

dun & bradstreet



IRFAI

INDIAN RAILWAY FREIGHT ACTIVITY INDEX

Q4 2023

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The Indian 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 to monitor 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 user's experiences for the current quarter and Freight Activity Optimism sub-index captures the freight users expectations for the next quarter of 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 Q4 2023 and their expectations for the same in Q1 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.



Highlights



The Indian Railway Freight Activity (IRFA) Index stood at 63 for Q4 2023: An index value above 50, indicates an increase in the level of activity from the base period and vice-versa.



Within railway zones, the IRFA index is the highest for the Northern zone and with firm size, it is highest for the mid-sized freight transporters.



The gap between IRFA optimism level for Q1 2024 and IRFA experience level for Q4 2023 is highest for the Central and the Eastern railway zones and lowest for the Northern railway zones.



This suggests that the Central and Eastern railway zones are anticipated to experience a higher pace of freight activity in Q1 2024 over Q4 2023 compared to other regions.



Optimism of demand of large businesses is highest for labours and for medium sized businesses it is machinery for cargo handling in Q1 2024.



Freight users have experienced increase in freight cost in Q4 over Q3 2023 and this is expected to increase in Q1 2024.



More than 90% of freight users did not experience delays in railway freight transit times.



Availability and turnaround time for machinery for cargo handling and wagons improved the most in Q4 2023 compared to Q3 2023.



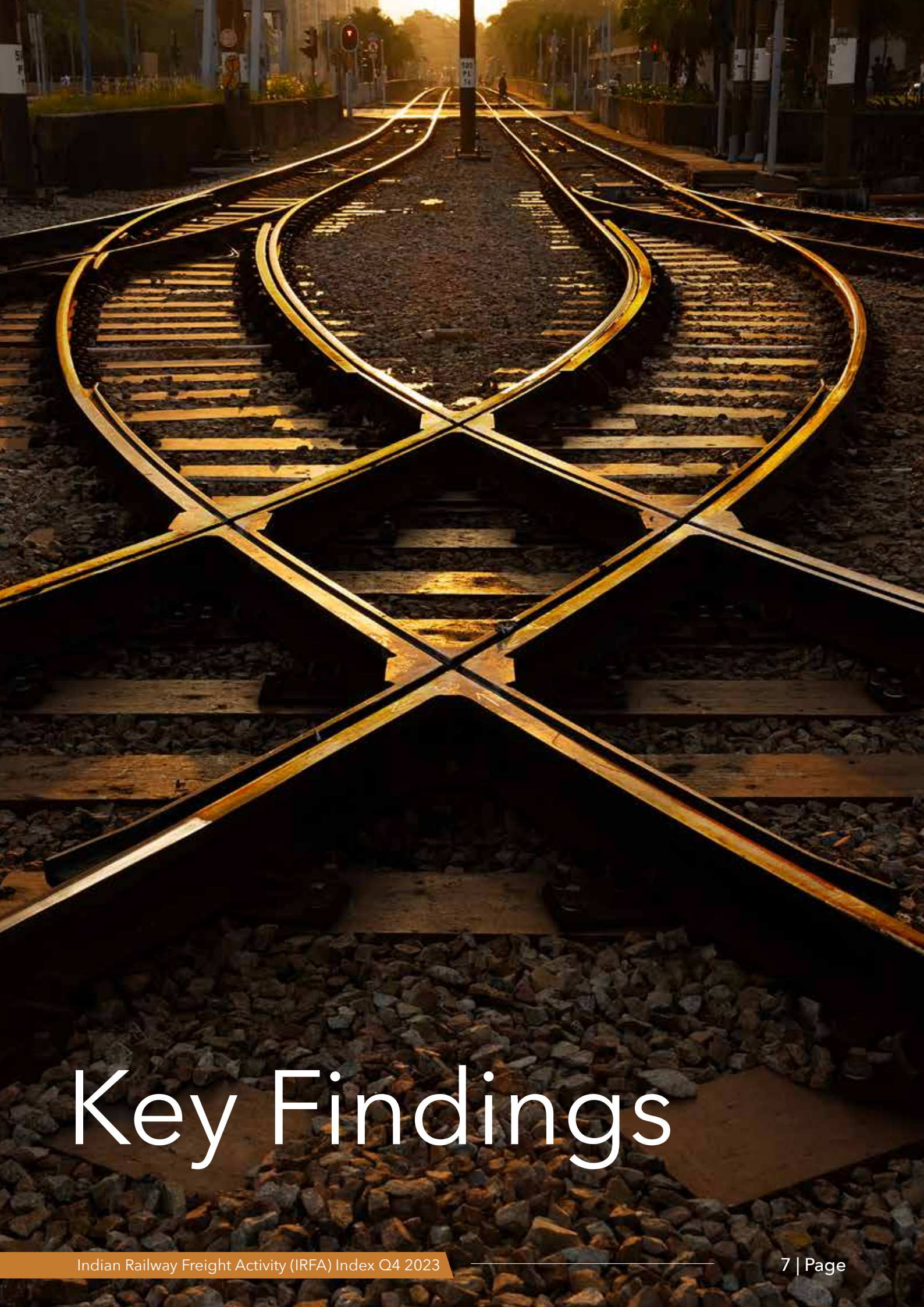
Freight users experienced minimal network congestion during Q4 2023.



In Q4 2023, freight users' experiences with first and last mile connectivity, as well as dwell time, were notably positive and showed the most improvement compared to Q3 2023.



Our study reveals that businesses are showing increased awareness of sustainability in freight transportation, especially large and mid-sized railway freight users. While over 1 in 3 of large and mid-sized businesses utilize railways for environmental sustainability, only 1 in 5 smaller businesses have expressed similar intentions.



Key Findings

The Indian Railway Freight Activity (IRFA) Index stood at 63 in Q4 2023 largely driven by the positive outlook and higher freight activity experienced by the medium-sized railways freight users.

IRFA Index (Q4 2023)

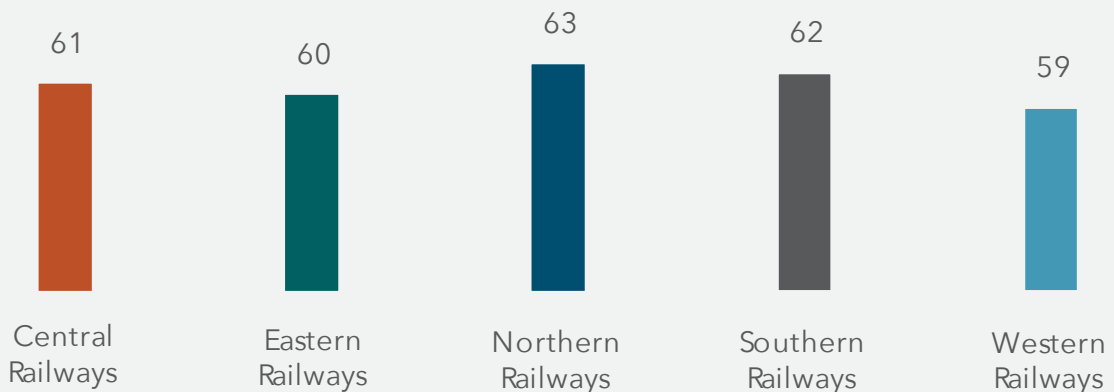


Note: The index ranges from 0 to 100. Higher the index value, higher is the level of activity and optimism.
 Source: Dun & Bradstreet and Jupiter Wagons Indian Railway Freight Activity Index survey, October - December 2023

- The Indian Railway Freight Activity (IRFA) Index for Q4 2023 stands at 63 (level of activity viz-a-viz the base period).
- The railway freight user’s Freight Activity Optimism (sub-index) for Q1 2024 was higher at 67 than the Freight Activity Experience sub-index at 59 for Q4 2023.

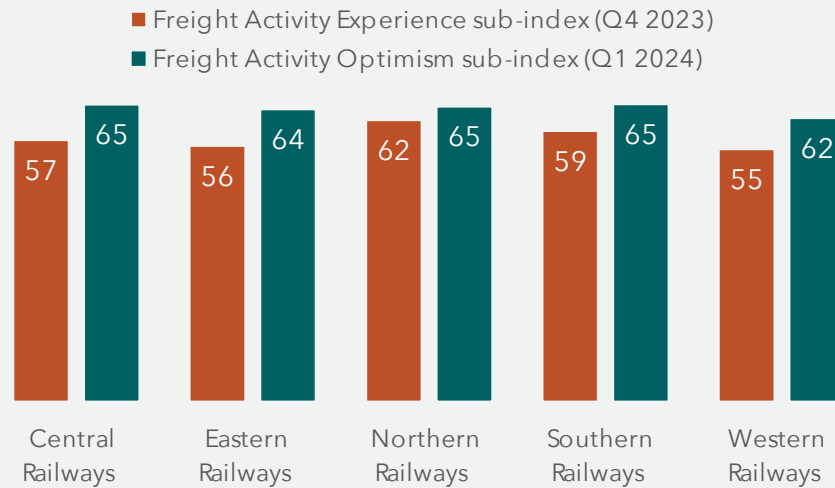
Freight Activity Optimism level across all the regions remains high for Q1 2024.

Region-Wise IRFA Index (Q4 2023)



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, October - December 2023

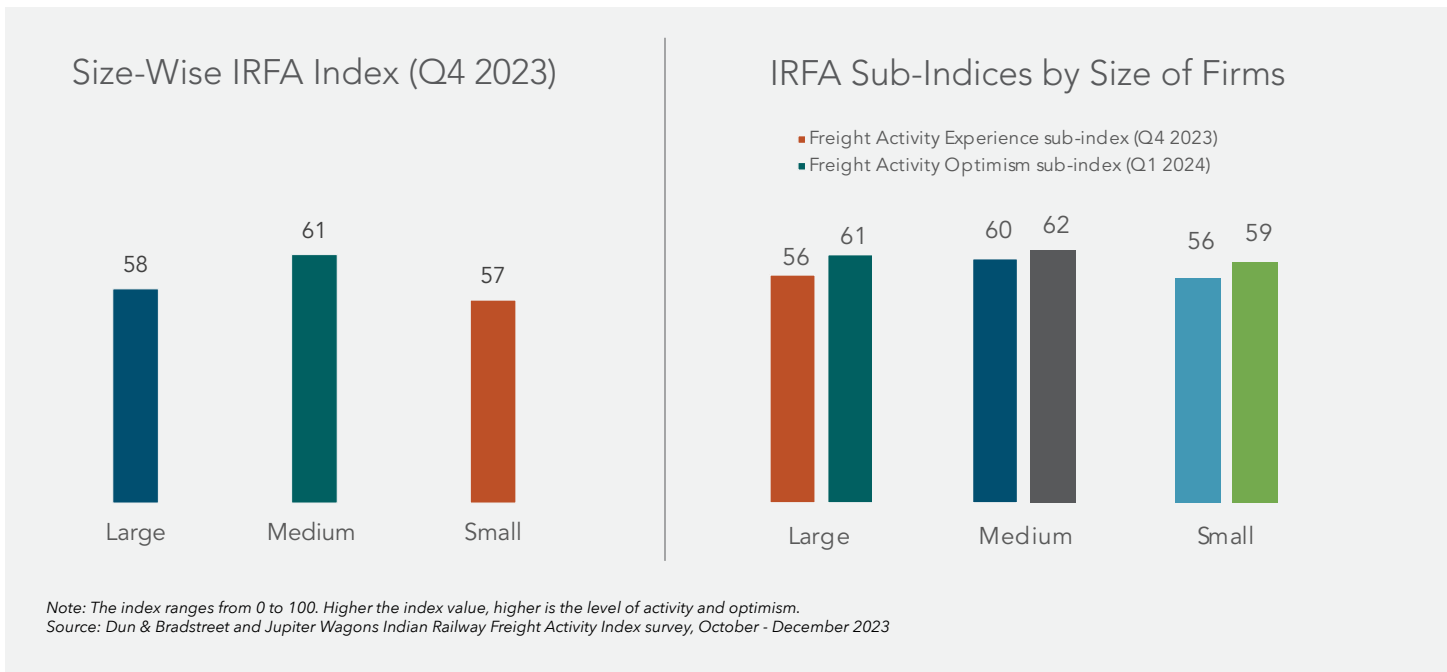
Region-Wise Sub-Indices



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, October - December 2023

- Regional analysis of data shows that the IRFA index for the Northern railway zone is the highest and lowest for the Western zone.
- Freight activity optimism level across all the regions remains high for Q1 2024. Nonetheless, the disparity between the Freight Experience and Optimism sub-indices is most pronounced in the Central and Eastern railway zone, while it is least in the Northern railway zone.
- This suggests that the Central and Eastern railway zones are anticipated to experience a higher pace of freight activity in Q1 2024 over Q4 2023 compared to other zones.

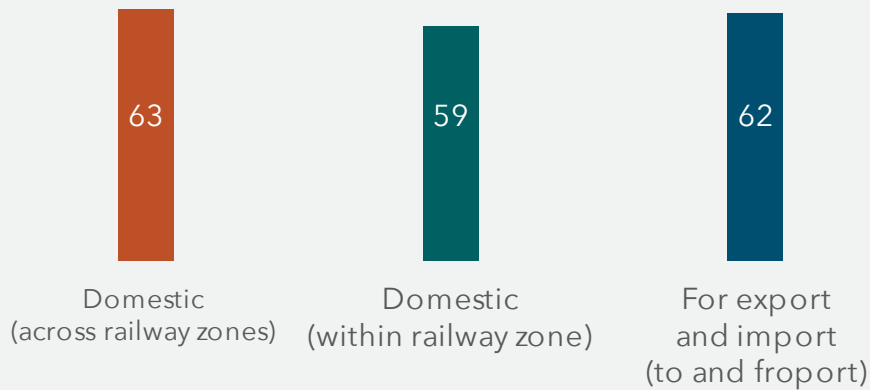
IRFA index is highest for medium sized freight transporters in Q4 2023.



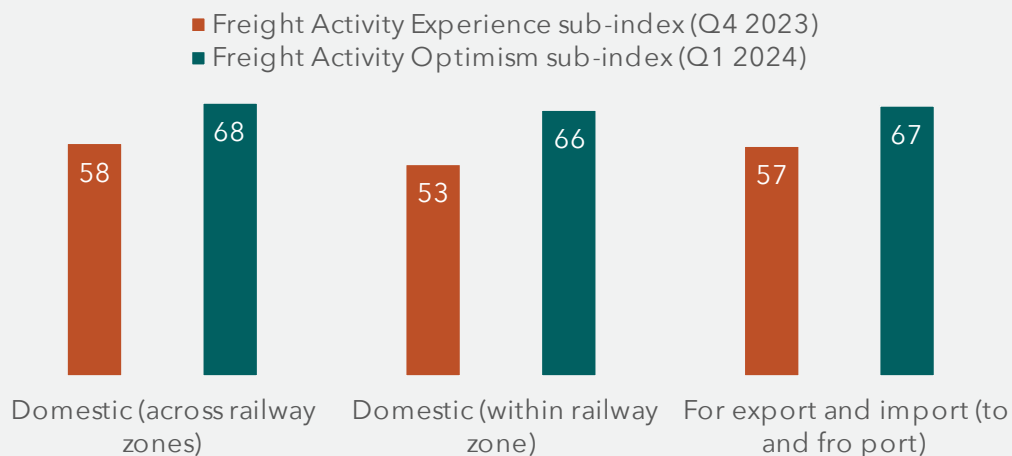
- Both the experience in Q4 2023 and optimism level for Q1 2024 for rail freight activity were the highest for medium-sized businesses and lowest for small sized businesses.

IRFA index for within railway zones is weaker than across railway zones and export and import activity.

IRFA Index by Trade Activity (Q4 2023)



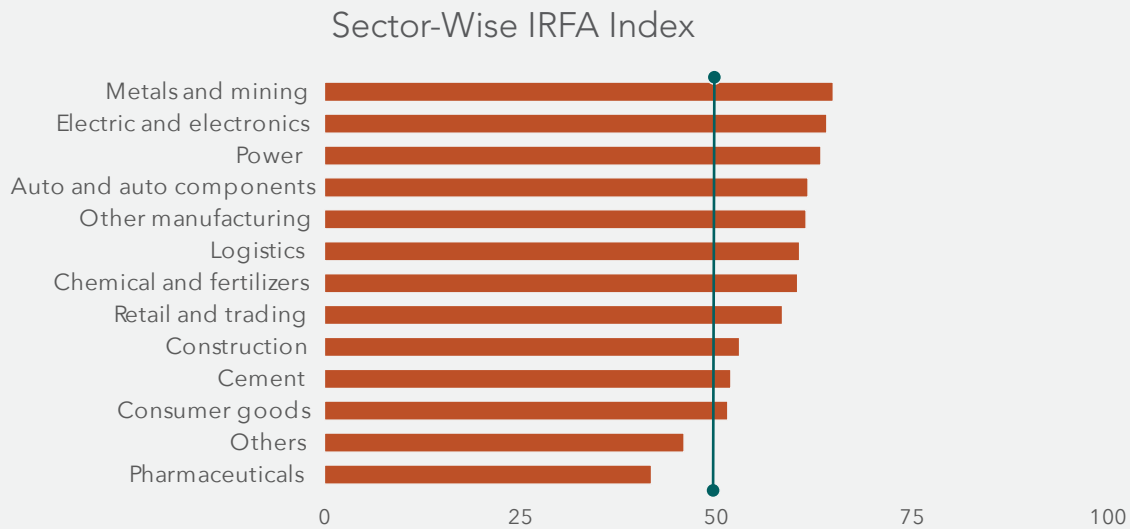
IRFA Sub-Indices by Trade Activity



*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, October - December 2023*

- Railway freight users transporting goods within the railway zones reported both lower activity experience for Q4 2023 and optimism for Q1 2024 compared to those engaged in transporting freight across railways zones and for export and import activity.
- The IRFA index for within railway zones remains low as small players not only reported lower experience in Q4 2023 but are also less optimistic about freight activity than large and medium businesses in Q1 2024.

The IRFA index is highest for freight users in the metals & mining and electric & electronics sectors.

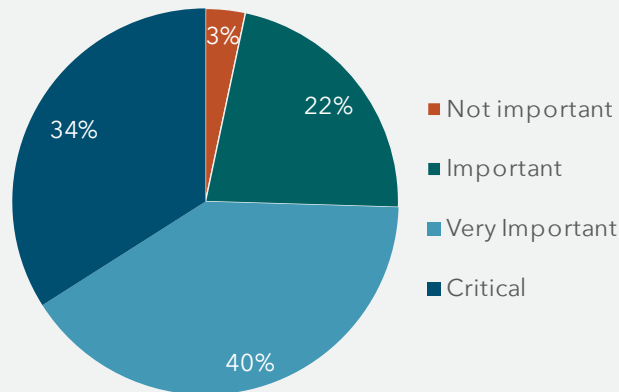


*Note: The index ranges from 0 to 100. Higher the index value, higher is the level of activity and optimism.
Source: Dun & Bradstreet and Jupiter Wagons Indian Railway Freight Activity Index survey, October - December 2023*

- The metals & mining and electric & electronics sectors exhibited the highest IRFA index; indicating strong freight activity, both for Q4 2023 and Q1 2024.
 - Macro data highlights high level of domestic production and export-import activity in these sectors during Q4 2023.
 - Notably, production and imports of finished steel experienced a double-digit growth in Q4 2023.
- Exports also picked up in Q4 2023, showing a slight uptick following six quarters of negative growth.
- Exports for electrical machinery and electronic components registered an average growth rate of 8% year-on-year during Q4 2023, higher than the overall growth rate of India's exports, which stood at 1% during this period.

Indian Railways plays significant role for 2/3rd of respondents.

Criticality of Railways in Transportation Strategy

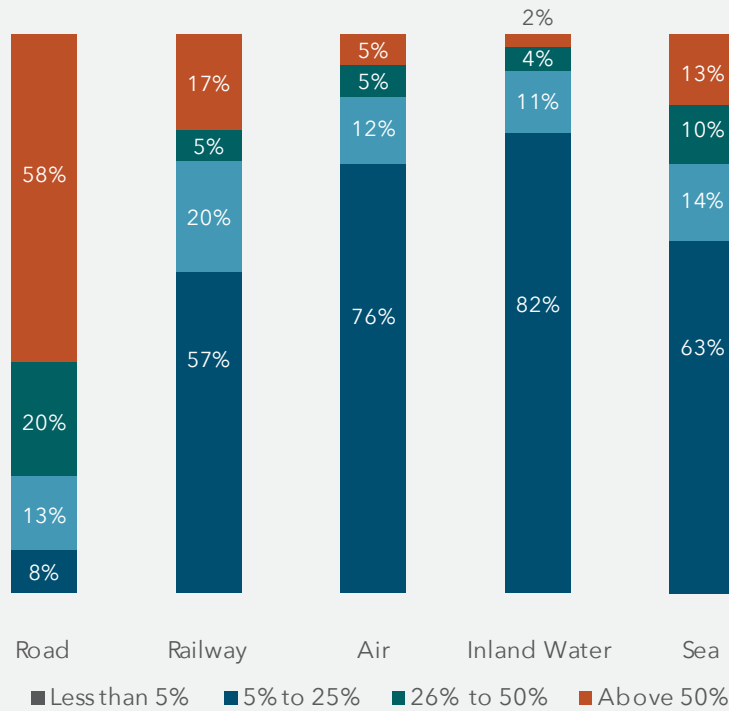


Source: Dun & Bradstreet and Jupiter Wagons Indian Railway Freight Activity Index survey, October - December 2023

- 34% of railway freight users consider transportation of freight through railways to be critical, but there is a clear divide between small and large freight transporters.
- While 30% of small users consider transporting freight through railways to be critical, 51% of large users consider railways to be critical.

Road transport still retains the largest share for freight transport; 58% of freight transporters use road to transport 50% of freight, while 17% use railways.

Modal Freight Share in Q4 2023 (%)

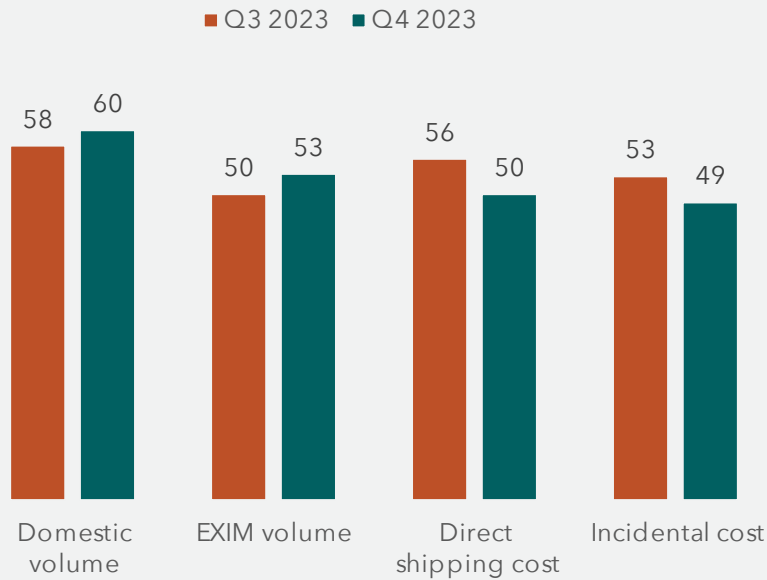


Source: Dun & Bradstreet and Jupiter Wagons Indian Railway Freight Activity Index survey, October - December 2023

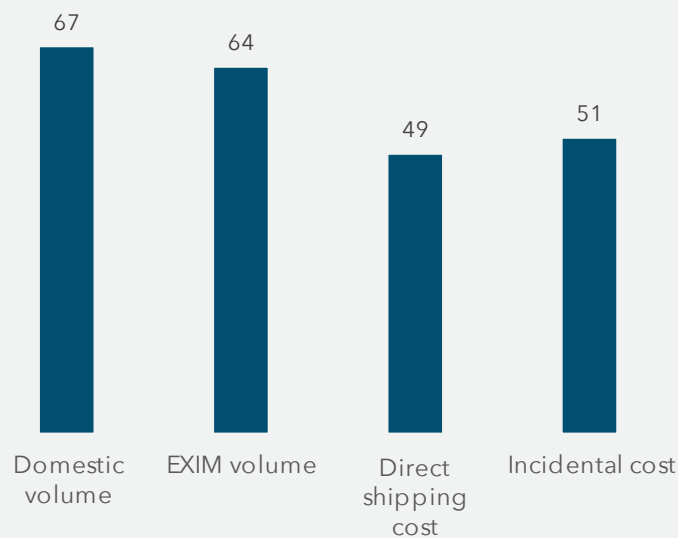
- Further break-up of the data shows that 15% of small freight transporters use rail to transport 50% of freight, compared to 23% of large users.
- More than 3 in 5 small users use road to transport more than 50% of their freight. Less than 1 in 3 large users use road to transport more than 50% of their freight.

Freight users have experienced increase in freight cost in Q4 over Q3 2023 and this is expected to increase in Q1 2024.

Indexed Volume and Cost – Q4 vs Q3 2023



Indexed Volume and Cost – Expected for Q1 2024

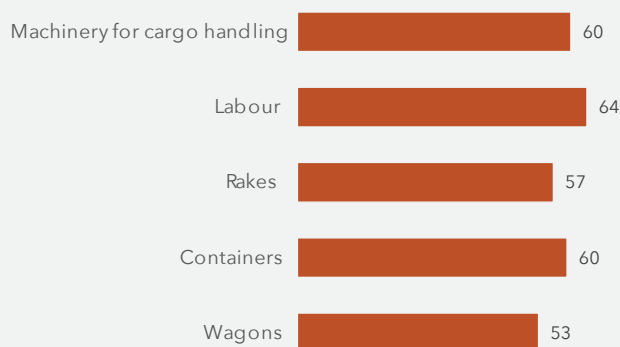


Note: Reading above 50 indicates improvement over the same quarter last year, reading below 50 indicates deterioration over the same quarter last year.
 Source: Dun & Bradstreet and Jupiter Wagons Indian Railway Freight Activity Index survey, October - December 2023

- Freight transporters reported increase in both domestic and exim volume of freight in Q4 2023 compared to Q3 2023.
- Large businesses reported the highest domestic freight activity during October -December 2023 and least for EXIM and are also the most optimistic for freight activity in Q1 2024.
- Both direct and incidental cost for freight users have increased in Q4 2023 from Q3 2023. Direct cost is expected to further increase in Q1 2024 and this expectation is consistent across all size of freight users. Large, medium, and small rail freight users anticipate an increase in direct costs in Q1 2024.
- The experience index regarding direct shipping costs among all freight users—large, medium, and small—lie within the range of 30 to 44 in Q4 2023 (with values below 50 indicating increase in freight cost compared to the same quarter last year). Notably, medium sized freight transporters experienced the most increase in direct cost.

Freight transporters are optimistic that their demand for containers, wagons, cargo handling machinery, and rakes will be met with adequate supply in Q1 2024.

Optimism for Demand in Q1 2024
(indexed)



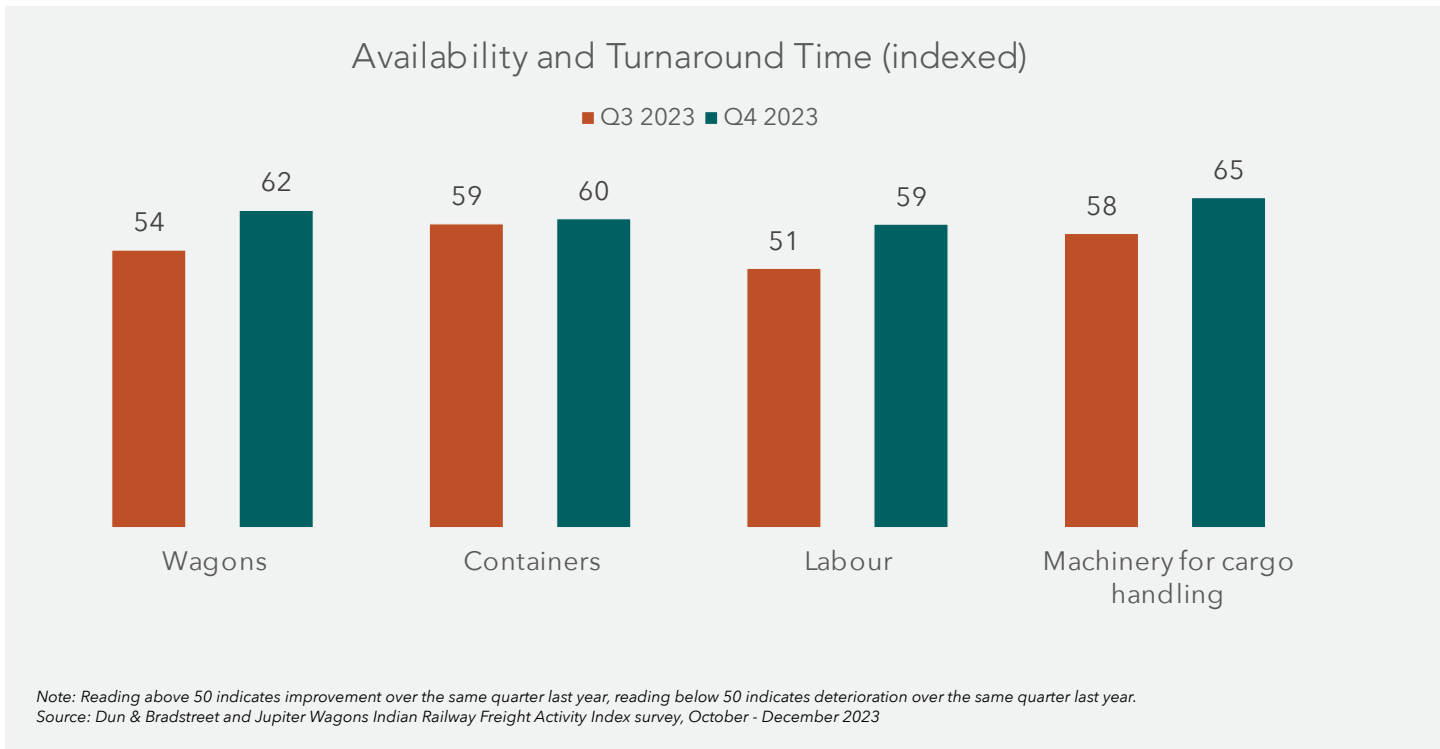
Optimism for Supply in Q1 2024
(indexed)



Note: Reading above 50 indicates improvement over the same quarter last year, reading below 50 indicates deterioration over the same quarter last year.
Source: Dun & Bradstreet and Jupiter Wagons Indian Railway Freight Activity Index survey, October - December 2023

- Freight transporters anticipate that their requirement for containers, wagons, cargo handling machinery, and rakes will be met satisfactorily, as their optimism regarding the supply of these items matches or surpasses the demand.
- Optimism for labour demand is indexed at 64 indicating that the demand for laborers is expected to increase the most in Q1 2024, followed by containers and machinery for cargo handling.
- Large businesses will demand the most for laborers in Q1 2024 compared to medium and small sized businesses.
- Medium-sized businesses will demand the most for machinery for cargo handling compared to others, while their demand for labourers is expected to decline in Q1 2024.

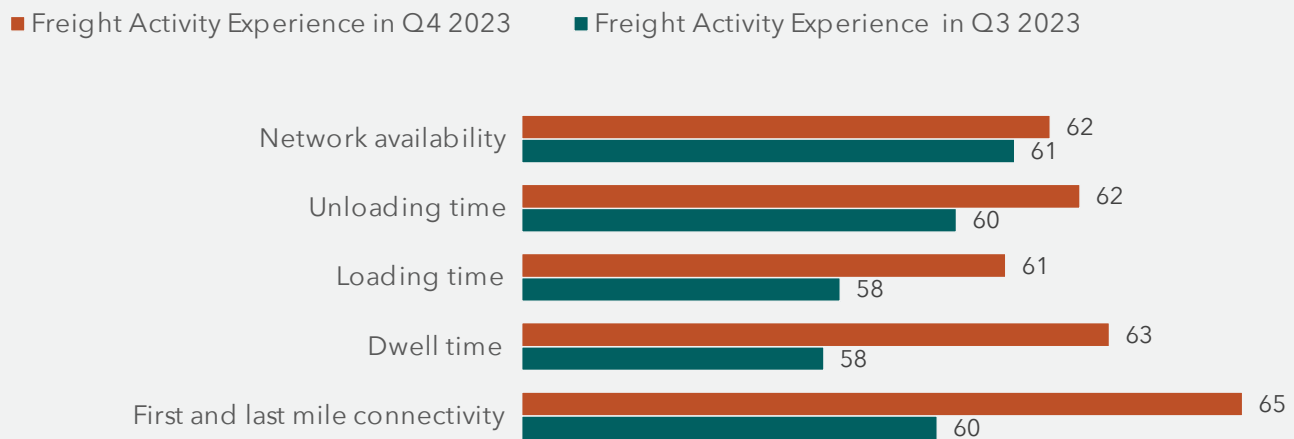
Availability and turnaround time for machinery for cargo handling and wagons improved the most in Q4 2023.



- Availability and turnaround time for machinery for cargo handling and wagons was the highest in Q4 2023.
- Small-sized freight users experienced the highest availability and turnaround time for machinery for cargo handling, while large users experienced the highest availability and turnaround time of wagons in Q4 2023.
- Railway freight users noted the highest improvement in availability for laborers during Q4 2023 compared to the previous quarter, followed by wagons.
- Small-sized freight users experienced the highest availability of laborers and large users observed a deterioration in Q4 2023.

In Q4 2023, freight users' experience with first and last mile connectivity, as well as dwell time, were notably positive and showed the most improvement compared to Q3 2023.

Freight Activity Experience (indexed)

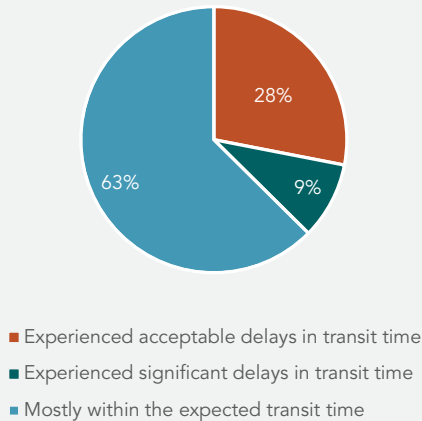


Note: Reading above 50 indicates improvement over the same quarter last year, reading below 50 indicates deterioration over the same quarter last year.
Source: Dun & Bradstreet and Jupiter Wagons Indian Railway Freight Activity Index survey, October - December 2023

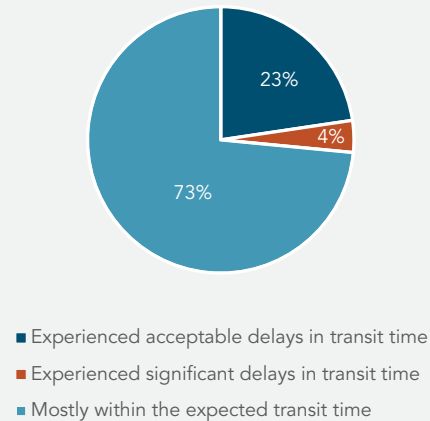
- Freight Activity Experience for first and last mile connectivity and dwell time remained high and improved the most in Q4 2023 over Q3 2023.
- However, experiences differ amongst the railway freight users: For example in Q4 2023, both large and medium railway freight users reported the most positive experience with first and last-mile connectivity but might have encountered challenges with unloading time. Conversely, small sized railway freight users would have faced difficulties primarily with loading time and network availability, indicating their least satisfactory experiences.
- Experience of freight users for network availability remained almost the same in Q4 2023 over Q3 2023.

More than 90% of freight users did not experience delays in railway freight transit times.

Transit Time Experience - Q3 2023



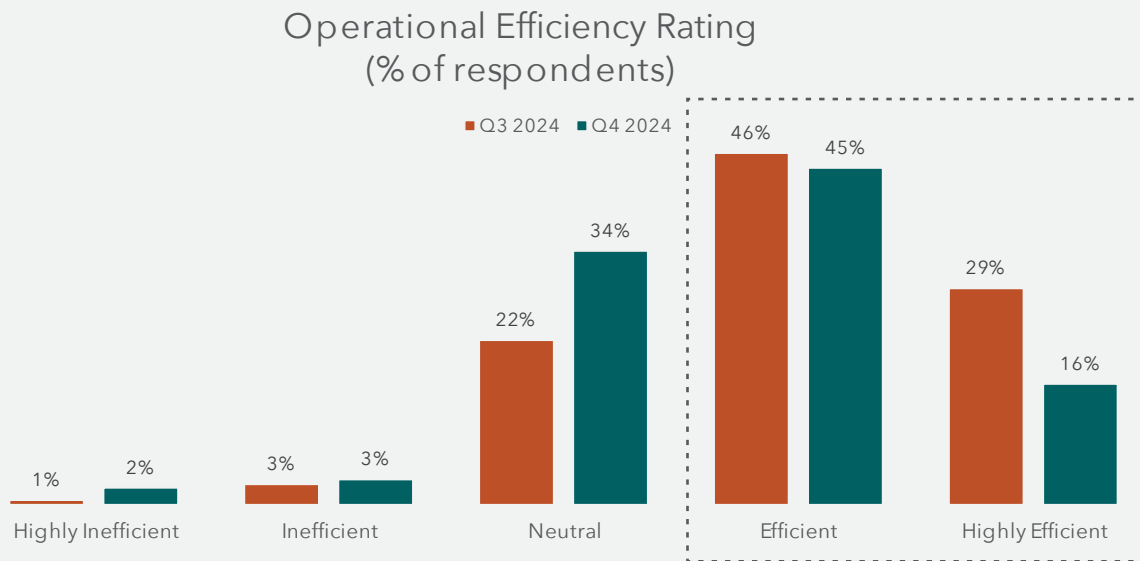
Transit Time Experience - Q4 2023



Source: Dun & Bradstreet and Jupiter Wagons Indian Railway Freight Activity Index survey, October - December 2023

- The survey reveals that more than 90% respondents reported transit times of their freight transported through railways within their expectation, nonetheless there have been delays reported by freight transporters across different size and sectors in Q4 2024.
- 14% of medium freight users experienced significant delays. Sector-wise, 10% of metals and mining and 6% of consumer goods freight users reported significant delays.
- 36% of large and 23% of small freight users experienced acceptable delays. Sector wise, 33% of logistics service and 25% of auto and auto-components freight users experienced acceptable delays.

More than 2/3rd of the railway freight users consider railway operations to be efficient.

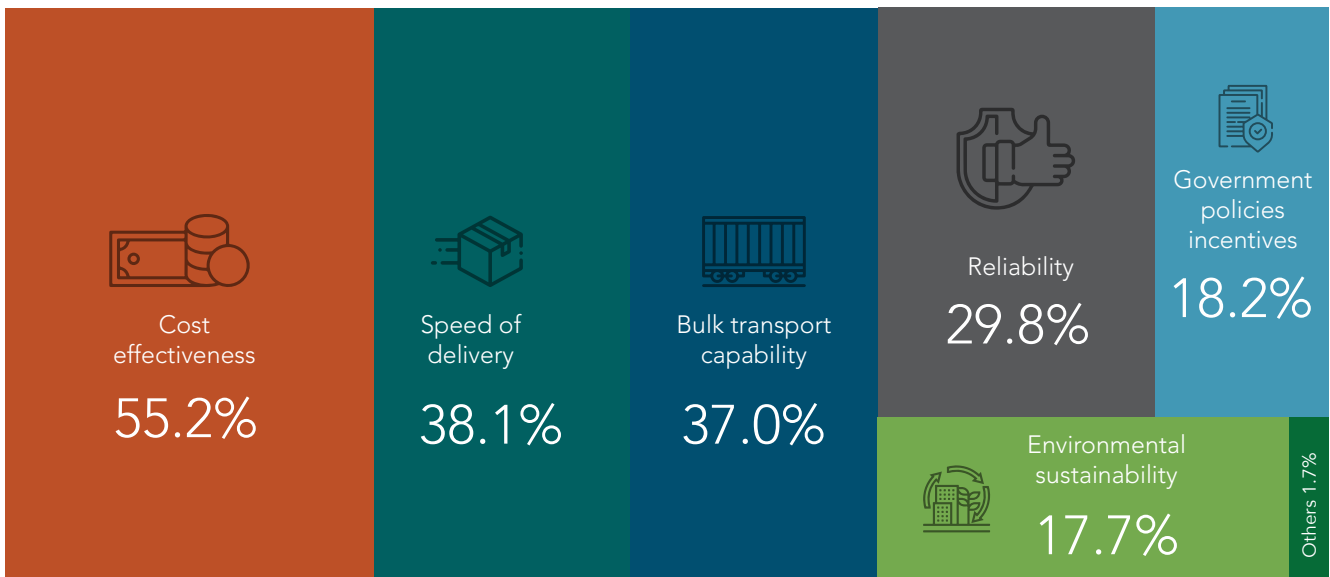


Source: Dun & Bradstreet and Jupiter Wagons Indian Railway Freight Activity Index survey, October - December 2023

- Further analysis of the data shows that 6% of large railway freight users, 36% of medium and 22% of small users have rated railway operations as highly efficient.
- Around 60% of respondents in the metals & mining, power and auto & auto components rated railway operations to be more than efficient.

Cost effectiveness retains the pole position amongst the demand drivers for two consecutive surveys.

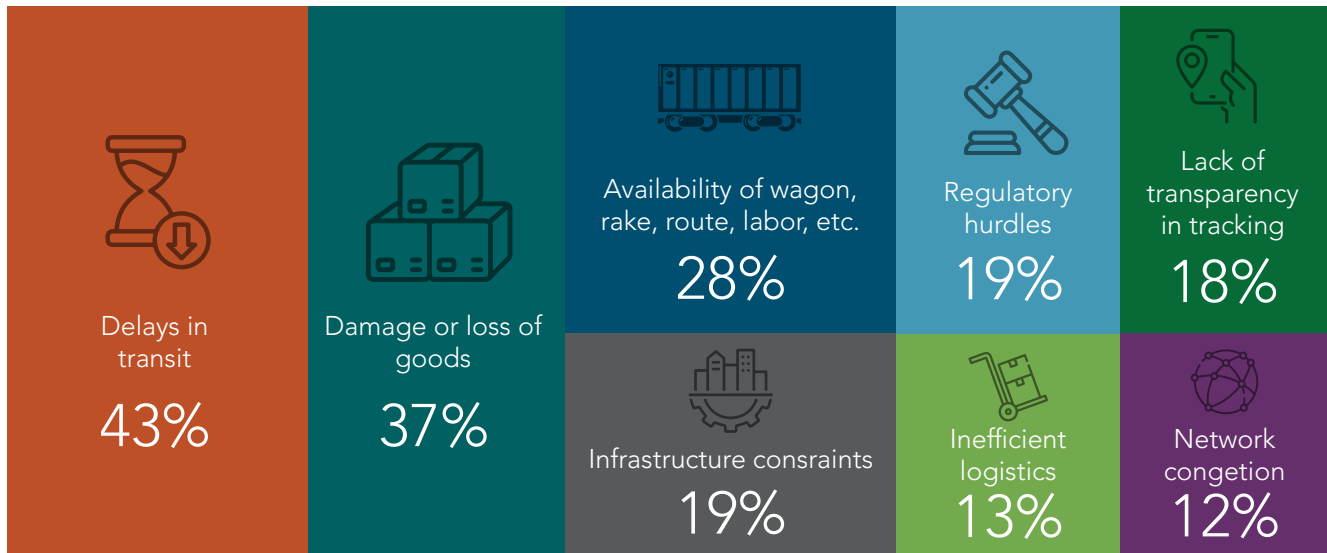
Major demand drivers for railway freight



- Cost effectiveness is the major demand driver for transporting freight through railways more than bulk transportation and speed of delivery for two consecutive surveys.
- Our survey reveals that businesses are showing increased awareness of sustainability in freight transportation, especially large and mid-sized businesses. While over 1 in 3 of large and mid-sized businesses utilize railways for environmental sustainability, only 1 in 5 smaller businesses have expressed similar intentions.
- Further the survey data also shows that 1 in 2 large and medium-sized freight users regard freight transportation through railways as reliable. On the other hand, only 1 in 4 small freight users share the same viewpoint.

Freight users experienced minimal network congestion during Q4 2023; only 12% cited it as a major challenge.

Major obstacles faced when transporting via railways



- In Q4 2023 respondents highlighted delays in transit time (43%), damage or loss of goods (37%) and the availability of wagons, rakes, and labor (28%) as the primary challenges in transporting freight via railways.
- However, it was predominantly small freight users who encountered delays in transit time compared to others. Approximately half of small freight users identified delays in transit time as a significant challenge, in contrast to only 1 in 20 medium and large freight users each.
- Damage of goods were cited by 37% of small freight users, while less than 5% of large and medium freight users consider it as a challenge.
- Freight users experienced minimal network congestion during October -December 2023; only 12% cited it as a major challenge. Infrastructure constraints were also considered as a challenge by only 19% of freight users.

Announcement in the Union Budget (Interim) for 2024-25 for Railways



- The planned capital expenditure for Indian Railways stands at Rs 2.5 tn for 2024-25 (Budgeted estimates;BE), 5% increase from 2023-24 (Revised estimates;RE) and over 1.6 fold jump from 2022-23.
- Allocation for new railway lines has been set at Rs 360 bn in FY25 (BE) from Rs 344 bn in FY24 (RE).
- Three pivotal railway corridor initiatives, encompassing energy, mineral & cement corridors, port connectivity corridors and high traffic density corridors, are set to be

executed under the PM Gati Shakti programme, fostering multi-modal connectivity, enhancing logistics efficiency and lowering costs.

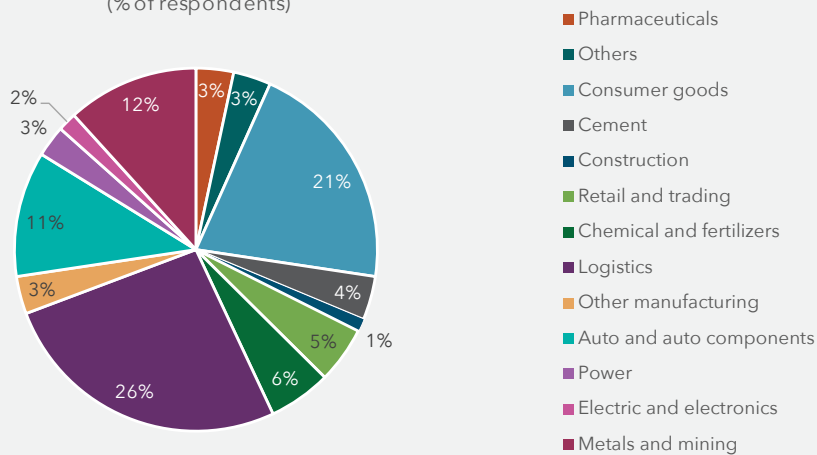
- 40,000 normal rail bogies to be converted to the Vande Bharat standards to enhance safety, convenience and comfort of passengers.
- Expansion of Metro Rail and NaMo Bharat will be supported in large cities focusing on transit-oriented development.

Achievement of physical target of Indian Railways over the years

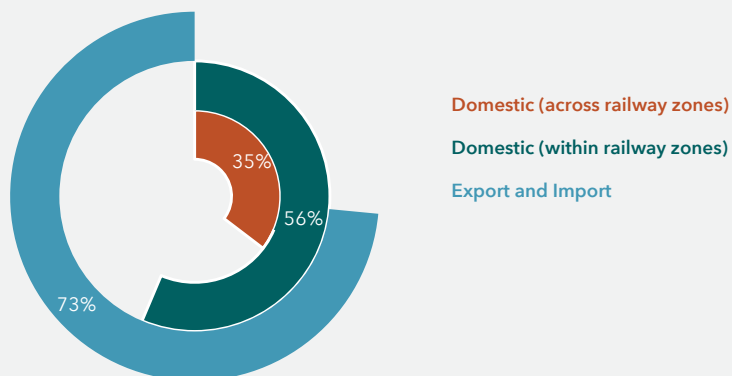
		2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
		% of target achieved	% of target achieved	% of target achieved	% of target achieved	% of target achieved	% of target achieved	% of target achieved	% of target achieved	Revised target in 2023-24 as % of budgeted target	Budgeted target in 2024-25 as a % of revised target in 2023-24
1	Construction of New Lines (Route Kms)	163%	106%	102%	48%	120%	95%	96%	908%	100%	117%
2	Gauge conversion (Route Kms)	130%	113%	79%	60%	102%	117%	127%	242%	100%	133%
3	Doubling of Lines (Route Kms)	81%	84%	106%	120%	86%	115%	124%	145%	100%	104%
4	Rolling Stock	79%	78%	102%	106%	NA	NA	NA	103%	100%	100%
	a (i) Diesel Locomotives	100%	98%	107%	109%	110%	104%	102%	84%	99%	100%
	b Coaches	114%	101%	96%	104%	94%	102%	88%	78%	100%	111%
	c Wagons (vehicle units)	105%	103%	88%	87%	88%	101%	87%	85%	88%	113%
5	Track renewals (Track Kms)	112%	93%	112%	95%	115%	136%	119%	124%	100%	104%
6	Electrification Projects (Route Kms)	108%	82%	102%	88%	73%	100%	106%	101%	100%	NA

Firmographics

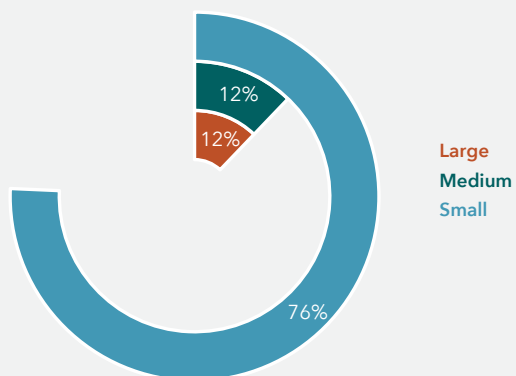
Sector-wise survey participation
(% of respondents)



Railway zone wise participation
(% of respondents)



Size of business
(% of respondents)



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 stock 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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