ECONOMIES OF SCALE

OLA ELECTRIC

AADHITHYA R P - 106121002
VEZHA VENDHAN D S - 106121038
RAHUL KORUKONDA - 106121066
MANIKANDAN - 106121072
NISHAANTH J V - 106121084
PRAJWAL SUNDAR - 106121092
PREM RANJAN KUMAR - 106121094

ABSTRACT

Earlier this month, the long-awaited OLA electric scooter became available in India for the first time. The scooter has already attracted a lot of attention because of the low prices and high-quality features it is offering at launch. According to Ola Electric, they were able to produce 1,000 units per day in January, but only sold 1,102 units in February 2022. There were just a few hundred of the 1,000 electric scooters Ola Electric started making in the first week of January, a start-up giant.

According to data provided by the Federation of Automobile Dealers Associations, the Bangalore-based company sold 1,102 electric scooters in January (FADA). Even more interest is expected in the future. In January, Ola Electric's retail sales were lower than usual because its vehicles were being transported, according to Ola Electric. A vehicle with registration can be delivered in less than ten days to any location in the country, according to the Federal Auto Dealers Association Because there was no lockdown, RTOs were fully functional during the third wave of the pandemic. What should Ola do to make the product a success is at the heart of the case.

TABLE OF CONTENTS

- Introduction
- Economies of Scale
- The Indian EV Market
- Ola vs Uber
- Strategies used by Ola Electric for achieving Economies of Scale
- Controversies and setbacks
- Conclusion
- References

INTRODUCTION

The rise of electric vehicles has been a significant trend in the automotive industry in recent years. The demand for electric vehicles has been growing at a rapid pace, driven by the increasing awareness of environmental issues and the push towards reducing carbon emissions. The electric vehicle industry is still in its early stages, and it is undergoing significant changes, particularly in terms of the economics of scale.

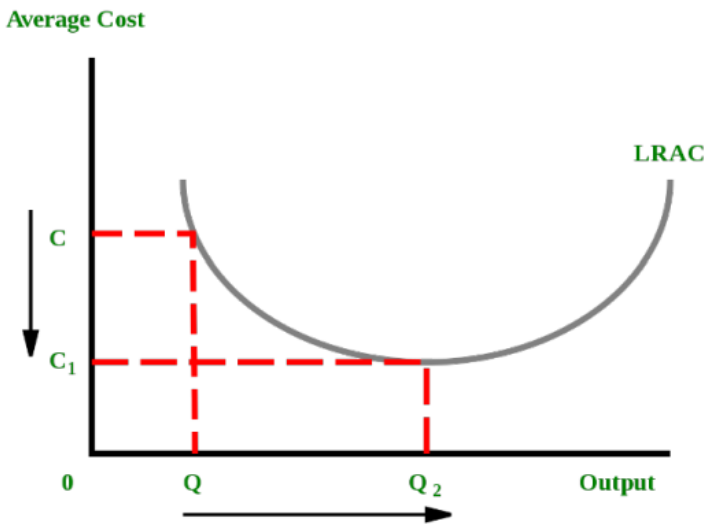
In this report, we will explore the economics of scale in the electric vehicle industry, including what it is, how it works, and various examples and scenarios.

WHAT ARE ECONOMIES OF SCALE?

Economies of scale are cost advantages that companies can attain by increasing their production levels. Essentially, as a company produces more of a given product, the cost of producing each individual unit decreases. This happens because many of the fixed costs involved in production, such as rent, machinery, and salaries, can be spread out over a larger number of units. Consequently, each unit becomes less expensive to produce.

For instance, if a company is producing 100 units of a product for a total cost of Rs 1,000, the cost per unit would be Rs 10. However, if the same company is able to produce 1,000 units for a total cost of Rs 4,000, the cost per unit decreases to Rs 4.

Economies of scale can provide companies with a competitive edge by enabling them to manufacture goods more efficiently and cost-effectively, which translates to lower prices for consumers. This, in turn, allows companies to earn a higher profit margin on each unit sold, as the cost of production is lower.



As the quantity of production increases from Q to Q2, the average cost of each unit decreases from C to C1. LRAC is the long-run average cost.
There are two distinct economies of scale: one based on internal factors, and one based on external factors.

INTERNAL ECONOMIES OF SCALE:

Internal economies of scale are cost advantages that a company can obtain by increasing its production volume through its own efforts. This may involve adopting more efficient production methods, employing more skilled workers, or investing in advanced technology. By expanding and becoming more efficient, a business can manufacture more products at a lower cost per unit, resulting in higher profits and a competitive edge in the market.

For example, if a business owns the patent to a machine that increases production more than other businesses in the same industry, it has created an internal economy of scale.

EXTERNAL ECONOMIES OF SCALE:

External economies of scale are cost advantages that a company can obtain by taking advantage of external factors in its industry or location. Such advantages can arise from industry-wide investments in infrastructure, research and development, or marketing, which can benefit all companies in the industry. These external factors help businesses reduce their costs and improve their competitiveness without having to make substantial changes to their own internal operations.

For example, if there is a well-educated workforce in the area, a business may have access to a larger pool of skilled workers.

OTHER CLASSIFICATIONS:

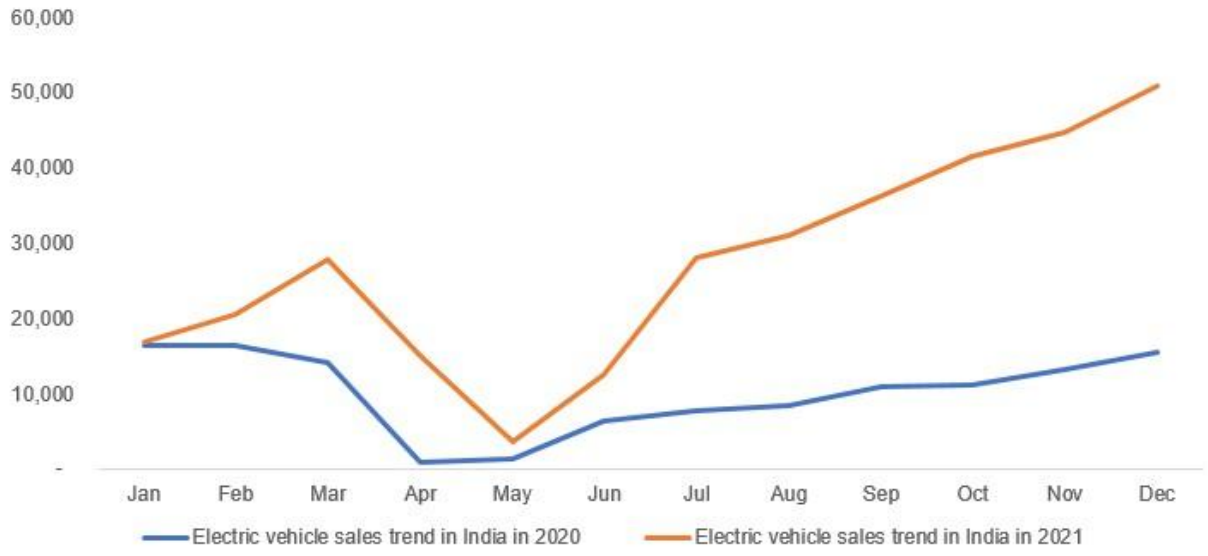
Technical economies of scale: These are the benefits that arise from increased efficiency in production processes. As production increases, firms can invest in new technologies, equipment, and processes that enable them to produce more efficiently, thus reducing costs.

Managerial economies of scale: These are the benefits that arise from increased efficiency in managerial and administrative functions. As firms grow, they can employ specialist staff to manage different functions, such as HR, finance, and marketing. This leads to more efficient management and a reduction in costs.

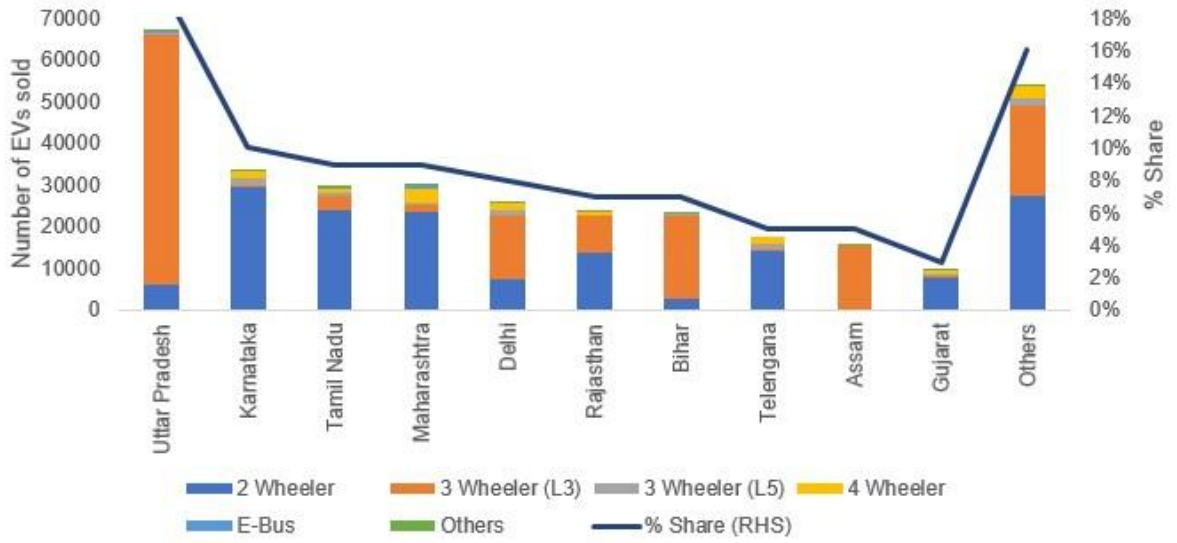
Financial economies of scale: These are the benefits that arise from increased bargaining power with suppliers and customers. As firms grow, they can negotiate better terms with their suppliers, such as discounts on bulk orders. They can also negotiate better prices with their customers, such as lower prices for large orders.

THE INDIAN EV MARKET

The Indian electric vehicle (EV) market has grown steadily in recent years with various government initiatives and incentives to promote clean mobility. As per the latest studies, the electric vehicle market in India was valued at $71.1 million in 2017 and will grow at a CAGR of 35.3% by 2025. It is expected to show a $707.4 million growth during the forecast period.



One of the major drivers of the Indian EV market is the government's National Electric Mobility Mission Plan (NEMMP) launched in 2013. The plan aims to achieve 6-7 million EVs on Indian roads by 2020 and 30% EV penetration by 2030. The government has also introduced various incentives for EV manufacturers and buyers, such as purchase subsidies, tax exemptions, and charging infrastructure subsidies. India's EV market is currently dominated by two-wheelers, accounting for over 95% of EV sales. This is due to the high demand for affordable and efficient personal transport in urban areas.



The demand for electric vehicles however, especially in the fleet segment, has increased significantly in recent years. Despite its growth potential, the Indian EV market is found to face various challenges, with one of its biggest challenges being the lack of charging infrastructure, especially in rural areas. This raises range concerns and limits EV adoption among potential buyers. In addition, the high initial cost of EVs compared to conventional vehicles is a major barrier to mass adoption. Thus, despite showing great growth potential, addressing the charging infrastructure and affordability challenges is critical to realizing this potential.

OLA VERSUS UBER

ADVANTAGES OF UBER OVER OLA:

1) Uber has more money in the bank than Ola Cabs scale and can engage in endless wars. Be kind to customers. However, dynamic pricing algorithms can sometimes hurt the monthly transportation budget.

2) The Uber mobile app is smoother considering its 197MB size (compared to Ola's 52MB).

3) Uber's routing algorithm is better than Ola Cabs. The usual waiting time for Ola Share is around 15 minutes, while the UberPOOL taxi can arrive in just a few minutes. The technical skills in America seem to be better than in Bangalore.

4) If the taxi takes a 3rd passenger because it is not suitable for other passengers and the driver gets extra money for it, Uber offers a 10% discount on the UberPOOL price. Ola Share does not do this.

5) Uber taxis are more expensive than Ola, meaning they are closer to market prices and may have less incentives for drivers. This is necessary for the long-term development of the company.

6) Uber customers do not need an OTP to start their journey just like Ola Cabs. Heavy penalties for violations ensure Uber drivers follow the rules.

7) Uber taxis are generally better managed than Ola Cabs.

8) Uber actively supports the driving industry and has signed memoranda of understanding on skills development with the state governments of Haryana, Maharashtra, Tamil Nadu, Telangana and Punjab.

9) Uber executives are giving Indian seniors enough opportunities to take pictures.

10) While supporting other Indian companies such as Uber, PayTM, Ola Cabs prefers to develop all the technology in-house.

ADVANTAGES OF OLA OVER UBER:

1) Ola Cabs is a true blue company solving a real problem in India. The leaders are Indians who eat with their hands. Foreign companies with favorable exchange rates should not be allowed to spend more than they do.

2) Ola Cabs is a compassionate company. Unlike Uber, which doesn't believe in arrest, Ola deprives competitors of their resources and then takes them - Auto Raja, Taxi for sure. Company employees continue to work without having to face stigma. Some fans are also laughing all the way to the bank.

3) Ola Cabs gives opportunity to the underprivileged in society, especially Uber drivers fired for bad credit. By using Ola Cabs we protect the livelihoods of these drivers who have invested heavily in their vehicles and would otherwise not be able to work.

4) Ola Cabs operates various services such as Express, Micro, Mini, Prime, Lux, Rentals, Outstation, Bike, Autos, Shuttle. Most of these services are free or very low cost and benefit millions of customers every month. The team supports and will continue to use these services. Management will also tell its investors a strong story of future growth to sustain stable cash flow that will allow them to continue enjoying the car ride.

5) Ola Cabs operates in nearly 100 cities.

This means that the company has created more than 1,000 direct jobs in operations, product management and technology. Considering that 70% of the towing work is done by the ship owners, there are hundreds of thousands of indirect jobs. If people stop using these services, it will have a huge impact.

STRATEGIES USED BY OLA FOR ACHIEVING ECONOMIES OF SCALE

Ola Electric is an Indian manufacturer and developer of electric vehicles (EVs) and infrastructure for their charging stations. The business has been working to achieve economies of scale in order to lower production costs and provide market-competitive EVs. In order to achieve economies of scale in its EV manufacturing and charging infrastructure businesses, Ola Electric has adopted a variety of strategies. Vertical integration, localization, standardization, modularization, and partnerships and collaborations are some of these tactics. By putting these tactics into practice, Ola Electric hopes to lower costs and provide the market with accessible EVs and charging infrastructure, which can help the EV industry grow in India and elsewhere. Here are some methods Ola Electric employs to achieve economies of scale:

VERTICAL INTEGRATION:

Ola Electric has adopted a vertical integration strategy, which means that it has complete control over every stage of the value chain, from design and development to production, sales, and after-sales service. Ola Electric can cut costs and increase efficiency by getting rid of middlemen and lowering transaction costs by integrating the entire value chain.

LOCALISATION:

In order to cut costs, Ola Electric has also implemented a localization strategy. Because it has manufacturing facilities there, the company can take advantage of India's cheaper labor and raw material costs. Local component sourcing also allows Ola Electric to save money on logistics and enhance supply chain effectiveness.

STANDARDISATION:

Ola Electric has standardized the design and production of its electric vehicles. The business can decrease production time and expense, raise quality, and realize economies of scale by standardizing processes. Greater manufacturing flexibility is also made possible by standardization, which streamlines the production process and eliminates the need for customization.

MODULARISATION:

Ola Electric's EVs are built using standardized modules that are simple to assemble and reconfigure thanks to the company's adoption of a modular design approach. Ola Electric can cut costs and increase efficiency by using modular components because they allow for more flexible production and require less customization.

COLLABORATIONS AND PARTNERSHIPS:

In order to achieve economies of scale, Ola Electric has created partnerships and collaborations with a variety of businesses. For instance, the business has collaborated with BHEL to develop EV charging infrastructure and Siemens to establish a manufacturing facility in India. Ola Electric is able to achieve economies of scale through these partnerships by utilizing the knowledge and resources of its partners.

CONTROVERSIES AND SETBACKS

Ola Electric, a subsidiary of the ride-hailing company Ola, is an Indian electric vehicle (EV) manufacturer that specializes in the production of electric scooters. Although Ola Electric has made significant strides in the EV market, it has faced several controversies and setbacks, including:

- Battery Fire Incidents: In November 2021, Ola Electric's S1 electric scooter was involved in two separate incidents where the vehicle's battery caught fire, resulting in severe injuries to the riders. This led to the company recalling all its electric scooters, causing a major setback in their production and sales.

- Patent Infringement Lawsuit: In September 2021, Ola Electric was hit with a lawsuit by a US-based EV charging company, alleging that the Ola Electric scooter's design infringed on its patents. The lawsuit sought to halt the sale of Ola Electric scooters in the US market, potentially affecting the company's plans for global expansion.

- Manufacturing Delays: Ola Electric faced significant delays in the production and delivery of its electric scooters, with customers experiencing delays of up to six months in receiving their vehicles. This led to a backlash from customers and potential investors, who criticized the company for failing to meet its production targets.

- Controversial "Buy Now, Pay Later" Scheme: In July 2021, Ola Electric launched a "buy now, pay later" scheme that allowed customers to purchase its electric scooters without paying the full amount upfront. However, the scheme faced criticism for being misleading and opaque, with many customers complaining of hidden fees and unclear repayment terms.

- Safety Concerns: In August 2021, Ola Electric's S1 electric scooter received a 3-star safety rating from the Global New Car Assessment Program (NCAP), indicating significant safety concerns. The company faced criticism for its lack of attention to safety standards and its failure to prioritize rider safety.

Despite these setbacks, Ola Electric remains a significant player in the Indian EV market and has ambitious plans for global expansion. The company has also taken steps to address some of these controversies, such as recalling its electric scooters to address the battery fire incidents and improving its safety standards.

CONCLUSION

After analyzing the relationship between Ola Electric and economies of scale, considering various factors that affect the company's operations and profitability, the research paper concludes that Ola Electric has the potential to achieve significant economies of scale in the Indian EV market. Ola Electric's focused business strategy, investments in research and development, and partnerships with leading technology companies have enabled it to emerge as a prominent player in the EV space in India.

The study suggests that Ola Electric's emphasis on cost leadership, efficient operations, and innovative business models has helped the company to achieve economies of scale, contributing to its growth and profitability. The company's commitment to developing a robust charging infrastructure and a sustainable EV ecosystem is expected to further enhance its economies of scale and enable it to capture a significant share of the Indian EV market.

The report also highlights that Ola Electric's successful implementation of its business strategy has been possible due to its strong management team, effective organizational structure, and commitment to innovation and technology. By investing in advanced technology and building strategic partnerships, the company has been able to reduce its costs, improve its operational efficiency, and enhance its economies of scale.

Overall, our paper concludes that economies of scale will be a critical factor in the success of Ola Electric in the Indian EV market. The findings of this study provide valuable insights into the role of economies of scale in the EV industry and can be useful for other companies looking to achieve similar success in this growing sector.

REFERENCES

1) Gujarathi, P. K., Shah, V. A., and Lokhande, M. M. (2015). Design, Modeling, Simulation and Analysis for Conversion of Conventional Tata Indica Car into Plug in Hybrid Electric Vehicle. In The 28th International Electric Vehicle Symposium and Exhibition (EVS28), KINTEX, Korea.
2) Electric Vehicles in India Policies, Opportunities and Current Scenario ADB Open Innovation Forum, Manila, 2015.
3) https://www.5paisa.com/blog/decoding-ola-electrics-game-plan-to-capture-indias-two-wheeler-ev-market
4) https://economictimes.indiatimes.com/industry/renewables/the-giant-indian-auto-market-is-short-of-ev-buyers-heres-why/articleshow/97110458.cms?from=mdr
5) http://ir.pdpu.ac.in:8080/jspui/bitstream/123456789/564/1/20201025_BD%20Report.pdf
6) https://www.researchgate.net/publication/346806063_Investigating_the_Characteristics_and_Choice_of_Electric_Scooter_Users_A_Case_Study_of_Tiruchirappalli_City