight activity (37), while the western region had the highest (78), with all other regions recording index value of above 50. The western region led in optimism for EXIM freight. The eastern region remained the least optimistic for both domestic and EXIM trade.
- Optimism of demand for wagons remained higher across western (76) northern (65), southern (64) and central railways (63), while it was quite low among firms transporting freight through the eastern railways (47).
- The western region also exhibited the highest optimism for container demand (87), followed closely by the

Southern (74) and northern regions (73). Western region also showed highest optimism for rakes (76) and labour (76) compared to other regions.

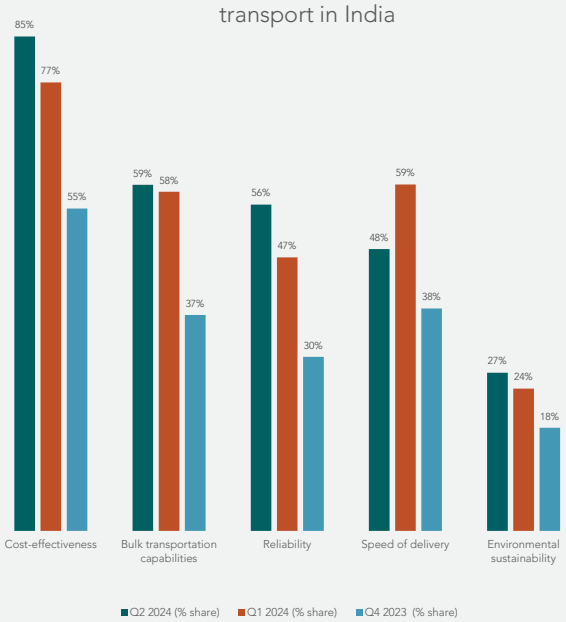
- Regarding supply, the southern region emerged as the most optimistic for the availability of wagons (74) and rakes (69) in Q3. Conversely, the eastern region remained the least optimistic about the supply of rakes (47), labor (37) and machinery (27) compared to its peers.



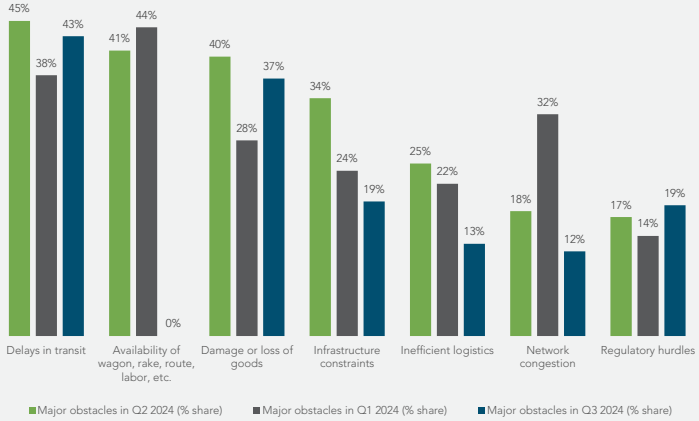
Demand drivers and challenges of railway freight users

Rail freight demand driven by cost-effectiveness and bulk transport, but delays, resource shortages, and regional disparities pose major challenges.

Factors driving the demand for railway freight transport in India



Major obstacles faced by firms transporting goods via railways



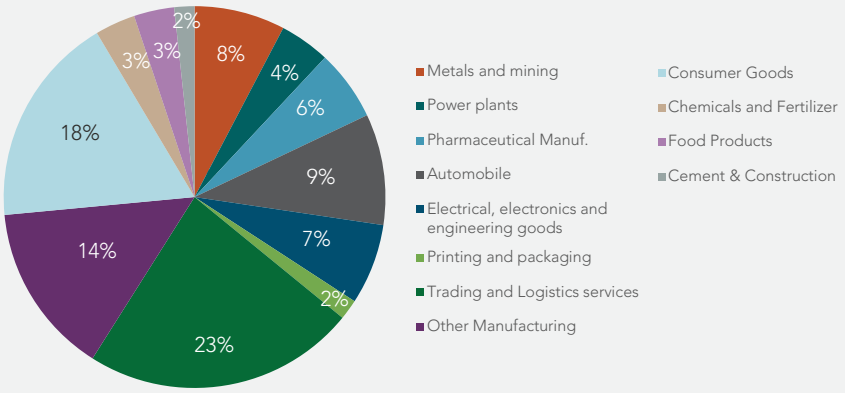
Source: Dun & Bradstreet and Jupiter Wagons Indian Railway Freight Activity Index survey, April -June 2024

- For three consecutive quarters, the primary factors driving demand for railway freight transportation have remained consistent: cost-effectiveness and bulk transportation. Following closely behind are reliability and speed of delivery, which also play a significant role in influencing firms' choices to transport freight through railways.
- Respondents across all sizes—large, medium, and small—acknowledged the importance of cost-effectiveness, with firms from all five surveyed railway zones highlighting this aspect.
- However, there are notable regional variations in the utilisation of railways. In the eastern region, less than 50% of firms opt for rail transport for bulk transportation, while only 29% in the central region use railways for speed of delivery. Only 50% of surveyed firms in the northern region rely on railways for their perceived reliability.
- Despite these demand drivers, railway freight users face several challenges.

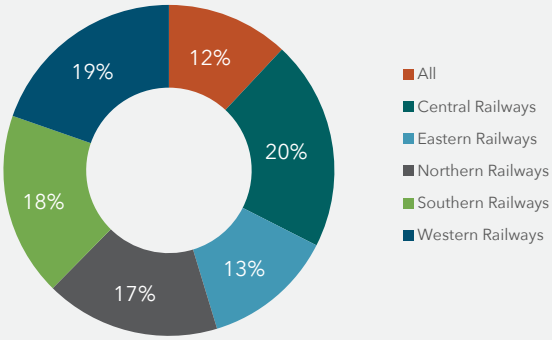
- On an average for three consecutive quarters, 42% of respondents identified delays in transit time as a significant hurdle in transporting goods by rail.
- Additionally, the timely availability of wagons, rakes, routes, and labor continues to be a major challenge, cited by an average of close to 40% of firms for the past three quarters.
- Moreover, damage to goods during transit has been a persistent issue, with an average of 35% of firms reporting this problem over the past three quarter.
- For large firms, the primary challenges faced by them in Q2 include delays in transit time, network congestion, infrastructure constraints and the availability of essential resources such as wagons and labor.
- In contrast, the medium and small firms are more concerned with transit delays and damage or loss of goods.
- Regionally, the eastern (47%) and western (48%) regions reported the highest instances of transit delays.
- Firms in the eastern region also experienced the most significant issues with damage or loss of goods (67%).
- Furthermore, the challenges related to the availability of wagons, rakes, routes, and labor were highlighted by firms in the eastern (53%) and southern (57%) regions. Infrastructure constraints were primarily cited as an issue by firms in the central region (42%).

Firmographics

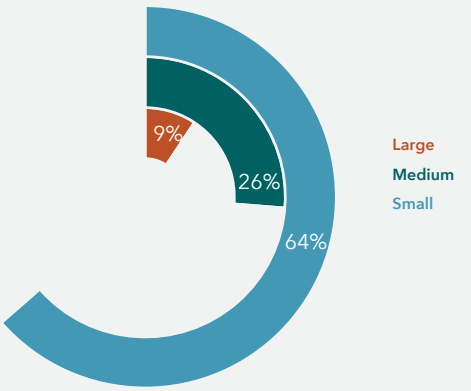
Sector-wise survey participation
(% of respondents)



Railway zone wise participation
(% of respondents)



Size of business
(% of respondents)



Source: Dun & Bradstreet and Jupiter Wagons Indian Railway Freight Activity Index survey, April -June 2024

Index Methodology

The IRFA Index is composed of two sub-indices: Freight Activity Experience sub-index and Freight Activity Optimism sub-index constructed from the survey of railway freight users. The experience sub-index captures railway freight demand, supply factors and operational efficiency parameters for the current quarter and the optimism sub-index captures the above for the next quarter.

Freight Activity Experience sub-index: Survey

- Demand
- Supply
- Operational Efficiency

Freight Activity Optimism sub-index: Survey

- Demand
- Supply
- Operational Efficiency

Dun and Bradstreet conducts survey of Indian Railway freight users, seeking respondent's experiences and optimism on parameters such as freight demand, supply factors, operational efficiencies in terms of an increase/improvement, decrease/deterioration or no change for current quarter and the upcoming quarter. A robust statistical process is followed to aggregate respondent level data in creating an Index (reflective of the overall railway freight environment). The derived index value can range between 0 to 100, with 50 being the neutral level of activity viz-a-viz the base period (same quarter previous year). An index value above 50, indicates an increase in the level of activity from the base period and vice-versa.

About Jupiter Wagons and Dun & Bradstreet

About Jupiter Wagons

Jupiter Group is a premier manufacturer of railway wagons, components for passenger coaches, alloy steel casting for rolling stack and track. The group also manufactures application-based load bodies for commercial vehicles, other products include ISO marine containers, refrigerated containers etc.

Jupiter Electric Mobility Pvt. Ltd. is a wholly owned subsidiary for manufacturing Commercial Electric Vehicles.

Over the last decades, we have emerged as a one-stop solutions provider within our sector. We are respected for the highest standards of quality. Our robust technological foundation underpins our status as one of the fastest growing within our industry.

Our integrated facilities are engaged in the manufacture of railway wagons, high-speed bogies, and railway castings; we manufacture couplers, draft gears and railway turnouts for the Indian Railways and the North American railroads.

We are the most integrated Railway Engineering Company, catering to the clientele spread across Indian Railway, Private wagon aggregators, commercial vehicles OEMs, Indian defense, and logistic companies. It regularly exports to North American market as well.

About Dun & Bradstreet

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