



Driving Income Uplift: Designing Inclusive EV Financing for India's Freight Drivers

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Foreword

The transition to electric mobility represents one of the most significant opportunities to decarbonize the global freight sector. In India, where freight demand continues to grow rapidly, this transition is already underway. However, its long-term success will depend not only on technology, infrastructure, or policy but on the people at the center of the system: freight drivers.

For millions of drivers across India, freight is both a livelihood and a pathway to economic mobility. Yet, this profession is often characterized by income volatility, limited access to formal finance, and rising operating costs. As electric vehicles (EVs) enter the freight ecosystem, they bring the potential to fundamentally reshape this reality by reducing operating costs, improving income stability, and enabling new pathways to asset ownership.

This report, developed jointly by **Smart Freight Centre** and **Shell Foundation**, brings together evidence from a large-scale study of over **1,500 drivers across 11 states in India**. It offers a detailed, ground-level perspective on how the transition to electric freight is impacting driver livelihoods, and what conditions are required to ensure that these benefits can scale.

The findings point to a clear conclusion: electric freight can improve driver income, but the extent of these benefits is shaped by how vehicles are financed and how freight demand is structured. Models that combine predictable utilization with affordable and accessible financing are critical to enabling a transition that is both economically viable and socially inclusive.

As the sector moves from early pilots to scaled deployment, the focus must shift toward designing systems that work for drivers ensuring that they are not only participants in the transition, but beneficiaries of it. This will require coordinated action across financial institutions, mobility platforms, policymakers, and development partners.

We hope that this report contributes to advancing that dialogue and supports the development of solutions that align climate goals with inclusive economic growth.



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Acknowledgments

This report has been developed through a collaborative effort between Smart Freight Centre and Shell Foundation, whose partnership and strategic guidance have been instrumental in shaping both the direction and depth of this study.

We would like to extend our sincere appreciation to the **Shell Foundation** team for their continued support and engagement throughout this work. In particular, we acknowledge the contributions of Amresh Sharma, Dara Owoyemi, Natalie Wong, Emma Stephenson and Habib Nuhu, and the broader Shell Foundation team for their insights on driver livelihoods, financing structures, and inclusive transition pathways.

At the core of this study are the 1,500+ freight drivers across 11 states in India who generously shared their time, experiences, and perspectives. Their inputs form the foundation of this report, and we are deeply grateful for their openness and trust.

We also thank the mobility platforms, **MoEViing, Omega Seiki Mobility and Bluwheelz**, logistics service providers, and fleet operators who supported access to driver networks and provided valuable operational insights. We would particularly like to acknowledge **Vikash Mishra – Founder & CEO and Megha Rajpal – Head, Strategy & Growth and Sanjay Sharma – Head of Operations at MoEViing** for their active support, coordination, and valuable contributions throughout the study. Their engagement was instrumental in facilitating driver outreach and enabling the successful execution of the research. Our appreciation extends to financial institutions and ecosystem stakeholders who contributed perspectives on EV financing, risk assessment, and emerging business models.

This work has also benefited from the contributions of research partners, survey teams, and field coordinators who enabled data collection and on-ground engagement across diverse geographies.

Within Smart Freight Centre, we acknowledge the efforts of the India team across research, partnerships, and communications for their role in delivering this study.

This report reflects a shared commitment to advancing an EV transition that is not only environmentally sustainable, but also economically inclusive ensuring that freight drivers are central to the future of clean logistics.



Sanya Shahi

Principal, Programs & Partnerships, Smart Freight Centre

Testimonial

At MoEVing, sustainability is measured not only by environmental impact, but also by the economic well-being of the driver partners who are at the core of the freight ecosystem. The transition to electric mobility can only be truly successful if it improves livelihoods alongside reducing emissions.

This report reflects a question that has been central to our work from the beginning: how can the benefits of electrification be made accessible and sustainable for drivers? Through multiple engagements with the teams including driver surveys, field workshops, and operational reviews we have sought to ensure that the realities of day-to-day freight operations are accurately reflected in the findings.

In our experience, access to affordable and appropriately structured financing remains one of the most significant barriers to EV adoption and income enhancement for drivers. Addressing this challenge is not merely a matter of enabling vehicle ownership it is fundamental to building an equitable and scalable electric freight ecosystem.

We extend our appreciation to the teams at the Smart Freight Centre and Shell Foundation for the rigour, depth, and practical perspective they have brought to this work. We hope this report serves as a valuable resource for financial institutions, policymakers, OEMs, and logistics platforms working to shape the next phase of India's electric freight transition.



1

Executive Summary



1. Executive Summary

Driving Income Uplift Through Inclusive EV Financing

India's freight electrification is accelerating. Yet behind every electric truck is a driver, whose income stability, asset ownership, and financial resilience determine whether the transition succeeds at scale.

This study draws on the survey of **1,500 drivers across 11 states in India**, covering both 3-wheeler and 4-wheeler segments. The survey sample was dominated by **salary-based drivers (79%)**, followed by **lease-based drivers (20%)**, with **owner-cum-drivers representing only 1%**, reflecting the current structure of organized freight operations and highlighting the importance of employer- and platform-led models in shaping the socio-economic outcomes of EV adoption. The objective was to understand how the transition from internal combustion engine (ICE) vehicles to electric vehicles (EVs) impacts driver livelihood and what financing structures can enable an equitable transition.

Financing design emerges as one of the strongest determinants of livelihood outcomes in the EV transition. While EVs offer lower operating costs than conventional vehicles, realizing these benefits depends on how drivers access and pay for the vehicle. Financing structures determine who bears the upfront investment, how repayment obligations are distributed, the extent of utilization risk drivers assume, and whether drivers have a pathway to eventual asset ownership. The study finds that models combining affordable financing, predictable utilization, and risk-sharing mechanisms consistently outperform traditional ownership models, highlighting that the success of freight electrification depends as much on financial architecture as on vehicle technology.

The study also highlights an emerging opportunity to expand **participation of women in freight operations**. While current representation remains limited, early evidence suggests that EVs through improved driving comfort, lower operational complexity, and platform-based employment models can enable greater inclusion of women drivers in the sector.

Key Findings:

1. EV Adoption Delivers Real Income Uplift

On average, drivers transitioning to EV operations report approximately 25% higher income compared to their previous professions, highlighting the potential of electric vehicles as a livelihood-enhancing pathway.

Under current operating conditions:

- **3W EV drivers** earn approximately **₹4,000–₹8,000 more per month** than their pre-EV income, depending on employment model.
- **4W EV drivers** see income improvements as well, drivers earn **~₹4,000 more per month** than their pre-EV income, with the strongest uplift seen in salary and lease-based archetypes.

By eliminating volatile fuel costs as a variable expense, EVs unlock structural cost savings that can directly translate into sustained income uplift provided utilization remains strong. These numbers were calculated before recent hike of fuel prices: effect may be even more significant in future even more volatile environment.

2. Business Model Determines Financial Viability

Income outcomes vary significantly by driver archetypes:

- **Lease-based EV drivers** emerge as the most financially viable and stable segment across scenarios.
- **Salary-based drivers** benefit from income stability and moderate uplift.
- **Owner-cum-drivers**, however, face higher risk exposure as they work outside platforms and often don't achieve the required miles to benefit from the transition. They struggle to match ICE income under current financing conditions.

The difference is not just technology-driven, it is primarily financing and utilization-driven.

3. Financing Design Is the Critical Lever

Across both 3W and 4W segments, EMI (Equated Monthly Instalment) payments are the largest cost component, particularly for owner-cum-drivers who face weaker credit profiles and higher interest rates.

Financing design emerges as one of the strongest determinants of livelihood outcomes in the EV transition. While EVs offer lower operating costs than conventional vehicles, realizing these benefits depends on how drivers access and pay for the vehicle. The study assesses a range of financing structures, from traditional ownership models and platform-backed leasing arrangements to lease-to-own pathways and anchor-linked financing models. Each structure allocates financing obligations, utilization risk, and ownership benefits differently, resulting in significantly different income outcomes for drivers.

The evidence suggests that financing models linked to predictable freight demand perform particularly well. Platform-backed lease models reduce upfront barriers and provide income stability through structured utilization, while lease-to-own models combine this stability with a pathway to asset ownership and long-term wealth creation. Emerging anchor-linked financing approaches further improve affordability by tying repayments to verified freight contracts and operational cash flows. In contrast, independent ownership models often place the full burden of financing and utilization risk on drivers, limiting the economic benefits of EV adoption despite lower operating costs.

Scenario modelling shows that:

- Extending loan tenures to six years
- Reducing interest rates modestly
- Improving utilization through platform-linked contracts

can significantly improve EV Driver incomes and ensure better lives and livelihoods for their families and communities.

Under advanced scenarios, lease-based EV drivers realize substantial income gains, compared to their ICE driving peers. At the same time, even owner-cum-drivers can surpass ICE earnings, when affordable financing is combined with high vehicle utilization and supporting charging infrastructure. This shift occurs for fundamental economic reasons, as EVs have lower operating costs, allowing each additional kilometre driven to generate higher net income than an equivalent ICE vehicle.

What This Means for the Market

The evidence is clear:

- EV adoption can enhance driver income.

- Platform-connected ecosystems accelerate income stability.
- Financing architecture determines whether the transition is inclusive.

The next phase of India's EV transition must therefore move beyond vehicle deployment toward **structuring capital, risk-sharing, and ownership pathways that unlock long-term driver prosperity.**

From Evidence to Action

Electric freight presents a unique opportunity to align climate and economic outcomes. However, scaling this transition will depend on **designing finance models that work for drivers** - not just providing the vehicles.



Key Insight

Electric freight can improve driver livelihoods

Drivers operating electric freight vehicles report approximately 25% higher income compared to their previous professions, demonstrating that EV adoption can create meaningful economic opportunities within the logistics sector.

2

India's EV Transition Is Also a Livelihood Transition



2. India's EV Transition Is Also a Livelihood Transition

India's freight sector is entering a decisive phase. As electric vehicles (EVs) gain momentum across last-mile and short-haul logistics, the conversation is often centred on emissions reduction, technology readiness, and infrastructure deployment.

Yet, behind every freight movement is a driver and the success of this transition will ultimately depend on whether it works for them.

For millions of drivers across India, freight is more than a job. It is a primary source of income, often supporting entire families, and in many cases, a pathway toward financial independence. However, this livelihood is shaped by structural challenges income volatility, rising fuel costs, and limited access to formal financial systems.

The transition to electric freight has the potential to change this equation.

2.1 The Reality of Freight Driver Livelihoods

Freight drivers—particularly in last-mile and short-haul segments operate within highly fragmented and often informal systems that shape both their earning potential and financial security.

Unlike formal employment structures, a large share of drivers enters the sector through **informal networks, contractor arrangements, or platform-based onboarding**, with limited documentation of income or employment history. This has direct implications for their access to finance and long-term economic mobility.

For many drivers, daily earnings are not only modest but also highly variable. Income depends on factors such as trip availability, route allocation, downtime, and seasonal demand fluctuations. As a result, even small disruptions such as lower trip volumes or unexpected expenses can significantly affect take-home income.

Several structural challenges define this reality:

- **Limited access to formal credit**
Most drivers lack the documented income streams or credit history required by traditional banks. As a result, they often depend on NBFCs or informal lenders, where borrowing costs are significantly higher and loan terms less flexible.
- **Thin and fluctuating margins**
Earnings are closely tied to utilization. Drivers operating in unstructured or spot markets may experience idle time between trips, directly reducing daily income. Even in platform-linked models, incentives and trip allocations can vary.
- **High exposure to fuel price volatility**
For drivers operating internal combustion engine (ICE) vehicles, fuel represents one of the largest operating expenses often accounting for a substantial share of daily costs. Fluctuations in fuel prices directly erode margins, with drivers absorbing most of this risk without corresponding adjustments in freight rates.
- **Limited capacity to save or build assets**

Given the combination of variable income and high operating expenses, many drivers struggle to accumulate savings. This limits their ability to make upfront investments, manage financial shocks, or transition toward asset ownership.

For a typical ICE driver, daily economics are tightly constrained. A significant portion of earnings is spent on fuel alone, leaving limited surplus after accounting for maintenance, vehicle payments (if applicable), and household expenses. This creates a cycle, where income is earned and spent within short timeframes, with minimal opportunity to build long-term financial resilience.

In this context, income stability is not only about how much drivers earn but how predictable and controllable their costs are. The lack of cost predictability, particularly driven by fuel price fluctuations, remains one of the most critical challenges in improving driver livelihoods under traditional freight models.

2.2 EVs as a Structural Shift in Driver Economics

Electric vehicles (EVs) introduce a fundamentally different operating model for freight drivers - one that has the potential to reshape both daily earnings and long-term financial outcomes.

At the core of this shift is a change in **cost structure**.

Under internal combustion engine (ICE) operations, a large share of a driver's daily earnings is spent on fuel. This cost is not only high, but also volatile, fluctuating with global oil prices and local market conditions. As a result, drivers have limited control over one of their largest expenses, making income inherently unpredictable.

EVs eliminate this dependency.

Instead of fuel, drivers incur electricity costs, which are:

- Significantly lower per kilometre
- More stable and predictable
- Less exposed to market volatility

In addition, EVs typically have:

- Fewer moving parts
- Lower maintenance requirements
- Reduced downtime due to mechanical failures

Together, these factors result in a structurally lower and more stable operating cost base.

From Variable to Predictable Economics

For drivers, this shift is not just about cost reduction. It is about greater control over earnings.

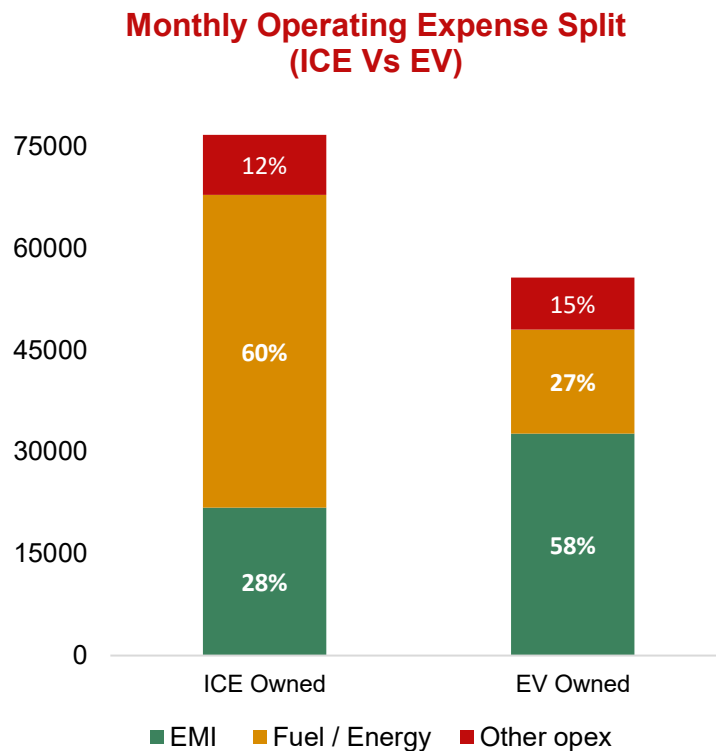
In ICE operations:

- Costs fluctuate daily
- Earnings are uncertain
- Financial planning is difficult

In EV operations:

- Costs are more predictable
- Margins are more stable
- Income becomes easier to anticipate and manage

This transition from variable to predictable economics is one of the most important, yet often under-recognized, benefits of electrification.



Income Uplift Through Cost Efficiency

When paired with sufficient utilization, these cost savings translate directly into higher net income.

Drivers operating EVs can:

- Retain a larger share of their earnings
- Reduce exposure to daily cost shocks
- Achieve more consistent monthly income

This is particularly evident in high-utilization segments, where vehicles are used intensively and savings accumulate over time.

However, utilization remains a critical condition.

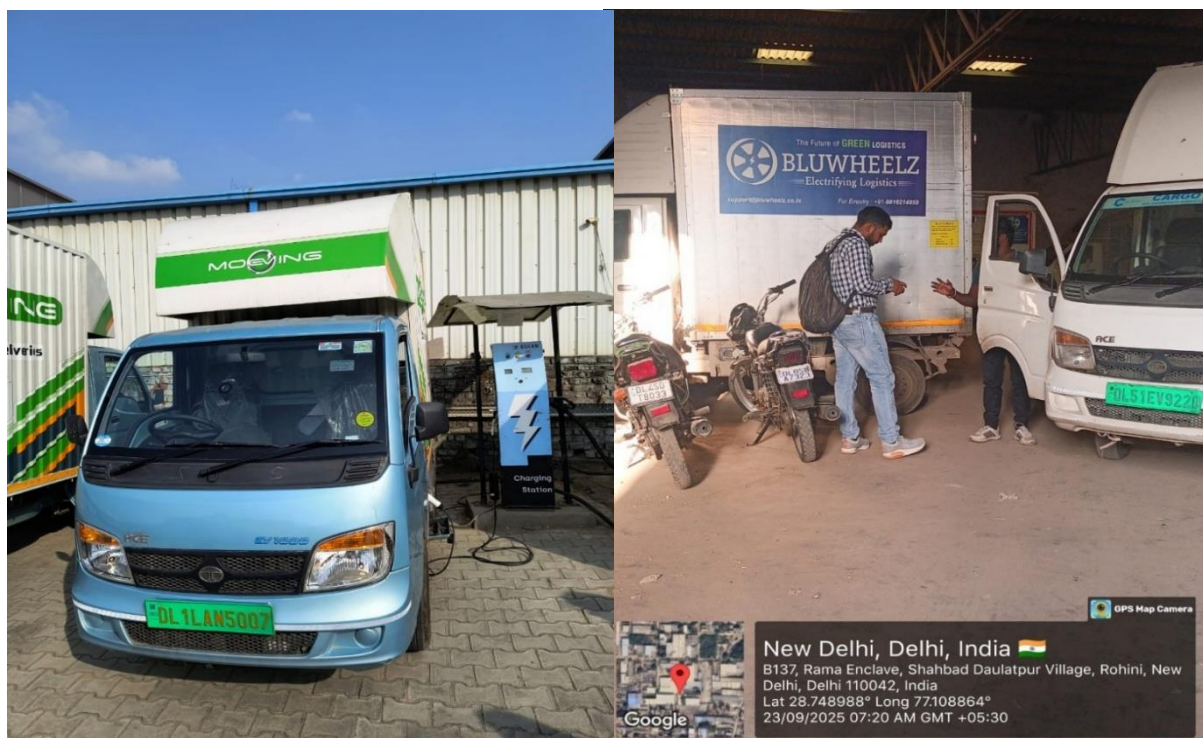
Without consistent trip volumes, the benefits of lower operating costs are diluted. This highlights an important dynamic: **EV economics improve margins—but utilization determines total income.**

New Dependencies in the EV Model

While EVs improve operating economics, they also introduce new structural dependencies that shape driver outcomes. In practice, drivers access EVs through different ownership and financing arrangements. Salary-based drivers typically operate vehicles owned by fleet operators, lease-based drivers access vehicles through structured leasing arrangements, while owner-cum-drivers finance and operate their own vehicles. These models distribute financing obligations, utilization risk, and ownership benefits differently, resulting in distinct income outcomes.

These include:

- **Higher upfront vehicle costs**
EVs require significantly higher initial investment compared to ICE vehicles, making access to financing essential for most drivers.
- **Dependence on financing structures**
Both ICE and EV vehicles require financing, but financing design is more critical for EVs, because of their higher upfront costs. Well-structured loans through longer tenures and lower interest rates reduce monthly repayments and enable drivers to fully benefit from EVs' lower and more predictable operating costs. Improved loan terms increase net income for lease-based EV drivers by approximately 10%. However, owner-cum-drivers require around 3,800 km per month to achieve income parity for EVs, compared to ICE operations.
- **Charging infrastructure and operational planning**
Drivers must adapt to charging schedules, station availability, and route planning in ways that differ from ICE operations.
- **Platform and ecosystem integration**
EVs deliver higher net income than ICE, in particular for salary- and lease-based models. At the same time, owner-cum-drivers may earn less with EVs, due to fewer load opportunities, dependence on volatile spot markets, limited ability to maximise utilisation without driver rotation, and reduced routes. 10% higher utilization boosts EV income most notably for lease and owner-cum-driver models; however, gains remain marginal for owner-cum-drivers versus ICE, unless they achieve higher utilization even without platform access.



Shift in Risk Distribution

Importantly, EVs do not eliminate risk—they redistribute it.

- In ICE models, risk is largely tied to **fuel price volatility**.
- EVs benefit more from higher utilization because their lower energy and maintenance costs allow each additional kilometre to generate greater net income than in ICE operations: hence there is a **built-in incentive for EV drivers to reach higher utilization**.
- This advantage is amplified, when **financing terms are affordable** and supporting infrastructure is reliable.

In addition to financing and utilization, EV performance depends on enabling conditions such as dependable electricity supply, access to charging or battery-swapping networks, battery standardization, and robust after-sales service and maintenance. For drivers with predictable demand and structured operating models, this shift is beneficial for reducing uncertainty and improving income outcomes.

However, for independent drivers without access to stable demand or affordable financing, these new risks can become significant barriers.

2.3 The Missing Link: Linking Electrification to Livelihood Outcomes

While the electrification of freight transport in India is gaining momentum, much of the current discourse remains focused on **technology deployment, infrastructure expansion, and policy incentives**. These are critical enablers, but they do not, on their own, determine whether the transition will succeed at scale.

At the centre of this transition is a more fundamental question:

Does electrification improve the economic reality of drivers and for whom?

To date, there has been limited structured evidence on how EV adoption affects:

- Driver income and take-home earnings
- Cost structures across different operating models
- Financial risk exposure under different financing conditions
- Long-term pathways to asset ownership

Why This Gap Matters

Without a clear understanding of livelihood outcomes, there is a risk that EV adoption remains concentrated within specific segments particularly platform-linked fleets, while independent drivers are excluded due to persistent barriers related to financing and utilization. For the latter, financial risks may be disproportionately transferred to drivers, especially under high-cost lending structures, increasing their vulnerability rather than improving their economic position.

At the same time, the absence of income visibility and stability can make drivers hesitant to transition, slowing overall adoption. In effect, electrification may continue to progress, but not in a way that is inclusive or equitable across the broader driver ecosystem.

The evidence gap also reflects a broader challenge: EV adoption is often approached as a **vehicle-level transition**, rather than a **system-level transformation**. In reality, driver outcomes are shaped by the interaction of multiple factors:

- **Vehicle technology (EV vs ICE)**
Determines the overall cost structure. EVs typically involve higher upfront capital costs but offer lower and more predictable energy and maintenance expenses, while ICE vehicles generally have lower initial costs, but higher and more volatile operating costs, driven by fuel and maintenance.
- **Operating model (salary, lease, ownership)**
Shapes how income is earned and how financial risk is distributed between drivers, platforms, and fleet owners.
- **Utilization levels (trip frequency, route structure)**
Directly influence total income, as higher and more consistent usage improves earnings and repayment capacity.
- **Financing terms (interest rates, tenure, repayment structure)**
Define the affordability of EV adoption by impacting monthly repayment burden and overall financial viability.
- **Ecosystem support (platforms, infrastructure, service networks)**
Enables smooth operations by ensuring access to demand, charging, and maintenance, which are critical for sustained income.
- **Policy and regulatory support (incentives, manufacturing, infrastructure policies)**
Influences vehicle affordability and market readiness by reducing manufacturing costs, supporting charging infrastructure deployment, and improving access to subsidies and financing mechanisms.

Without aligning these elements, the benefits of EVs can remain uneven or inaccessible.

Bridging the Gap Through Evidence

Addressing this gap requires moving beyond assumptions toward **driver-level evidence**.

This means:

- Understanding real income outcomes
- Comparing EV performance against actual ICE baselines
- Analysing differences across driver archetypes
- Identifying the structural drivers of success and failure

This study is designed to do exactly that bringing together quantitative and qualitative insights to build a grounded understanding of how electrification is shaping livelihoods in practice.

2.4 The Financing Gap: Why the Market Is Not Scaling

While electric vehicles (EVs) improve the underlying economics of freight operations, adoption at scale remains constrained. The analysis points to a clear reason: **the market is not limited by technology; it is limited by financing**.

Across driver segments, the ability to transition to EVs is determined less by willingness and more by **access to affordable, appropriate, and aligned financial structures**.

High Upfront Costs and Limited Access to Credit

One of the most immediate barriers to EV adoption is the **high upfront cost of vehicles**, particularly in the 4W segment.

For many drivers:

- EVs require significantly higher initial investment than ICE vehicles
- Access to formal banking credit is limited due to lack of documented income or credit history
- Collateral requirements and risk perception further restrict eligibility

As a result, a large share of drivers relies on **non-banking financial companies (NBFCs)** or informal lenders, where:

- Interest rates are higher
- Loan tenures are shorter
- Repayment structures are less flexible

Financing Institutions in 3W & 4W (ICE + EV)

Category	Institutions	Typical Rate*	Ideal For
Banks	SBI, HDFC, Axis, ICICI, IndusInd	7–12%	Drivers with formal documentation
Mainstream NBFCs	Shriram Finance, HDBFS, Cholamandalam, SK Finance, Tata Capital, L&T Finance, TVS Mobility	12–22%	Informal drivers, small fleet owners
EV-Focused NBFCs / Fintechs	Revfin, Ecofy, Three Wheels United, Mufin Green, Ohm Mobility, Greaves Finance, Euler Financing, Stride Green	15–26%	First-time EV buyers, low-credit drivers
Leasing / Subscription	Orix, ALD/LeasePlan, Alt Mobility, Vyom Finance, Sundaram Finance	20–30%	Drivers with no capital for upfront purchase

*Interest rates mentioned are indicative

This creates a structural barrier for drivers who could benefit most from EVs but are least able to access them.

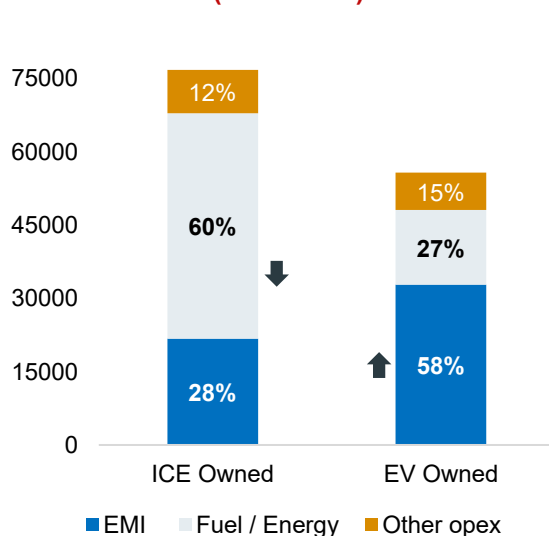
EMI Burden as the Dominant Cost Driver

Under EV operations, the cost structure shifts from variable fuel expenses to **fixed monthly repayments (EMIs)**.

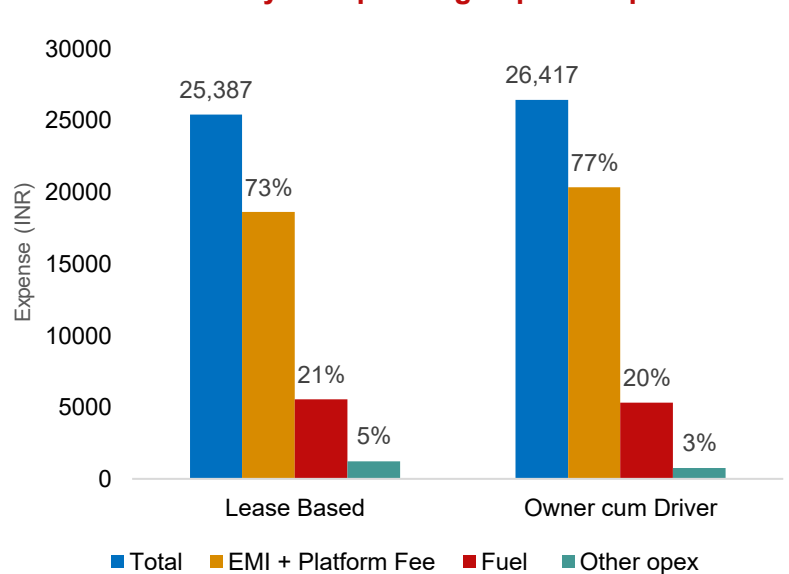
The analysis shows that:

- EMIs are the **single largest cost component** for EV drivers
- This burden is especially high for owner-cum-driver
- Higher interest rates and shorter tenures increase monthly repayment pressure
- Interest rates for EV loans can range significantly, depending on lender type and driver credit profile. In many cases, independent drivers face interest rates in the range of **16–19%**, reflecting lenders' perception of technology risk and borrower credit risk.

Monthly Operating Expense Split (ICE Vs EV)



Monthly EV Operating Expense Split across



While EVs reduce operating costs, high EMIs can offset these gains particularly in the early years of ownership.

The Viability Gap: Difference Between fixed-cost Financing and variable Driver Revenues

A fundamental constraint to scaling EV adoption lies in the **mismatch between financing structures and the realities of driver income**.

Under current models, EV financing is structured around **fixed monthly repayments (EMIs)**, while driver earnings remain inherently **variable and utilization dependent**. This creates a structural imbalance, that can create an opportunity or a risk, depending on vehicle uptime and utilization.

For many drivers:

- Repayments are fixed and time-bound
- Income fluctuates based on trip availability, route allocation, and downtime

Drivers operating within structured ecosystems—such as platform-linked or contract-based models - are better positioned to manage these constraints. They benefit from:

- More predictable trip volumes
- Greater income visibility
- Higher and more stable utilization

In contrast, independent drivers face:

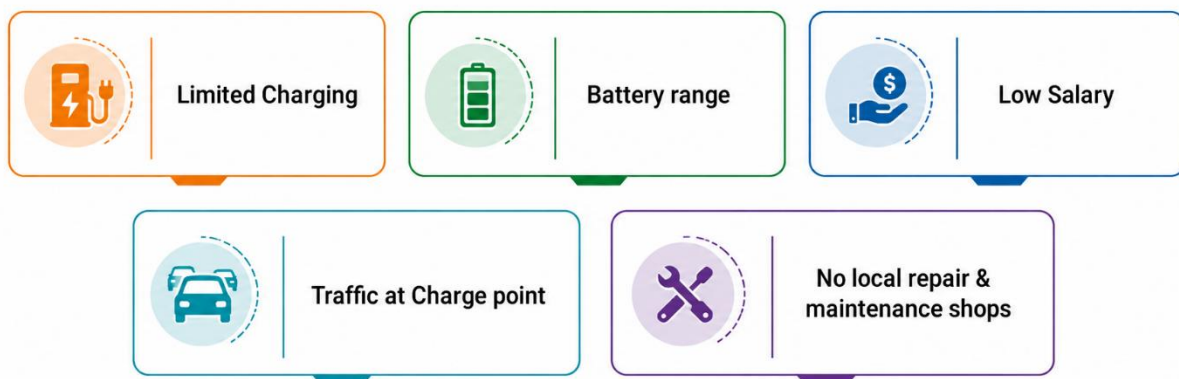
- Demand uncertainty
- Irregular earnings
- Greater exposure to repayment stress

Infrastructure and Service Ecosystem Gaps

Drivers also report operational barriers that influence their willingness to recommend EV adoption. Limited public charging infrastructure, long waiting times at charging stations, and a lack of local repair and maintenance facilities remain important concerns.

While these constraints are gradually improving as the EV ecosystem matures, they continue to shape driver perceptions and affect operational efficiency.

Driver Feedback on EV Adoption Barriers



Bridging this gap will require rethinking, how capital is deployed in the freight sector moving toward models that align repayments with income, reduce perceived risk, and support drivers through the transition.

2.5 Purpose and Scope of the Study

This study was undertaken to build a comprehensive, evidence-based understanding of how the transition to electric vehicles (EVs) is impacting freight driver livelihoods in India—and what it will take to scale these benefits inclusively.

The objective is twofold:

- **Assess the economic impact of EV adoption at the driver level**
- **Identify financing and operating models that enable sustainable and scalable adoption**

While the electrification of freight transport is gaining momentum, limited evidence exists on how this transition affects the livelihoods of drivers—the individuals who operate these vehicles and sustain the logistics ecosystem. Many drivers operate in informal employment structures, face limited access to credit, and are exposed to volatile income patterns under traditional internal combustion engine (ICE) vehicle models.

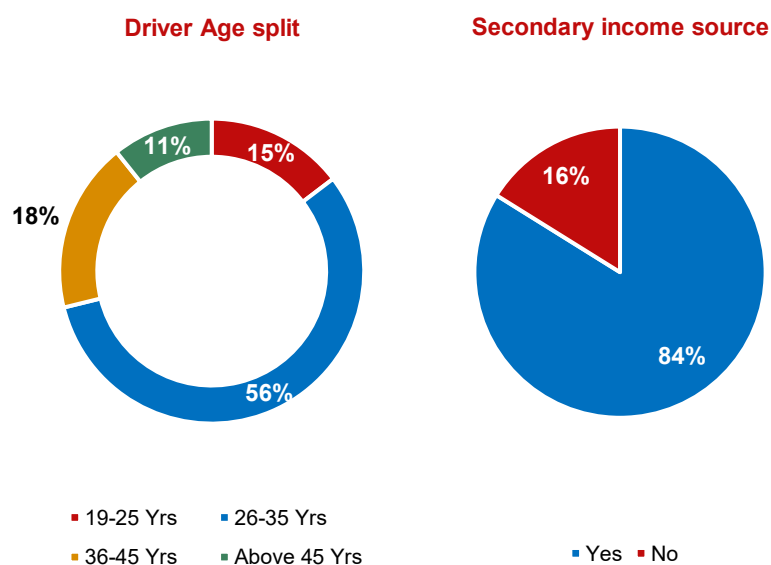
The objective of this study is therefore to provide **driver-level insights into income dynamics, cost structures, and financing constraints**, and to translate these insights into practical pathways for designing inclusive EV financing models.

By linking driver economics with financing and ownership models, the study aims to support ecosystem stakeholders including financiers, mobility platforms, policymakers, and development partners in developing solutions that accelerate EV adoption while strengthening driver livelihoods.

Scope of Analysis

The study draws on a large and diverse dataset covering:

- Over **1,500 freight drivers**
- Across **11 states in India**
- Spanning both **three-wheeler (3W)** and **four-wheeler (4W)** freight segments



This broad coverage ensures that the analysis reflects a wide range of geographic contexts, operating conditions and market structures.

Capturing the Diversity of Driver Models

To reflect the heterogeneity of the freight ecosystem, the study analyzes drivers across three primary archetypes:

- **Salary-based drivers**
Operate vehicles owned by logistics companies or fleet operators and receive a fixed







monthly salary regardless of trip volumes. While this model offers income stability and reduced financial risk for drivers, the opportunity for income growth is relatively limited.

- **Lease-based drivers**

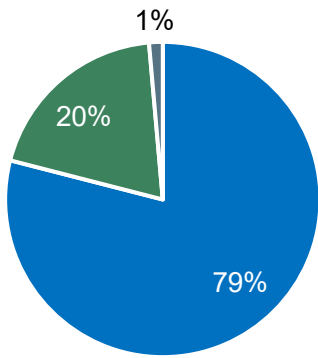
Operate vehicles leased from mobility platforms or fleet operators. Their income is typically linked to trip volumes or utilization, with lease payments deducted from earnings. This model balances operational flexibility with relatively predictable income streams.

- **Owner-cum-drivers**

Own and operate their vehicles independently. They retain the full profit from operations after covering fuel, maintenance, and financing costs. While this model offers the greatest autonomy and potential long-term wealth creation through asset ownership, it also exposes drivers to the highest financial risk.

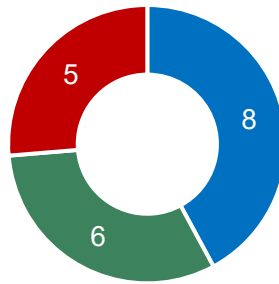
Driver Type	Key Features	Typical Use Cases
 <p>Salary Based Drivers</p>	<ul style="list-style-type: none"> ✓ Full-Time/Part-Time Employees ✓ Receive Fixed Monthly Salary Regardless of Trips ✓ Higher Employer Control Over Routes, Hours ✓ Eligible for Benefits (Insurance, Paid Leave etc) 	 <p>Corporate Fleets, Logistics Companies, Last-Mile Delivery</p>
 <p>Lease Based Drivers</p>	<ul style="list-style-type: none"> ✓ Lease Vehicle from Platform ✓ Income Varies with Trips or Utilization ✓ Lease Fee or EMIs Deducted from Earnings ✓ Operate Under Platform Agreement 	 <p>Aggregator Platforms, Ride-Hailing, Logistics Startups</p>
 <p>Owner-cum Drivers</p>	<ul style="list-style-type: none"> ✓ Owns and Operates Vehicle Independently ✓ Retains Full Profit After Expenses ✓ Flexible Work Schedule and Routes ✓ May Be Connected to a Digital Freight Marketplace 	 <p>Independent Operators, Small Fleet Owners, Marketplace Platforms</p>

Driver by Archetype



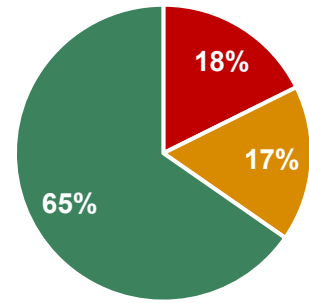
- Salary Based
- Lease Based
- Owner cum Driver

Avg Years of Driving Experience (Truck – ICE, EV or CNG)



- Salary Based

% Driver gaining vehicle ownership (Lease based model)



- Yes, > 2 yrs

Methodological Approach

The study combines multiple sources of data and engagement to ensure both depth and reliability of insights:

- **Structured driver surveys** to capture income, cost structures, and operating patterns
- **Focus group discussions** to understand lived experiences, perceptions, and challenges
- **Engagement with mobility platforms and logistics operators** to assess operational models



Voices from the Field



The resulting analysis provides insights into **how EV adoption influences driver income under different scenarios**, including current operating conditions and improved financing structures.



Key Insight

EVs fundamentally improve the unit economics of freight operations but their success depends on how financing, utilization, and ecosystem support are structured around the driver.

3

Inside the Study: Data, Drivers, and Approach



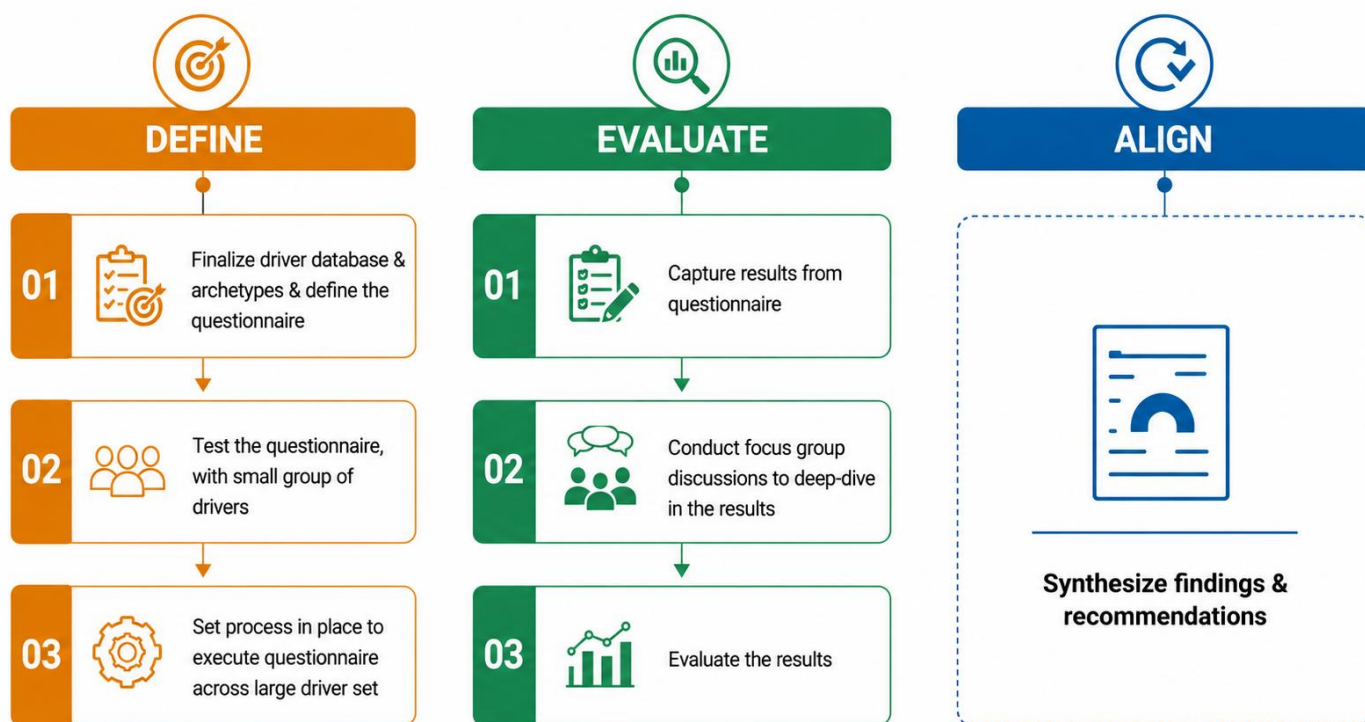
3. Inside the Study: Data, Drivers, and Approach

This study was designed to build a robust, ground-level evidence base on how electric vehicle (EV) adoption is shaping freight driver livelihoods in India. Given the diversity and fragmentation of the freight ecosystem, the approach combines large-scale data collection with targeted stakeholder engagement to capture both quantitative trends and lived experiences.

3.1 Study Design and Methodology

The study follows a structured three-step approach:

- **Define**
Establish the scope of the study by identifying key driver segments, geographies, and survey parameters.
- **Evaluate**
Collect and analyze data on income, cost structures, utilization patterns, and financing conditions across driver archetypes.
- **Align**
Translate findings into actionable insights through engagement with financial institutions, platforms, and ecosystem stakeholders.



This approach ensures that the analysis moves beyond descriptive insights to identify practical pathways for scaling inclusive EV adoption.

Data Collection and Stakeholder Engagement

The study combines multiple data sources to ensure depth and reliability:

- **Structured driver surveys**
Capture quantitative data on income, expenses, utilization, and financing.
- **Focus group discussions (FGDs)**
Provide qualitative insights into driver experiences, challenges, and perceptions of EV adoption.
- **Engagement with mobility platforms and fleet operators**
Offer insights into operational models, demand aggregation, and utilization dynamics



The study was supported by a network of ecosystem partners, including mobility platforms such as **MoEving, BluWheelz, and Omega Seiki Mobility**, which enabled access to driver networks, as well as an on-ground survey agency **DataCorp** that facilitated primary data collection across geographies.



	MoEving		Bluwheelz		Omega Seiki Mobility
	DataCorp – on ground survey agency				

In addition to structured surveys, focused group discussions and driver interviews were conducted to capture on-ground experiences, perceptions



Analytical Framework

The analysis links driver-level data with operating and financing conditions to assess:

- Income outcomes under current EV operations
- Differences across driver archetypes and vehicle segments
- The role of utilization in shaping earnings
- The impact of financing structures on net income

This framework enables the study to move beyond averages and identify what works, for whom, and under what conditions.



Key Insight

Understanding EV adoption requires linking technology, utilization and financing at the driver level rather than in isolation.

4

Business Models and Their Impact on Driver Income in the EV Transition



4. Business Models and Their Impact on Driver Income in the EV Transition

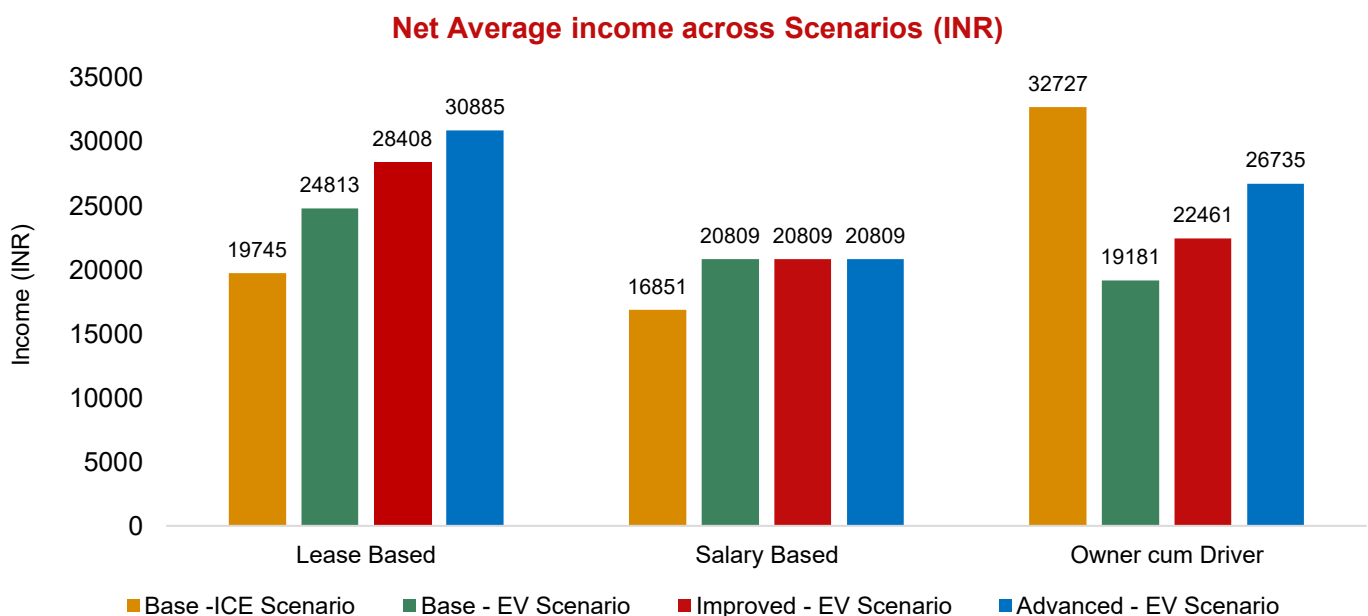
While EV adoption improves the underlying economics of freight operations, the analysis shows that **income outcomes are not determined by technology alone**. Instead, they are shaped by how vehicles are deployed, operated, and integrated into the freight ecosystem.

Across the study, one pattern is clear: Business models not vehicle technology alone determine, whether drivers benefit from EV adoption.

4.1 Comparing Operating Models

Freight drivers operate under different models that define how income is earned, how costs are structured, and how risk is distributed.

- **Salary-based model**
Drivers earn fixed monthly income, typically employed by fleet operators or logistics companies. This model offers income stability and low financial risk but limited opportunity for income growth.
- **Lease-based model**
Drivers operate vehicles through structured lease agreements, often linked to platforms. Income is tied to utilization, with repayments deducted from earnings, creating a balance between flexibility and predictability.
- **Ownership model (owner-cum-driver)**
Drivers own and operate their vehicles independently, retaining full profits but also bearing full exposure to financing, utilization, and operational risks.



Each model creates a different balance between **income stability, risk exposure, and long-term earning potential**.

4.2 The Role of Utilization and Demand Aggregation

A key advantage of structured models—particularly lease-based systems—is **access to consistent demand**.

Drivers operating within platform-linked ecosystems benefit from:

- Guaranteed or semi-guaranteed trip volumes
- Higher daily utilization
- Reduced idle time
- Greater income predictability

In contrast, independent drivers operating in fragmented markets must:

- Source trips independently
- Manage demand uncertainty
- Absorb the impact of downtime

Another key differentiator is how financial and operational risks are distributed.

- In salary-based models, risk is largely absorbed by the employer or fleet operator
- In lease-based models, risk is shared between driver and platform, with some level of income predictability
- In ownership models, risk is fully borne by the driver

For EV adoption, this distinction becomes critical.

Because EVs rely on financing and utilization to deliver economic benefits, models where risk is shared or supported tend to perform significantly better.

4.3 Income Outcomes of EV Adoption

The analysis of driver-level data reveals a clear and consistent finding: **electric vehicle (EV) adoption is already improving income outcomes for freight drivers in India**. However, the extent of this improvement varies significantly depending on how vehicles are operated, financed, and utilized.

Income Uplift: EVs vs ICE Vehicles

Across the surveyed drivers, EV adoption shows clear evidence of improved income outcomes compared with previous occupations and ICE vehicle operations.

Lease based drivers transitioning to EV-based freight operations experience approximately 25% higher income compared to their previous professions, demonstrating the potential of electric mobility to improve livelihoods in the logistics sector.

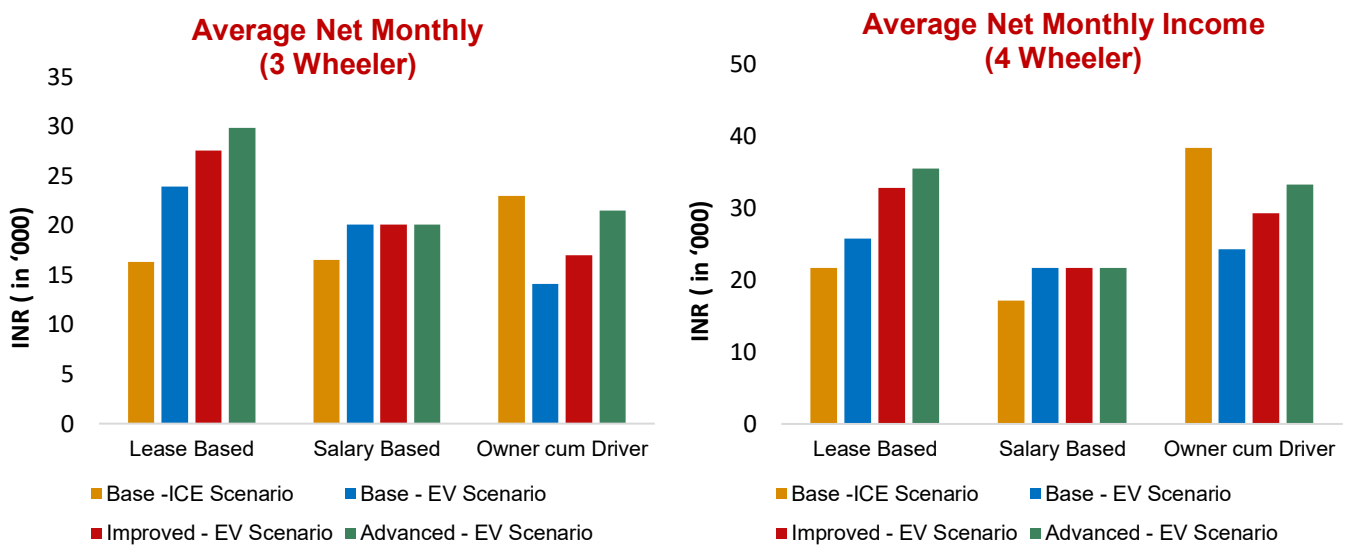
Under current operating conditions:

- Under **As-Is conditions**, 3-Wheeler EV drivers earn ~₹4,000/ month (salary-based drivers) and 8,000 /month (lease-based driver) more than their pre-EV income.
- Under **As-Is conditions**, 4-wheeler EV drivers earn ~₹4,000 more than their pre-EV income, with the strongest uplift seen in **salary** and **lease-based** archetypes.

This uplift is primarily driven by **lower operating costs**, particularly the elimination of fuel expenses and reduced maintenance requirements.

Net Income (ICE Vs EV) across Scenarios

Vehicle operational life ~ 10 years, with battery replacement at end of 5th Year



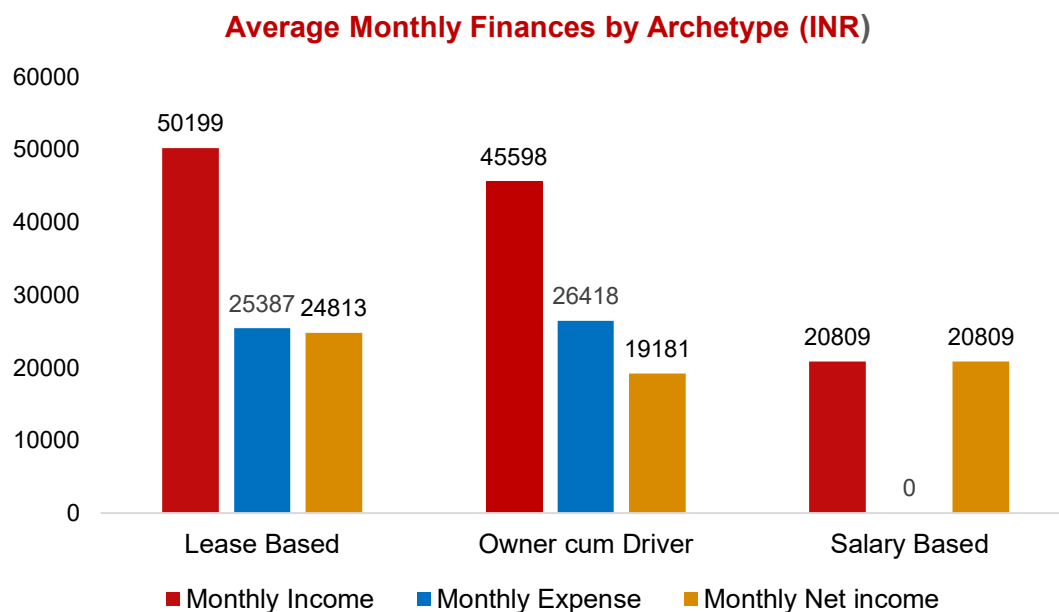
Unlike ICE vehicles, where fuel costs erode a significant portion of daily earnings, EVs allow drivers to retain a larger share of their income provided utilization remains stable.

Income Outcomes Across Driver Archetypes

While overall income trends are positive, outcomes differ significantly across driver archetypes.

- **Lease-based drivers**
Consistently demonstrate the strongest income performance, benefiting from high utilization and predictable earnings through platform-linked demand.
- **Salary-based drivers**
Experience stable incomes and improved working conditions, though with limited upside due to fixed earning structures.
- **Owner-cum-drivers**
Face the most complex transition, where high financing burdens and lower utilization can limit income gains despite lower operating costs.

EV Income Conditions by Archetype



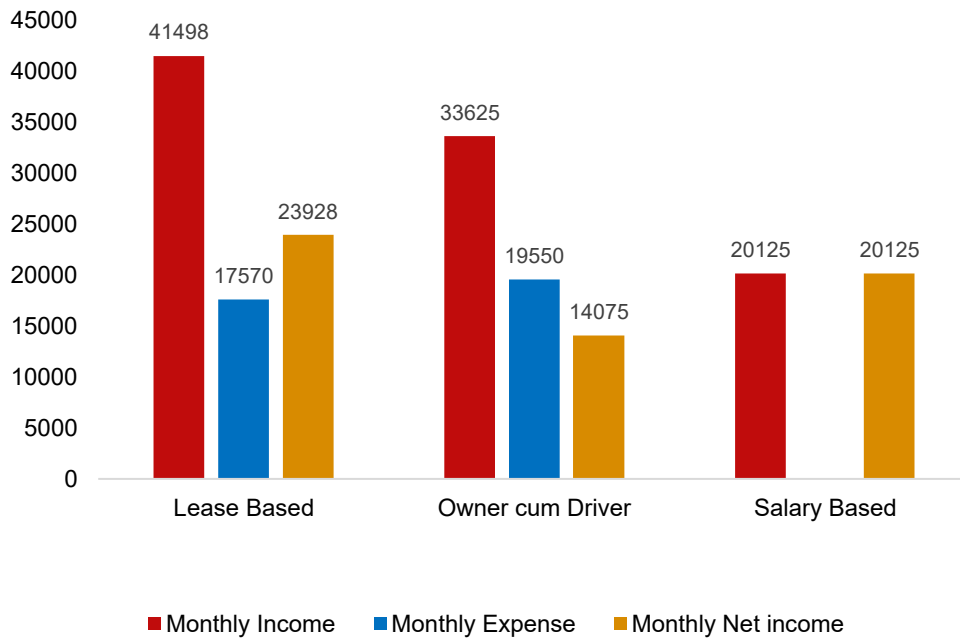
These differences highlight that **EV adoption does not create uniform outcomes**. Financial performance depends heavily on how drivers are integrated into the operating ecosystem.

Differences Across 3W and 4W Segments

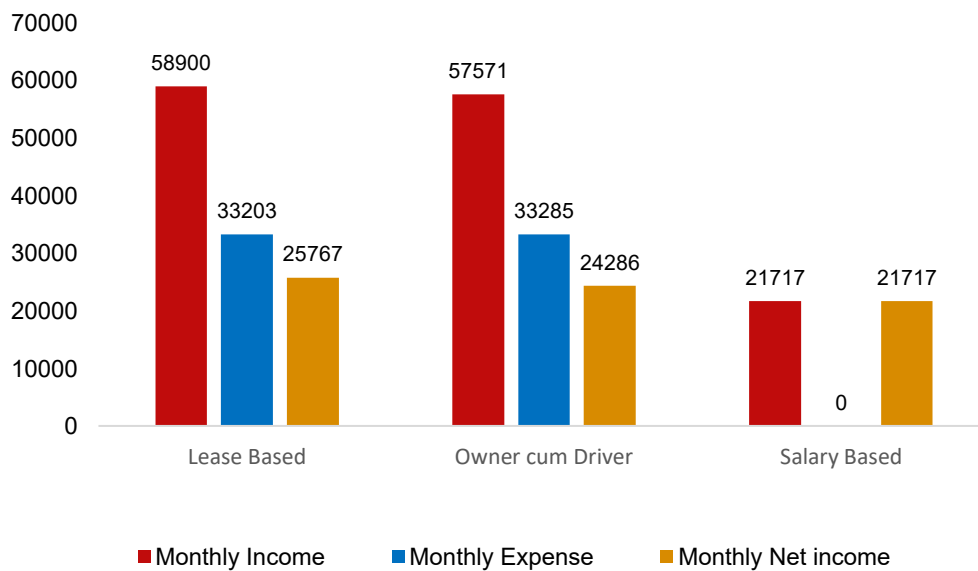
The impact of EV adoption also varies across vehicle segments.

- In the **3W segment**, lower vehicle costs and shorter operating cycles enable faster realization of income gains, supported by relatively lower financing pressure.
- In the **4W segment**, while operating cost savings are significant, higher vehicle costs increase dependence on financing, making income outcomes more sensitive to loan terms and utilization.

Average Monthly Finance (3 Wheelers)



Average Monthly Finances (4 Wheelers)

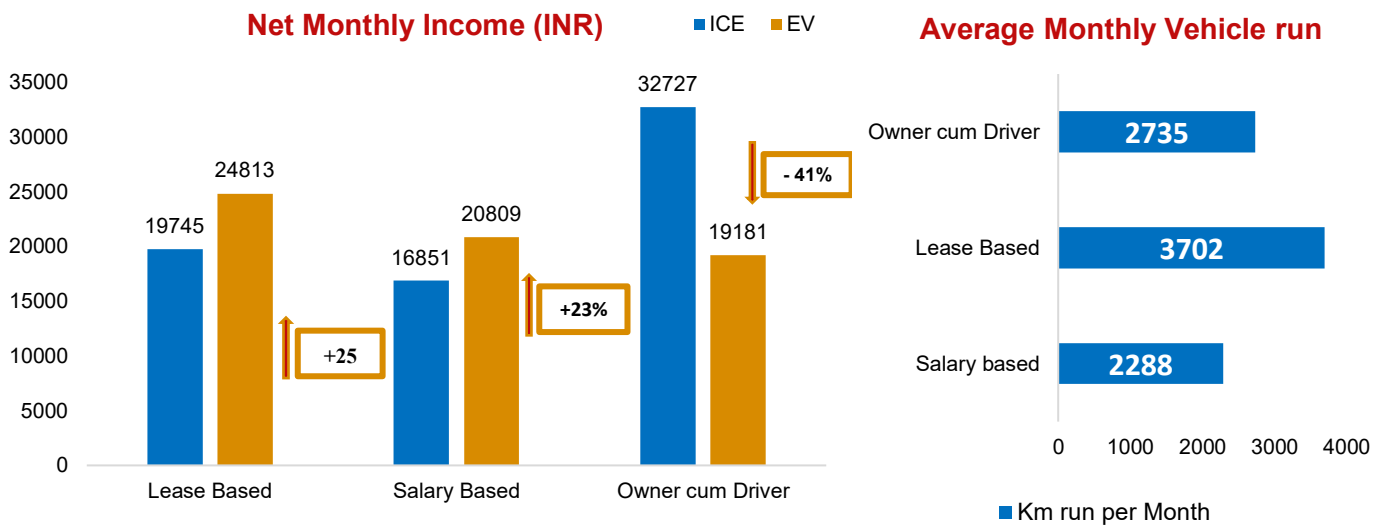


This suggests that while EVs are viable across segments, financing design becomes increasingly critical as vehicle size and cost increase.

Net Income Uplift: ICE Vs EV, Base Scenario with As-Is condition

Overall Improvement in income uplift across Archetype

Km run per month across Archetype



The Financing Effect on Income

Despite lower operating costs, EV income outcomes are significantly influenced by financing structures.

- **Loan repayments (EMIs)** are the largest cost component across both 3W and 4W segments
- Independent drivers often face **higher interest rates and shorter tenures**
- This results in **higher repayment burdens**, especially in early years

For owner-cum-drivers, this can offset the cost advantages of EVs and limit net income gains.



Key Insight

EV technology already enables higher driver income but financing structures and utilization determine who benefits from that opportunity.

5

Designing Models That Work for Drivers



5. Designing Models That Work for Drivers

The findings from this study make one point clear: **electric vehicles (EVs) can improve driver income, but only when supported by the right financing and operating models.**

Scaling EV adoption in freight therefore requires moving beyond traditional ownership structures toward **models that align with driver income patterns, reduce upfront barriers, and distribute risk more effectively across the ecosystem.**

5.1 Platform-Backed Lease Models

Platform-backed lease models have emerged as one of the most effective ways to enable early EV adoption, particularly in segments where drivers lack access to upfront capital. In this model, vehicles are owned by platforms or fleet operators and made accessible to drivers through structured lease agreements. Repayments are typically deducted directly from trip earnings, creating a built-in mechanism that aligns income and repayment flows.

This model addresses several of the structural challenges identified earlier. By removing the need for large upfront investments, it lowers the entry barrier for drivers. At the same time, integration with platform-based demand ensures relatively high and predictable utilization, which is essential for sustaining income and meeting repayment obligations.

Illustrative Financing & Ownership Models

Inclusive Financing Pathways for Drivers in the EV Transition

Traditional Loan (Baseline ICE)	Platform-Backed Lease (Base EV Scenario)	Lease-to-Own with De-Risking (Advanced EV Scenario)	Anchor/Platform-Linked Credit
<ul style="list-style-type: none"> High interest NBFC or informal loans Short tenures leading to high EMI burden No structures pathway to ownership security High default risk for low-income 	<ul style="list-style-type: none"> Platform provides or intermediates EV lease Lower operating costs benefit passed to drivers No asset ownership at end of tenure Driver remain dependent on the platform for work/earnings 	<ul style="list-style-type: none"> Blended finance + partial guarantee lowers cost of capital Structured repayments over 4-5 years driver becomes owner Battery leasing or residual value guarantees reduce technology risk 	<ul style="list-style-type: none"> Financing tied to platform/shipper contracts Repayments deducted from freight earnings Builds alternative credit score using verified trip and income data Scalable for large platform fleets across corridors

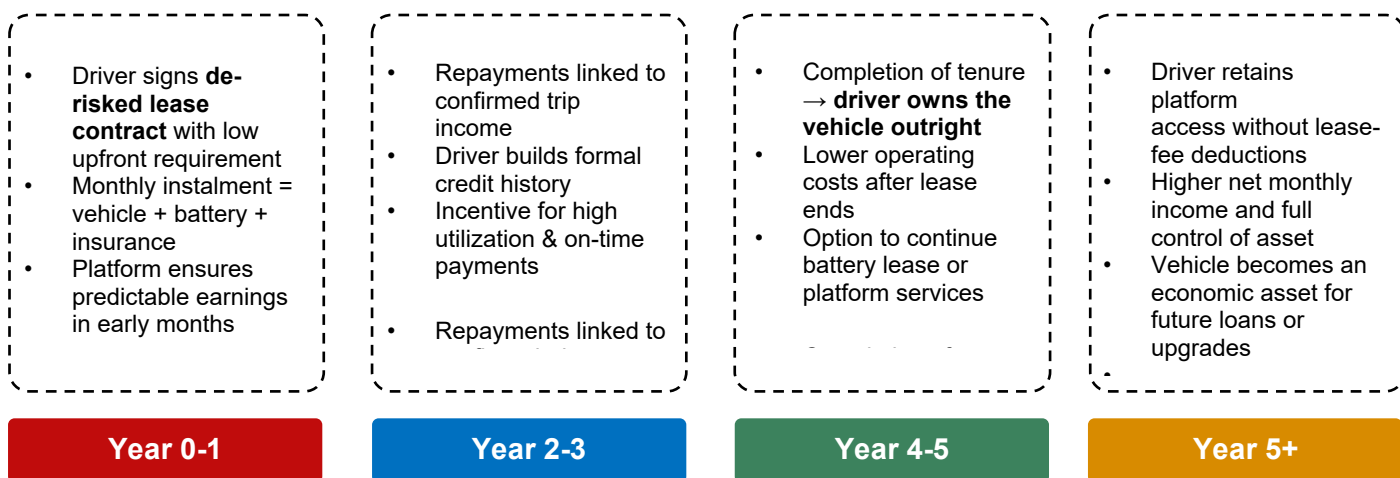
As a result, lease-based drivers consistently demonstrate the most stable income outcomes across the study. However, while this model improves short-term financial stability, it does not inherently create a pathway to asset ownership. Drivers remain dependent on platform structures, limiting their ability to build long-term wealth.

5.2 Lease-to-Own Models: Enabling Pathways to Ownership

Lease-to-own models build on the operational strengths of leasing, while addressing its key limitation—lack of ownership. These models are designed to provide drivers with a gradual and structured pathway toward owning their vehicles, without requiring high upfront capital. Under this approach, drivers begin by leasing the vehicle under conditions similar to platform-backed models,

benefiting from predictable earnings and lower financial risk in the early stages. Over time, a portion of these payments contributes toward ownership, allowing drivers to transition from operators to asset owners.

Lease-to-Own: Pathway Toward Asset Ownership and Income Stability



Lease-to-own structures build on the operational advantages of platform-backed leasing while introducing a clear pathway to vehicle ownership.

In this model, drivers initially lease the vehicle under structured contracts with predictable earnings support from platforms. Over time, lease payments contribute toward eventual ownership of the vehicle.

This approach reduces upfront financial barriers while enabling drivers to gradually build asset ownership.

A typical pathway unfolds over several stages:

Year 0–1:

Drivers enter a lease agreement with minimal upfront payment. Monthly repayments cover vehicle cost, battery use, and insurance, while platform demand supports early utilization.

Year 2–3:

Repayments continue through structured instalments linked to income. Drivers build formal credit history through repayment records and verified trip data.

Year 4–5:

Upon completion of the tenure, the driver becomes the vehicle owner, gaining full control of the asset and retaining higher net income as lease deductions cease.

This model combines income stability with asset ownership, creating stronger long-term financial outcomes for drivers.

5.3 Anchor-Linked Financing Models

A third emerging approach focuses on linking financing directly to freight demand through anchor platforms or shippers. In this model, repayment structures are tied to verified income streams, using operational data such as trip volumes, route consistency, and earnings history to inform lending decisions.

This represents a shift from traditional asset-based lending toward **cash flow-based financing**, which is more suited to the realities of freight drivers. By anchoring financing to demand, this model improves income visibility for drivers and reduces perceived risk for lenders.

In practice, this approach enables:

- Repayments that are aligned with actual earnings
- Alternative credit assessment mechanisms based on platform data
- Lower default risk due to predictable utilization

This model is particularly relevant for drivers who are otherwise excluded from formal credit systems, as it bridges the gap between informal income structures and formal financing requirements.

5.4 Enabling Financial Mechanisms

In addition to business model innovation, targeted financial instruments can play a critical role in improving affordability and reducing risk across the ecosystem. These mechanisms are especially important in early-stage markets, where uncertainty around technology performance and borrower profiles remains high.

Several approaches have emerged as particularly relevant:

- **Partial credit guarantees**, which provide first-loss protection and encourage lenders to expand into new segments
- **Interest rate buy-downs**, which reduce the effective cost of borrowing and improve affordability for drivers
- **Residual value guarantees**, which address concerns around resale value and battery performance
- **Battery leasing or Battery-as-a-Service models**, which separate battery cost from vehicle financing and reduce upfront capital requirements
- **Blended finance structures**, which combine philanthropic and commercial capital to catalyze market development. These instruments help align risk across stakeholders and enable financial institutions to participate more actively in EV financing, particularly for underserved driver segments.



Key Insight

Scaling EV adoption requires financial innovation that aligns capital with driver livelihoods not just vehicle deployment.

6

From Evidence to Scale: Building an Inclusive EV Ecosystem



6. From Evidence to Scale: Building an Inclusive EV Ecosystem

The findings from this study provide clear evidence that electric freight vehicles can improve driver livelihoods while supporting India's broader decarbonization goals. However, translating this potential into large-scale adoption requires moving beyond isolated pilots toward **system-wide alignment across stakeholders**.

The transition to EVs is not only a technological shift—it is a **coordinated ecosystem transformation** involving financing structures, operating models, infrastructure, and policy support. Scaling this transition will depend on how effectively these elements are aligned to support both **economic viability and inclusivity**.

6.1 The Role of Financial Institutions

Financial institutions will play a central role in determining the pace and inclusivity of EV adoption. The study highlights the need to move away from conventional lending models toward approaches that better reflect driver income patterns and operational realities.

This requires a shift toward:

- Designing loan products tailored to different driver archetypes
- Extending loan tenures to reduce monthly repayment burdens
- Incorporating alternative credit assessment methods based on utilization and earnings data
- Piloting blended finance and credit enhancement mechanisms to reduce perceived risk

As EV adoption scales, financial institutions have an opportunity to move from cautious participation to **active market enablers**, unlocking access to capital for a broader base of drivers.

6.2 The Role of Platforms and Fleet Operators

Mobility platforms and logistics operators are critical in shaping utilization and income stability—two of the most important drivers of EV viability.

By aggregating demand and structuring operations, platforms can:

- Ensure consistent trip volumes and higher utilization
- Provide income visibility through verified operational data
- Enable repayment mechanisms linked to earnings
- Support driver onboarding and training for EV operations

In doing so, platforms act as a bridge between drivers and financiers, reducing uncertainty on both sides and enabling more scalable deployment models.

6.3 The Role of Philanthropy and Blended Finance

In the early stages of market development, philanthropic and development capital can play a catalytic role in addressing structural barriers and unlocking private investment.

Targeted interventions can include:

- First-loss capital to de-risk lending portfolios
- Interest rate support mechanisms to improve affordability
- Pilot funding to test innovative financing and ownership models
- Support for ecosystem coordination and capacity building

These interventions are particularly important in segments where perceived risk remains high, helping to accelerate market maturation and crowd in commercial capital over time.

6.4 The Role of Policy and Ecosystem Enablers

Policy frameworks will be essential in creating an enabling environment for EV adoption at scale. While progress has been made through incentives and demand-side programs, the next phase requires a more integrated approach.

Key priorities include:

- Supporting financing innovation through credit enhancement mechanisms
- Strengthening charging infrastructure and grid readiness
- Enabling data sharing frameworks to support alternative credit models
- Promoting standardization and transparency in EV performance and costs

By aligning policy with financing and operational realities, governments can help reduce systemic barriers and accelerate adoption across segments.

6.5 Conclusion: Enabling a Just Transition for Freight Drivers

The transition to electric freight presents a unique opportunity to align climate objectives with inclusive economic growth.

The evidence from this study shows that EVs can improve driver income and reduce cost volatility. However, realizing this potential at scale requires a deliberate shift in how systems are designed—placing driver livelihoods at the center of the transition.

Ensuring that drivers benefit from this transition will be essential to building a freight sector that is not only cleaner, but also more resilient and equitable.



Key Insight

A successful EV transition is not only about electrifying fleets, it is about enabling drivers earn sustainably, reduce risk, and build long-term financial security.

How can you accelerate your decarbonization journey?

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Suggested citation: Smart Freight Centre and Shell Foundation, Driving Income Uplift Designing Inclusive EV Financing for India's Freight Drivers 2026

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Acknowledgements

This report was written by Sanya Shahi, Christoph Wolff, with support from Deepali Thakur of Smart Freight Centre.

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