
Consumer Survey- Delivery Fleets and EV Transition in Six Indian Cities



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Acronyms

ACC	Advanced Chemistry Cell
ADAS	Advanced Driver-assistance Systems
BEV	Battery Electric Vehicles
BMS	Battery Management System
CAGR	Compound Annual Growth Rate
CO	Carbon Monoxide
EV	Electric Vehicles
EVET	Electric Vehicle Enabled Transport
FAME	Faster Adoption and Manufacturing of Electric and Hybrid Vehicles in India
FGD	Focus Group Discussion
GHG	Green House Gases
GNCTD	Government of NCT of Delhi
ICE	Internal Combustion Engines
IEA	International Energy Agency
MNRE	Ministry of New and Renewable Energy
NCT	National Capital Territory of Delhi
NEMMP	National Electric Mobility Mission Plan
PhD	Doctor of Philosophy
QC	Quality Control
SIAM	Society of Indian Automobile Manufacturer
STU	State Transport Undertaking
US	United States
VAT	Value Added Tax

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Executive Summary

A. Project Context

The expansion of the delivery and e-commerce sector, through the increase of last mile delivery fleets, has increased vehicular traffic in cities and towns and exacerbated the problem of air pollution and overall Greenhouse Gas emissions, which includes carbon emissions. An accelerated transition of the e-commerce delivery fleets into Electric Vehicles (EVs) will be an important step to mitigate vehicular emissions that contribute to air pollution and climate change. The World Economic Forum estimates that the number of delivery vehicles by 2030 could result in at least a 32 percent increase in emissions and 21 percent increase in congestion in cities in a business-as-usual scenario.

Hence, it is essential that companies take the lead in driving solutions to reduce emissions in our cities by making robust commitments to transition to electric vehicles. Additionally, city and state governments

can play an important role in ensuring that the right infrastructure and support is provided to companies in enabling a rapid transition.

India's central policies and direction, complemented by many state EV policies, already reflect ambitions for EV transition. These need to be streamlined and optimised to deliver transformational change in the last-mile delivery sector.

As an illustration, the Delhi government has recently taken a key step by introducing a draft policy that outlines regulatory requirements for last-mile delivery fleets and aggregators. Other states can build on and strengthen their existing EV policies using this as an example. It is also essential that companies and governments ensure strong support to the delivery workers across states and cities in the process of transition.

B. About the Survey

In light of this, CMSR Consultants Pvt. Ltd., a multi-disciplinary research and communication consultancy based in Delhi, conducted this survey on behalf of the Sustainable Mobility Network (SMN). The SMN is an informal network of organisations from across India that work on transportation and mobility issues, with significant support from the Climate Group and Jhatkaa.org

The survey was conducted in six cities: Delhi, Mumbai, Pune, Chennai, Bangalore, and Kolkata, to better understand consumer perspectives on major

e-commerce, food, and grocery delivery services such as Amazon, Flipkart, Zomato, Swiggy, BigBasket, Dunzo, Grofers/Blinkit, DHL, BluDart, FedEx, GATI, and JioMart on the need to transition last-mile delivery fleets to electric vehicles to reduce air pollution and mitigate climate change.

A total of 1508 users were surveyed from each city, adding up to a total of 9048 respondents across the six cities. In addition, a Focus Group Discussion (FGD) was conducted in each city.

C. Key Findings

Indicators	Key Findings
Respondents' background	<ul style="list-style-type: none"> 42 percent of the respondents were in the 26-35 age group, 27 percent in the 18-25 age group, 24 percent in the 36-45 age group, and 6 percent were above the age of 46. 58 percent of the respondents were males and 42 percent were females. Pune had the highest representation of male respondents (83%) while concentration of female respondents was highest in Mumbai (70%). A majority of the respondents were either Graduates (53%) or Post Graduates (23%). Chartered Accountants and those with M.Phil. and Ph.D degrees constituted 1 percent of the sample. A majority of the respondents (53%) were working professionals followed by self-employed/business owners and students (16% each). Around 14 percent of survey respondents were home makers.
Insights of respondents on goods delivery vehicles adding to air pollution and climate change issues	<ul style="list-style-type: none"> 78 percent of the respondents felt that goods delivery vehicles contribute to air pollution and climate change, while 6 percent were unsure. Pune had the highest percentage of the respondents (85%) who believed that emissions from delivery vehicles caused air pollution while Kolkata had the lowest percentage (63%) who believed the same. The highest number of city dwellers who were not sure if goods delivery vehicles contribute to air pollution was from Delhi (14%). Participants from Delhi cited various other causes of air pollution such as industrial waste, burning of crop residue in nearby states like Punjab and Haryana, burning of landfills, the city's landlocked geographical location, large scale construction activities, and unfavourable climatic conditions, especially during winter, rather than vehicular emissions. More male (81%) than female (73%) respondents believed that goods delivery vehicles contribute to air pollution and climate change. A positive correlation was found between the respondents' education levels and their belief that delivery vehicles contributed to air pollution and climate change.
Importance of delivery companies switching to electric vehicles for reducing air pollution and mitigating climate change	<ul style="list-style-type: none"> Delivery companies switching to electric vehicles to reduce air pollution and mitigate climate change was considered 'very important' by 67 percent of the respondents, with the number being the highest in Chennai (89%) and lowest in Pune (56%). No difference was observed among the responses of men and women.
Awareness of initiatives taken by delivery companies to use electric vehicles for deliveries	<ul style="list-style-type: none"> Only 12 percent of the respondents were aware of initiatives taken by some of the delivery companies to use electric vehicles for deliveries. City-wise analysis indicates that participants of Pune (31%) had the highest awareness while the least awareness was noted in Kolkata (5%). Males (16%) outnumbered females (6%) when it comes to awareness of the initiatives taken by delivery companies for a transition to electric vehicles. According to the respondents, delivery companies like Amazon, Flipkart, Zomato, Swiggy, BigBasket, DHL, DTDC and Zepto have initiated the transition to electric vehicles. Sources of information about this were mainly social media (Youtube, Twitter, LinkedIn), television, and family and friends. A few participants from Delhi and Pune had seen EVs being used for delivering products on the streets and their neighbourhood. However, they were not sure whether the delivery companies had provided electric vehicles or the delivery persons were using their own. Other respondents learned about this from delivery workers, from the television show 'Shark Tank', magazines etc.
Ripple effect on other companies of one company committing to converting its delivery vehicles to electric vehicles	<ul style="list-style-type: none"> Overall, around 93 percent of respondents believed that a delivery company electrifying its fleet would certainly influence other companies to follow suit. This response ranged from the highest (99%) in Pune to the lowest (81%) in Kolkata. More men (95%, compared to 87% of women) and people between the ages of 18 and 35 believed that if one delivery company switches to electric vehicles, it could influence other companies to do the same.

Indicators	Key Findings
Opinion of respondents on company's responsibility for being proactive in the transition to electric vehicles	<ul style="list-style-type: none"> • Overall, around 64 percent respondents believed that companies have a responsibility to be proactive in the transition to electric vehicles, with the highest percentage of respondents being from Pune (77%) and Delhi (76%). • More men (69%) as compared to women respondents (57%) believed that delivery companies need to be proactive in shifting to electric vehicles. • The higher the educational qualification of the respondents, the stronger was their belief that companies should play a proactive role in transitioning to electric vehicles. • People in the workforce and students felt the need for companies to be proactive in making the shift to electric vehicles more than homemakers.
Components of a proactive role on the transition to electric vehicles	<ul style="list-style-type: none"> • According to 42 percent of respondents, companies should commit to adhere to the timelines for electrifying their fleets set by the state government, 38 percent felt that companies should either lease or purchase electric vehicles for their delivery workers, 36 percent believed that they should share a plan for the transition with the state government, 31 percent respondents said that providing financial incentives to delivery partners for buying electric vehicles could be a good initiative, and another 19 percent opined that the existing delivery vehicles used by delivery partners could be retrofitted with electric engines.
Preference of Pune & Mumbai respondents to shop from companies that pledge to meet targets set out by state government's EV policy	<ul style="list-style-type: none"> • 78 percent of the respondents in Pune and 66 percent in Mumbai would prefer to shop from delivery companies if they pledge to meet the targets in the Maharashtra EV policy which mandates that the companies should transition 25 percent of their fleet to electric vehicles by 2025. • 25 percent of the respondents in Mumbai and 5 percent in Pune were indifferent on this issue while 13 percent of respondents were unsure.
Preference of Delhi respondents to shop from companies that pledge to meet targets set out by state government's Draft Aggregator Policy for delivery and fleet aggregator companies	<ul style="list-style-type: none"> • Nearly 78 percent of the respondents from Delhi stated that they will prefer to shop from those delivery companies that pledge to meet the targets set by Delhi's Draft Aggregator Policy. • Nearly 15 percent of the respondents were not sure about this while 6 percent were indifferent.

D. Summing Up

The study examined people's insights on delivery fleets and transition to Electric Vehicles in Delhi, Mumbai, Pune, Chennai, Kolkata and Bangalore.

The study shows that the most popular delivery providers are Amazon, Flipkart, Zomato, and Swiggy. People believe that the transition of fleet vehicles to Electric Vehicles to address climate change is important. Over two-third respondents believe that goods delivery vehicles contribute to air pollution and climate change. Nearly two-third respondents considered it very important to transition to EVs.

The results of the study also indicate that only a small percentage of people are aware of initiatives taken by delivery companies to switch to electric vehicles. Social media, TV, family, friends, colleagues and delivery workers are the primary sources through which they learn about such initiatives.

Additionally, 90 percent respondents believed that transitioning their fleet to electric vehicles would influence other companies to follow suit.

01

Introduction

The e-commerce, hyperlocal and food delivery sectors are rapidly expanding worldwide, with the e-commerce sector alone tripling in size within a span of five years between 2014 and 2019. The COVID pandemic has resulted in a further spike in the fortunes of the sector. All of this has also meant a massive increase of last-mile delivery and a corresponding increase in vehicular traffic in cities which has exacerbated the problem of air pollution and overall, Greenhouse Gas (GHG) emissions that includes carbon dioxide (CO₂) emissions.

Thus an accelerated transition of last-mile delivery fleets in the e-commerce, hyperlocal and food delivery sectors into Electric Vehicles (EVs) will be an important step to mitigate vehicular emissions that contribute to air pollution and climate change pollution causing poor air quality. The World Economic Forum estimates that the number of delivery vehicles by 2030 could result in at least a 32 percent increase in emissions and 21 percent increase in congestion in cities in a business-as-usual scenario.

Hence, it is essential that companies take the lead in driving solutions to reduce emissions for air pollution in our cities by making robust commitments to transition to electric vehicles.

Additionally, city and state governments can play an important leading role in ensuring that the right infrastructure and support is provided to companies in enabling a rapid transition.

The Delhi government has recently taken a key step by introducing a draft policy that outlines mandatory regulatory requirements for last-mile delivery fleets and aggregators. While Maharashtra's EV Policy sets a target of 25% Electric Vehicle (EV) adoption for delivery, logistics and fleet operators by 2025.



Additionally, India's Niti Aayog has formulated the Shooonya Campaign which envisages rapid decarbonisation of the last-mile delivery sector and along with other positive central government policies, complemented by progressive state EV policies on last mile deliveries, like in Delhi and Maharashtra provide a strong direction, framework and model for implementing further state level policies across Indian states on the last-mile delivery sector. These need to be streamlined and optimised to bring transformational change in the last-mile delivery sector.

It is also essential that companies and governments ensure strong support to the delivery workers across states and cities and support them in the process of transition.

02

About the Survey

2.1 Objectives of the Survey

The survey was designed to understand and gather insights on consumer behaviour and choices in relation to companies operating in the last-mile delivery sector.

2.2 Key research questions

In order to address the above objectives, the survey attempted to gauge the following from the respondents –

01

Whether people believe that reducing emissions in the transportation sector in India is a critical priority in fighting climate change and reducing air pollution

02

Whether people believe that electrification of delivery vehicles needs to be accelerated

03

Whether people believe that major brands like Amazon, Flipkart, Zomato, Swiggy, BigBasket, Dunzo, Grofers, and JioMart should play an active/leadership role in the transition to electric vehicles

04

Whether commitments towards electrification of delivery fleets by these companies make people more likely to shop from them or lead to more frequent usage

05

Whether people believe that such major brands making commitments towards electrification will lead to other companies doing the same

2.3 Study location and key stakeholders

The research was carried out in six tier-1 cities: Delhi, Mumbai, Pune, Chennai, Bangalore, and Kolkata. The

study's target population included active users of e-commerce, food, grocery, and delivery services.

2.4 Methodology

2.4.1 Study design

The study design primarily used quantitative data collection methods (based on the questionnaire), with a small portion using qualitative tools like Focused Group Discussions (FGD). The quantitative survey included 1508 users from each city, for a total of

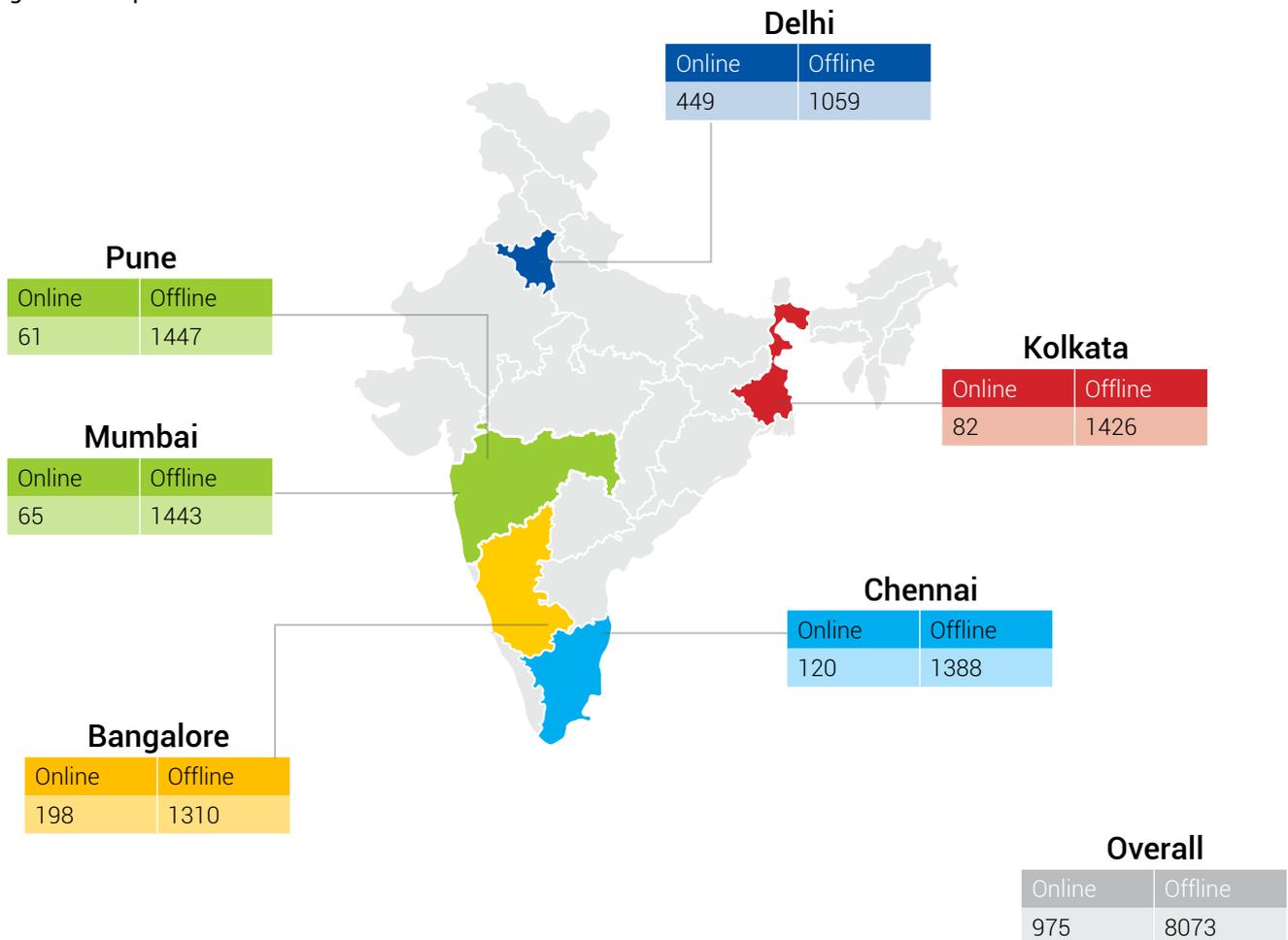
9048 people from six cities. The study's qualitative component included Focus Group Discussions (FGD) with the target groups (mixed gender and age groups). Each of the selected cities had one such focus group.

2.4.2 Sampling framework

Each Tier-1 city was divided into four quadrants for sampling purposes. All six cities have a sizable user base for these services, and dividing the city into four quadrants allowed us to reach respondents from all over the city. As a result, we obtained a sample size of 377 respondents for an assumed universe of 20,000

users in each quadrant of these cities (at 95 percent confidence level and 5 percent margin of error). The survey participants were chosen at random. The information was gathered both offline and online, with the majority of respondents being polled offline.

Fig 1: Sample covered



2.4.3 Fieldwork procedure

A one-day training session was organised for the CMSR field enumerators, supervisors and field coordinators to orient them about the study and acquaint them with every question of the survey schedule. Two teams of five enumerators and one supervisor each were deployed in each city to carry out data collection. FGDs were conducted by experienced moderators. All the field team members were hired locally and were fluent in the local language. They also had the required experience in conducting such field studies. The entire process of data collection took over a month to complete.

The 'eRaay' survey platform was used to create and configure the questionnaire. The enumerators were asked to conduct the interviews offline while in the field and synchronise the data once they had access to the internet (usually at the end of the day). The entire survey was conducted under the close supervision of the core research team and enumerators were asked to mandatorily collect the phone number of the respondents so that the data could be verified by the supervisors and field managers.

2.4.4 Survey length and construction

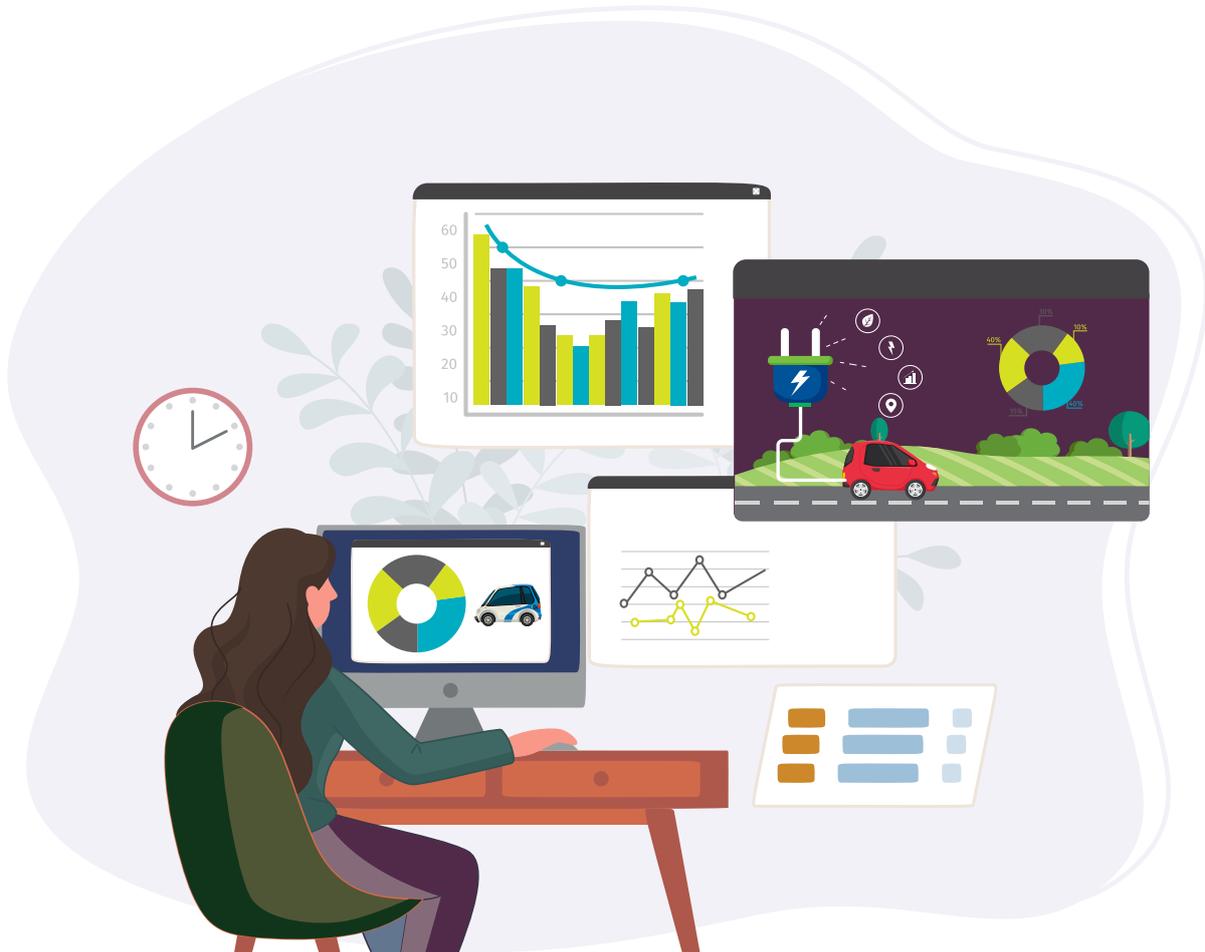
The questionnaire contained a total of 18 questions, most of which were close ended. The time taken to complete one interview was about 10-15 minutes. The survey teams were instructed to first explain the

purpose and objectives of the study to the respondents and to start the interview only after taking consent from the respondents.

2.5 Limitations of the study

Some respondents had reservations about revealing their name and contact number. Some of them also refused to be interviewed and share their inputs without assigning any reason. Their choice of not

wanting to be a part of the interviews were respected by the field enumerators and other respondents were identified to replace them.





Findings of the Survey

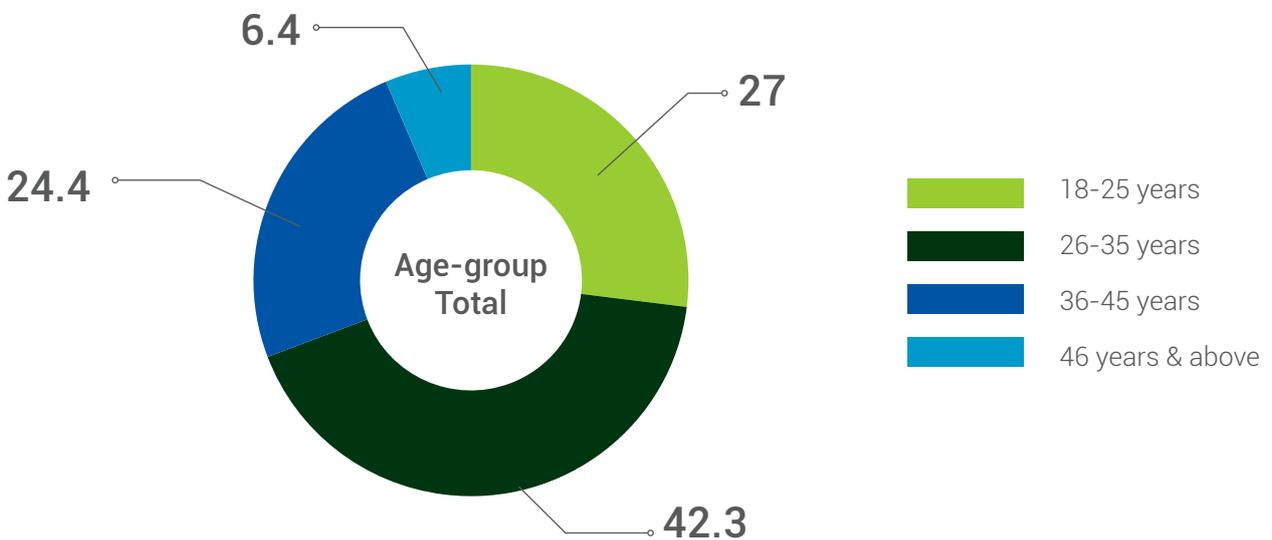
3.1 Demographics

The overall ratio of male and female respondents was 58:42. The maximum number of respondents (42%) belonged to the 26-35 age group. Those in the 18-25 and

36-45 age group constituted 27 percent and 24 percent of the sample respectively. Only 6 percent respondents belonged to the age group of above 46 years and above.

Table 1: Percentage distribution of respondents by age-group (n=9048)

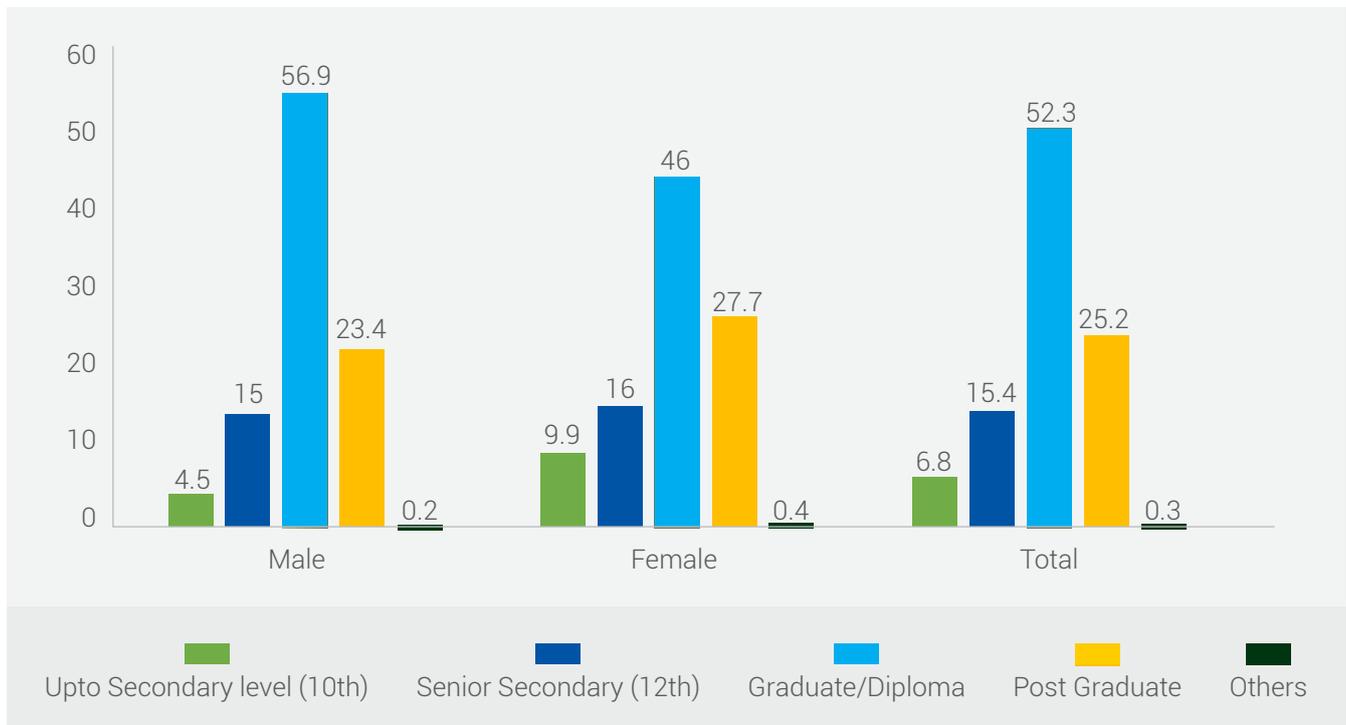
Location	Age-group			
	18-25 years	26-35 years	36-45 years	46 years & above
Delhi	33.2	31.8	23.5	11.5
Mumbai	18.7	46.8	32.0	2.5
Pune	35.2	43.4	18.2	3.2
Chennai	28.9	38.4	24.9	7.8
Kolkata	33.0	37.2	21.6	8.2
Bangalore	12.8	56.1	26.0	5.1



More than half the respondents (52%) were graduates or held diplomas, followed by Post Graduates (25%). Those who had completed Senior Secondary and Secondary school education constituted 15 percent

and 7 percent of the sample, respectively. Others (0.3%) included Chartered Accountants, Lawyers, Doctors, Nurses and those with M.Phil. and Ph.D. degrees.

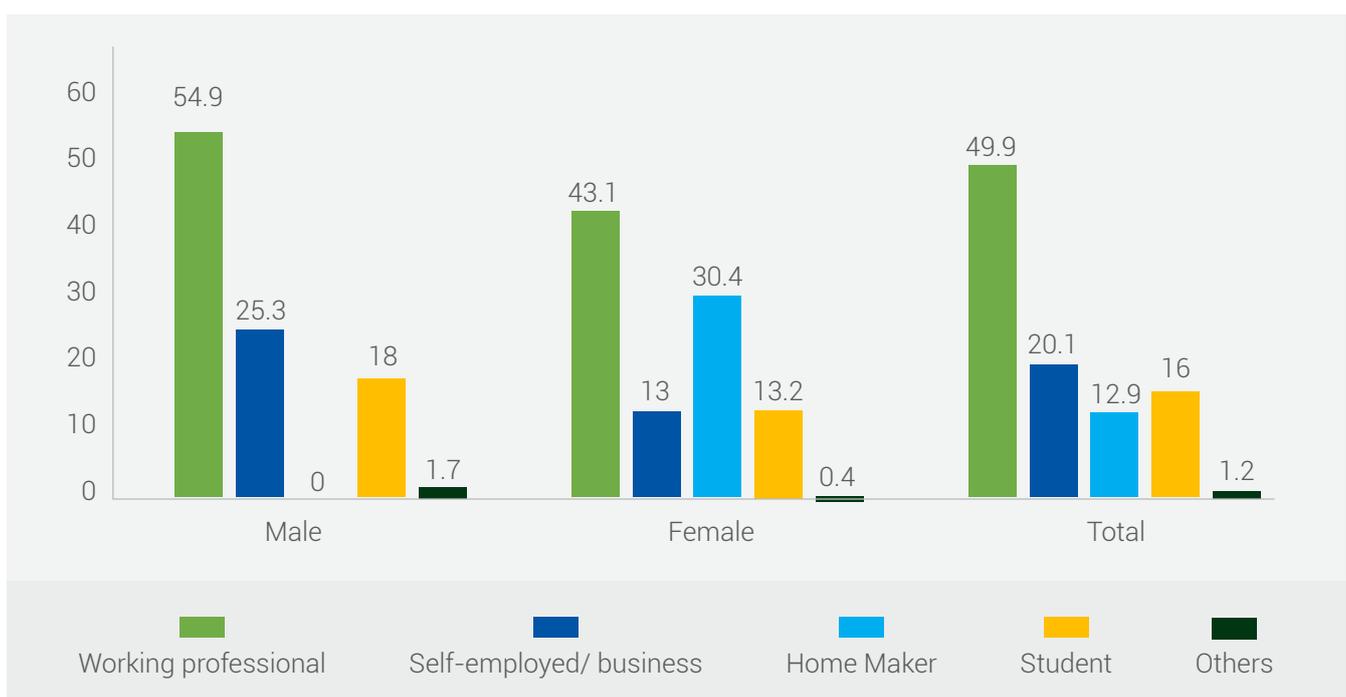
Fig 2: Percentage distribution of respondents by educational qualification (n=9048)



Data on **occupational status** indicates that half the respondents were Working Professionals (50%) followed by those who were self-employed or business owners (20%). Students constituted 16 percent of the

respondents and 13 percent of the respondents were home makers. The distribution by occupation and gender is given in the figure below.

Fig 3: Percentage distribution of respondents by occupation (n=9048)



3.2 Delivery services providers

Given the rapid growth of the e-commerce and delivery sector, the survey aimed to gather information about the most used delivery services. Overall, the delivery service used by the highest number of respondents was Amazon (91%), followed by Flipkart (82%), Zomato (81%) and Swiggy (81%). The delivery services used least

by respondents was Gati (11%) and Milkbasket (8%). Respondents also used other delivery services such as Nykaa, Myntra, Meesho, UberEats, Professional Courier, Pizza hut, Domino's Pizza, Zepto, Country Delight, Ajoio, Vishal Mega Mart, Spencer, Snapdeal, DTDC, DELHIVERY, Shadowfax, Rapido, Super Daily, Decathlon etc.

Table 2: Percentage distribution of respondents stating delivery services providers making deliveries to their addresses (n=9048)

Delivery companies	Delhi	Mumbai	Pune	Chennai	Kolkata	Bangalore	Overall
Amazon	89.8	96.3	76.9	87.2	98.9	98.6	91.3
Flipkart	72.2	91.8	67.1	72.2	98.9	91.2	82.2
Zomato	68	95	74.1	61.5	95.9	92	81.1
Swiggy	66.5	91.1	79.3	63.5	93.6	89.9	80.6
BigBasket	45.8	81.6	46.6	29.5	77.5	79.4	60.1
Dunzo	15.8	64.2	56.6	28.7	1.7	65.6	38.8
Grofers/Blinkit	42.4	58.5	34.3	11.9	57.5	42.6	41.2
JioMart	30.2	56.5	36.7	17.1	55.2	71.7	44.6
MilkBasket	19.6	1.4	0	9.1	0	18	8
Parcel delivery players like DHL, Fedex, BlueDart, etc.	39.6	35.1	24.3	13.1	51.3s	51.7	35.9
GATI	10.5	10.3	8	5.1	25.7	6.4	11
Others	6.7	0	0.4	0.7	24.3	8.3	6.7

Amazon, Flipkart, Zomato and Swiggy were used either frequently or moderately by a little over half the

respondents. Rest of the delivery services were used rarely by almost 75 percent of the respondents.

Table 3: Percentage distribution of respondents by frequency of using delivery services (n=9048)

Delivery services	Frequency		
	Frequently	Moderately	Rarely
Amazon	26.3	32.0	41.7
Flipkart	18.1	36.3	45.6
Zomato	24.4	30.1	45.5
Swiggy	23.5	25.9	50.6
BigBasket	10.1	17.5	72.4

Dunzo	7.3	14.7	78.0
Grofers/Blinkit	11.8	9.2	79.1
JioMart	11.1	16.9	72.0
MilkBasket	14.1	5.4	80.6
Parcel delivery players like DHL, Fedex, BlueDart, etc.	2.9	7.8	89.3
GATI	1.2	3.3	95.5
Others	11.7	30.3	58.1

3.3 Consumers' insights on impact of automobiles emission on air pollution and climate change

The survey attempted to understand respondents' perspective on whether goods delivery fleets add to air pollution and climate change. Around 78 percent were of the view that they did, while 16 percent did not think so. Another 6 percent were unsure.

City-wise data reveals that Pune had the highest number of respondents (85%) who believed that emission from delivery vehicles affects air quality and contributes to climate change followed by Mumbai (83%), Delhi, and Chennai (80% each). Even in other cities there was a significant number of respondents who identified goods delivery vehicles as sources of air pollution and climate

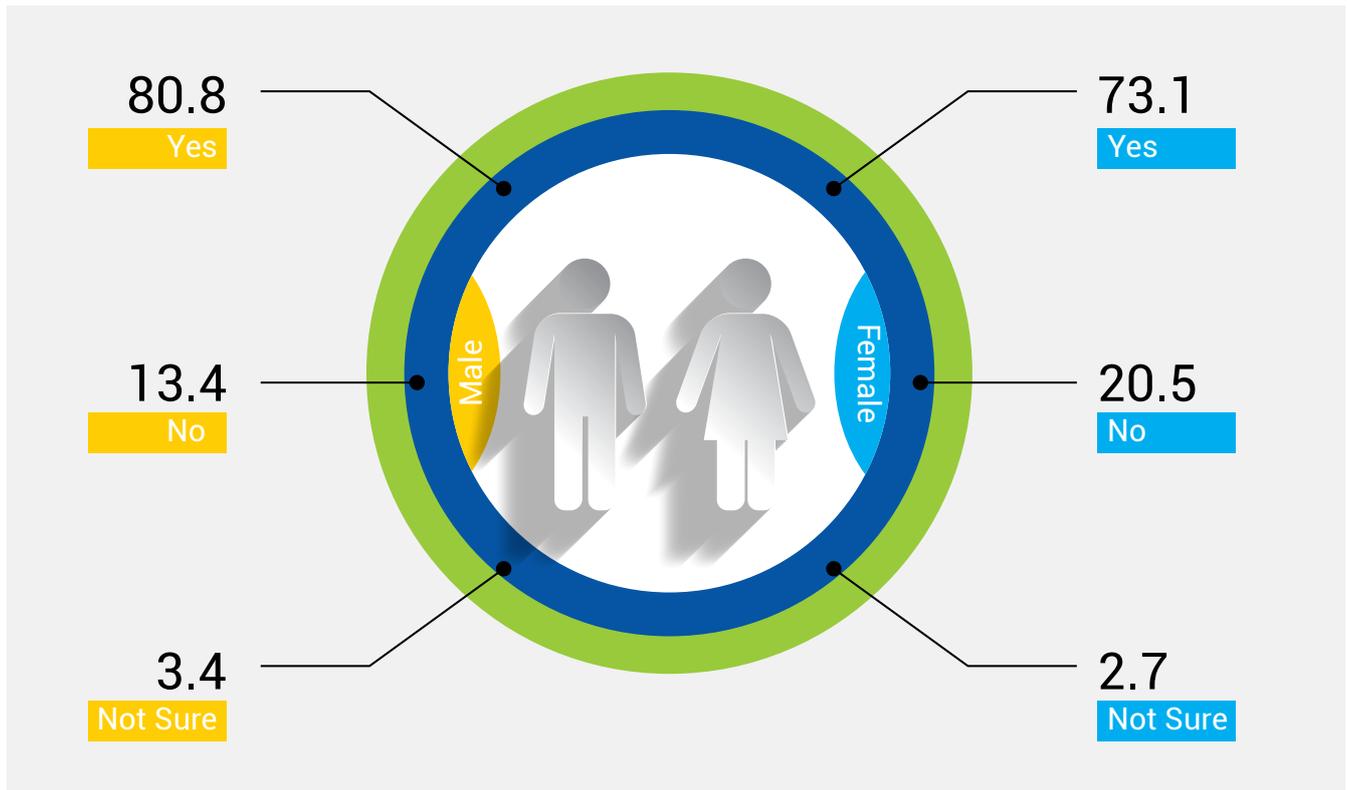
change (76% in Bangalore and 63% in Kolkata). The highest number (14%) of city dwellers who were not sure if goods delivery vehicles contribute to air pollution was in Delhi. **During focus group discussions, participants from Delhi mentioned that the reasons for alarming levels of air pollution in the city was also due to various other factors such as industrial waste, burning of crop residues in nearby states like Punjab and Haryana, landfill fire, city's landlocked geographical location, large scale construction activities, unfavourable climatic conditions especially during winter apart from vehicular emissions.**

Fig 4: Respondents' perspectives on contribution of Goods delivery vehicles to air pollution and climate change issue (n=9048)



More men (81%) than women (73%) believed that goods delivery vehicles are contributing to air pollution and climate change.

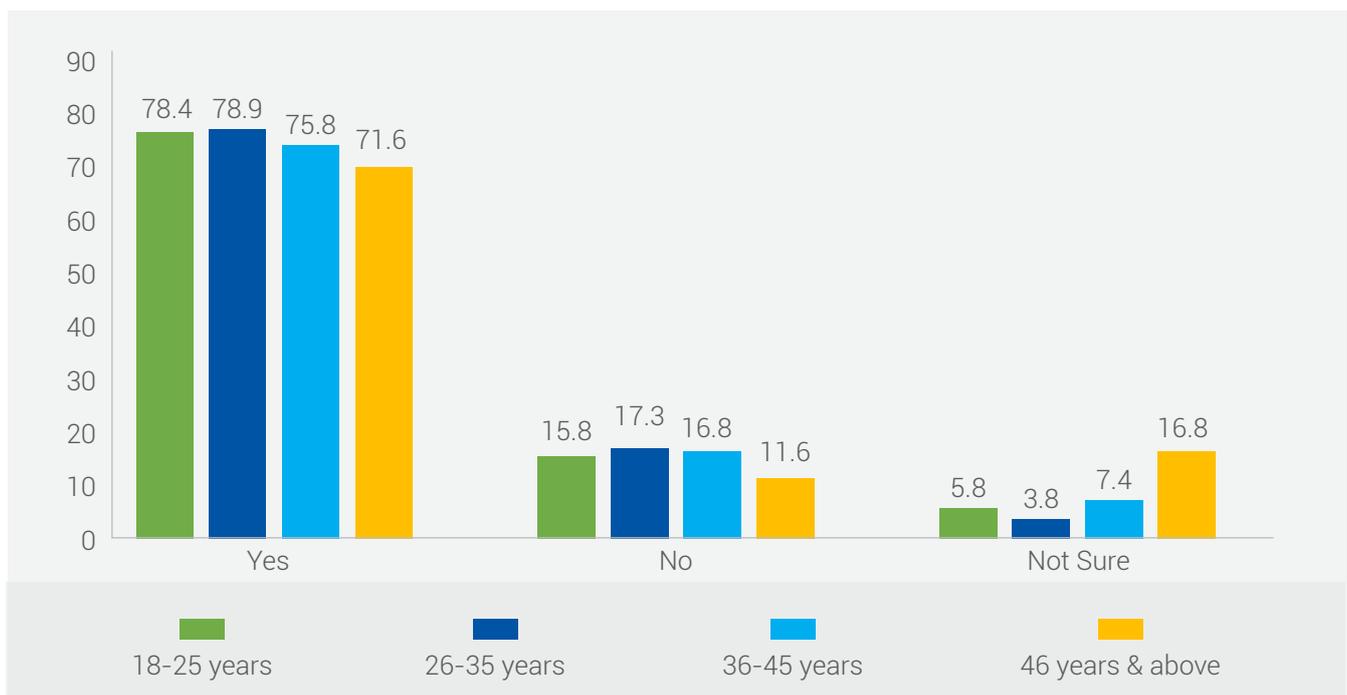
Fig 5: Respondents' perspectives on contribution of Goods delivery vehicles to air pollution and climate change issue by gender



Irrespective of age, around three-fourth of the respondents agreed that goods delivery vehicles contribute to air pollution and climate change. As compared to the older respondents i.e. above 36 years of age, a slightly higher number of respondents in the 18-35 age group believed

that delivery goods vehicles contribute to air pollution and climate change. Indecisiveness about the role of goods delivery vehicles contributing to air pollution and climate change was observed highest among the 46 and above age group (17%).

Fig 6: Respondents' perspectives on contribution of Goods delivery vehicles to air pollution and climate change issue by age group



The study tried to find if there was any correlation between the perspectives of the respondents on delivery vehicles contributing to air pollution and climate change and their educational levels. The analysis below indicates

that higher the education level of the respondents, the stronger was their conviction that the delivery vehicles contribute to air pollution and climate change issues.

Table 4: Respondents' perspectives on contribution of Goods delivery vehicles to air pollution and climate change issue by educational status

Whether Goods delivery vehicles contributing to air pollution and climate change	Educational qualification				
	Upto secondary level (10th)	Senior secondary (12th)	Graduate/ Diploma	Post Graduate	Others
Yes	70.6	71.4	80.4	77.4	65.4
No	24.8	22.9	13.6	16.1	11.5
Not Sure	4.7	5.7	6.1	6.4	23.1

Occupation-wise analysis shows that the highest number of respondents who believed that goods delivery vehicles contribute to air pollution and climate change were those who were self-employed/business

owners (81%) followed by working professionals (79%) and students (76%). Only 69 percent home makers opined that air pollution could be caused by goods delivery vehicles.

Table 5: Respondents' perspectives on contribution of Goods delivery vehicles to air pollution and climate change issue by occupational status

Whether Goods delivery vehicles contributing to air pollution and climate change	Occupation				
	Working professional	Self-employed/business	Homemaker	Student	Others
Yes	79.1	80.8	69.0	75.7	73.3
No	14.5	15.0	24.0	17.7	18.1
Not Sure	6.4	4.2	7.0	6.6	8.6

3.4 Need for switching to EV

Overall, 67 percent of respondents considered it 'very important' for delivery companies to transition to electric vehicles from ICE vehicles to reduce air pollution and mitigate climate change. Slightly more than one-fourth respondents felt that it was 'somewhat important' while 5 percent did not think it important. Around 1 percent of the respondents were indifferent.

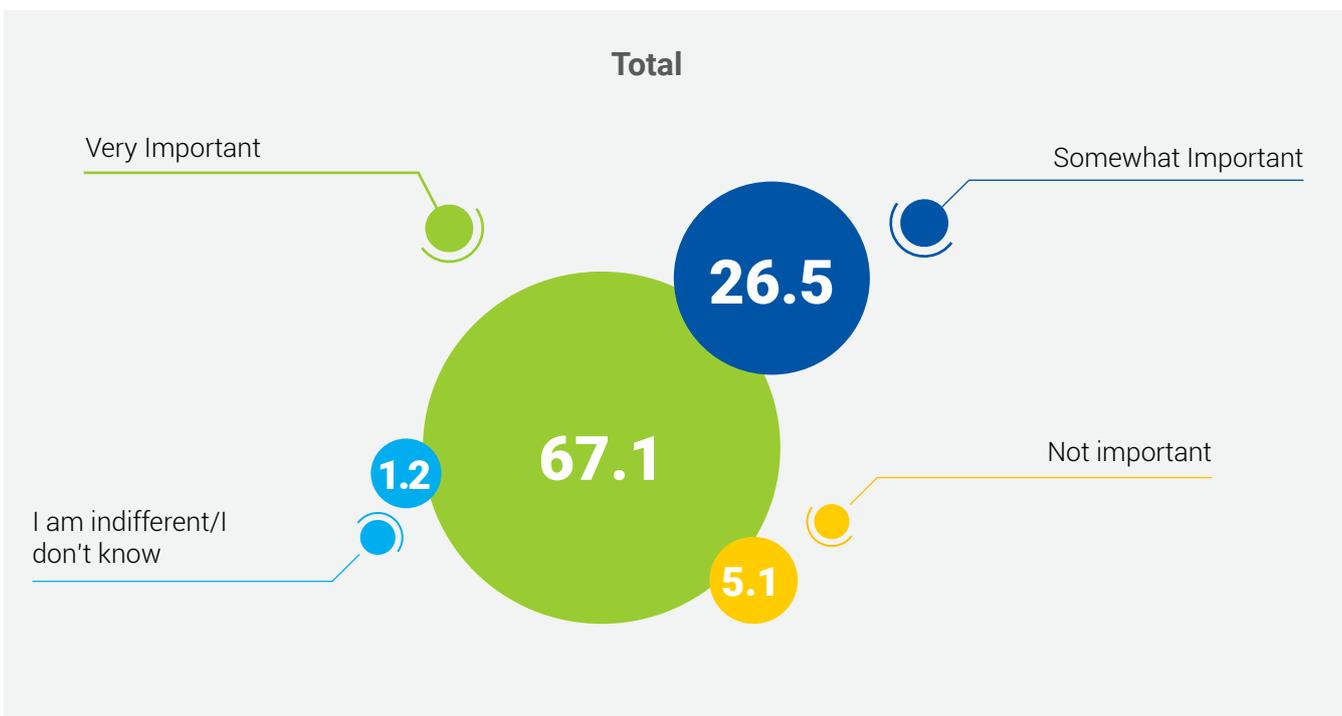
City-wise data indicates that the highest number of respondents who pointed out that it is very important for delivery companies to make the shift to electric vehicles were from Chennai (89%), followed by Kolkata (72%) and Delhi (70%). Pune (56%) had the least number of respondents in this category. Likewise, Bangalore (3%) had the highest number of respondents

followed by Delhi (2.1%) in the "I am indifferent/I don't know" category.

During the FGD, few participants mentioned that although companies like Zomato, Flipkart, etc. have started their transition to EV, the adoption rate is low. They were of the view that one of the key barriers that affect the pace of adoption could be the lack of trust in technology, especially given the recent incidence of EVs catching fire. Participants suggested that if this concern could be addressed adequately through inbuilt safety measures in EVs with better quality control and improved battery technologies for Indian conditions, the shift to EVs could be faster and more efficient.

Table 6: Respondents opined about significance for the delivery companies to switch to electric vehicles for reducing air pollution and mitigating climate change (n=9048)

Level of importance for delivery companies to switch to EV	Location					
	Delhi	Mumbai	Pune	Chennai	Kolkata	Bangalore
Very Important	70.4	58.7	55.8	89.1	71.5	57.4
Somewhat Important	24.8	33.0	41.4	9.0	23.1	28.0
Not important	2.7	7.5	2.2	1.6	5.0	11.9
I am indifferent/I don't know	2.1	0.9	0.7	0.4	0.5	2.7



No difference was observed among the responses of men and women. However, age-wise analysis revealed that 74 percent respondents who were aged

46 years and above considered that the transition to electric vehicles is 'very important' in order to reduce air pollution and mitigate climate change.

3.5 Awareness about initiatives taken by any of delivery companies to use electric vehicles for deliveries

Respondents were asked if they were aware of the initiatives taken by the delivery companies to use electric vehicles for deliveries. Overall, only 12 percent of the respondents replied in the affirmative while 88 percent did not have any knowledge about initiatives taken by the delivery companies.

City-wise data indicates that Pune had the highest percentage of respondents (31%) who were aware of the initiatives taken by the delivery companies to use electric vehicles for deliveries while the least awareness was noted in Kolkata and Bangalore with 5 percent each.

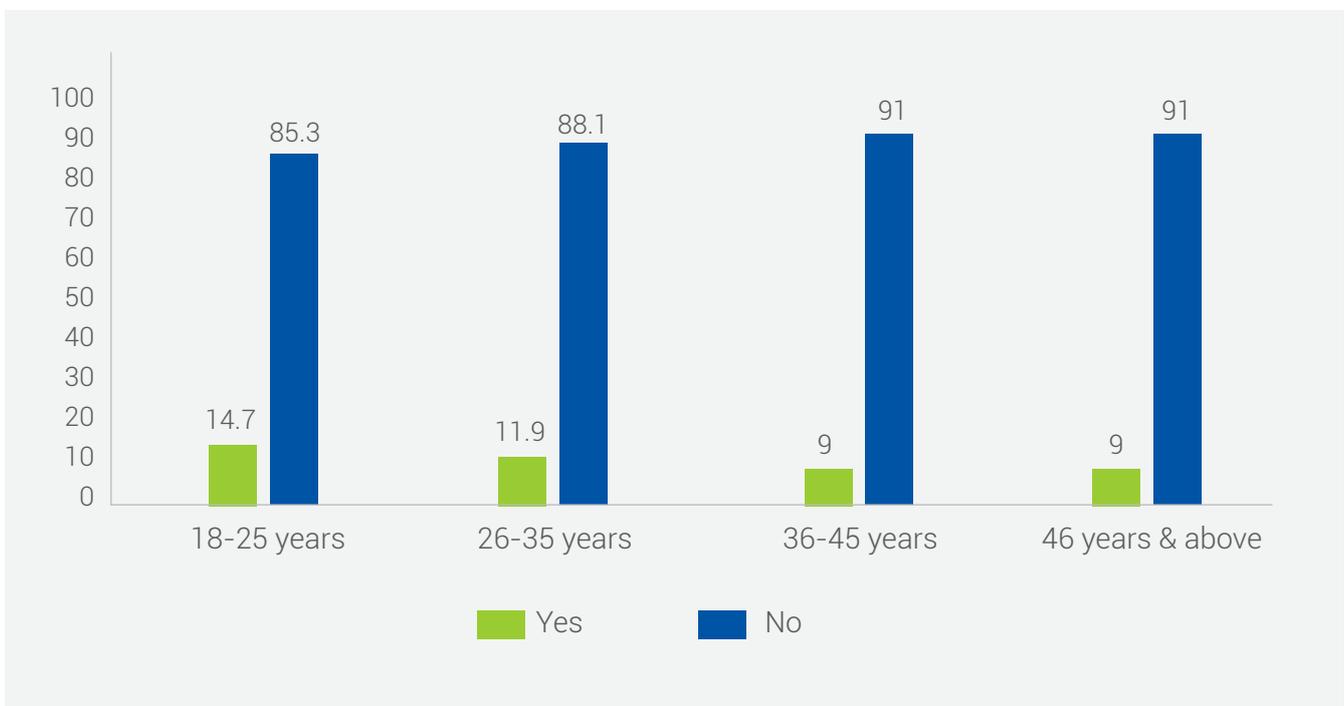
Table 7: Percentage distribution of respondents stating awareness about initiatives taken by any of the delivery companies to use electric vehicles for deliveries (n=9048)

Awareness	Location						Total
	Delhi	Mumbai	Pune	Chennai	Kolkata	Bangalore	
Yes	11.3	5.4	30.8	8.4	4.6	10.1	11.8
No	88.7	94.6	69.2	91.6	95.4	89.9	88.2

Further analysis indicates that males (20%) outnumbered females (6%) when it came to awareness about the initiatives taken by delivery companies to transition to

electric vehicles. Age group-wise data revealed that respondents in the 18-25 age group demonstrated better awareness on the issue than older respondents.

Fig 7: Respondents' awareness about initiatives taken by any of the delivery companies to use electric vehicles for deliveries by age-group



Occupation-wise analysis reveals that students and working professionals (14% each) were more aware about the initiatives taken by companies to use electric vehicles for deliveries. Home makers were the least aware occupational category (5%).

Survey respondents who were aware of initiatives taken by delivery companies to switch to electric vehicles were further asked which delivery companies had taken such initiatives. Respondents mentioned that they were aware of Amazon, Flipkart, Zomato, Swiggy, BigBasket, DHL, DTDC and Zepto initiating the transition to electric vehicles. **Focus group discussions with participants revealed that they were informed about the transition**

from various sources such as social media (Youtube, Twitter, LinkedIn, Instagram, Facebook), television and family and friends. Similarly, several participants from Pune and Delhi mentioned noticing electric vehicles used for delivering products on their streets or neighbourhood. However, they were unsure about the fact whether the delivery companies had mandated the move and provided electric vehicles or the delivery persons were using their own EV.

Few others also mentioned being informed by the delivery workers, the TV show 'Shark Tank', magazines, newspapers etc.

3.6 Ripple effect on other companies of one company committing to converting its delivery vehicles to electric vehicles

Across all cities, 93 percent of respondents believed that if a company commits to converting its delivery fleet to electric vehicles, it would push other companies to do so. The highest number of positive responses

were from Pune (99%) followed by Bangalore (94%) and Delhi (91%). Similarly, those who were unsure was highest in Delhi (8%) followed by Kolkata (6%).

Table 9: Respondents' views on ripple effect on other companies of one company committing to converting its delivery vehicles to electric vehicles (n=9048)

	Location						Total
	Delhi	Mumbai	Pune	Chennai	Kolkata	Bangalore	
Yes	90.6	87.8	99.1	85.7	81.2	94.1	93.4
No	1.8	8.5	0.2	9.5	13.0	1.3	3.2
Not Sure	7.6	3.7	0.6	4.8	5.8	4.6	3.4

Gender-wise analysis reveals that more males (95%) than females (87%) believed that if one delivery

company switches to electric vehicles, it would influence other companies to do the same.

Fig 8: Respondents' views on ripple effect on other companies of one company committing to converting its delivery vehicles to electric vehicles by gender



Younger respondents in the 18-25 (93%) and 26-35 (92%) age groups were more confident about delivery companies being able to inspire others to transition to

electric vehicles as compared to the older age groups of 36-45 (86%) and above 46 (87%).

3.7 Consumers' perspectives on company's responsibility for being proactive in EV transition

The opinion of the respondents was sought on whether they believe that companies have a responsibility to be proactive in the transition to electric vehicles. Around

64% of all respondents replied in the affirmative, with the highest percentage of respondents being from Pune (77%) and Delhi (76%) and lowest from Bangalore (46%).

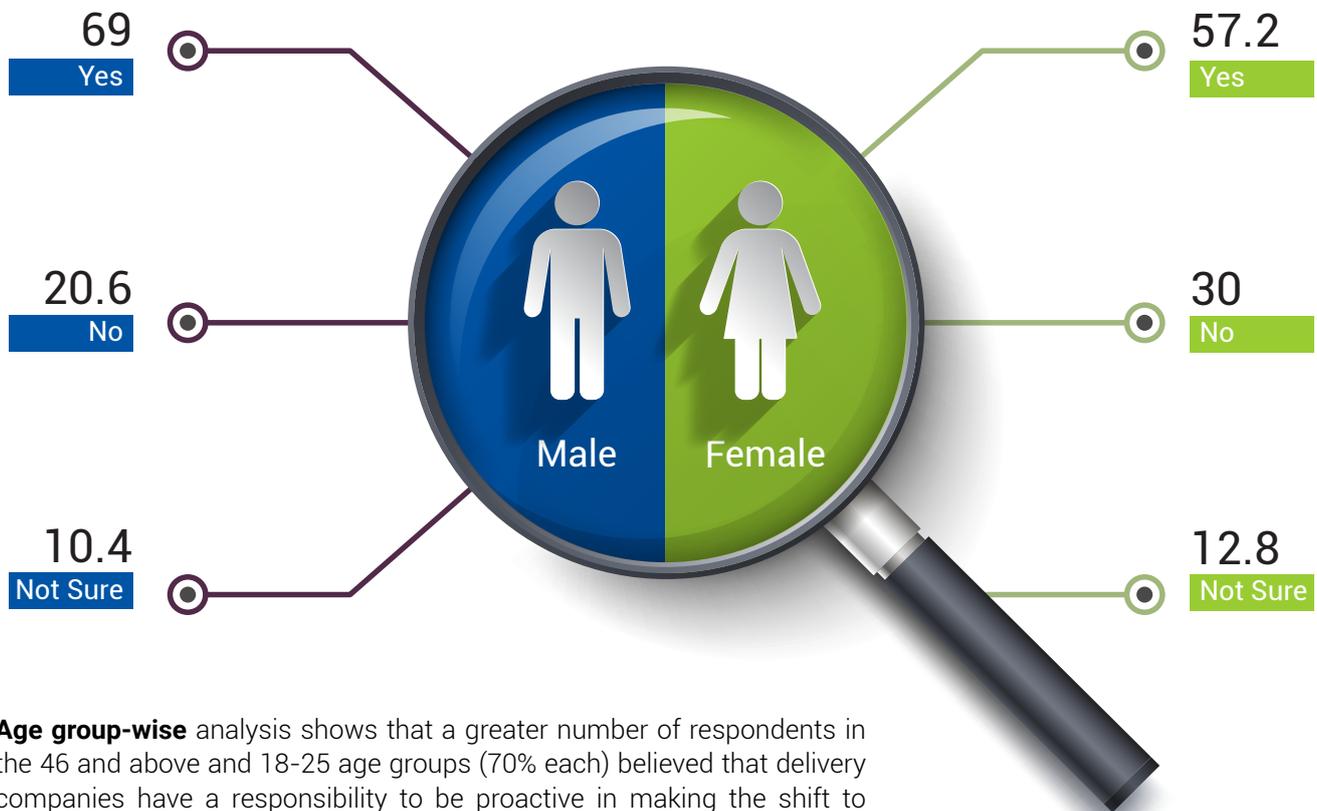
Table 10: Percentage distribution of respondents stating their views on company's responsibility for being proactive in the transition to electric vehicles (n=9048)

Whether companies have a responsibility to be proactive in the transition to electric vehicles	Location						Total
	Delhi	Mumbai	Pune	Chennai	Kolkata	Bangalore	
Yes	76.0	55.3	76.6	69.8	60.7	45.6	64.0
No	6.2	34.4	12.8	23.8	29.6	40.6	24.6
Not Sure	17.8	10.3	10.6	6.4	9.7	13.8	11.4

Gender-wise data indicates that more men (69%) than women (57%) were of the view that delivery companies need to be proactive in the shift to electric vehicles.

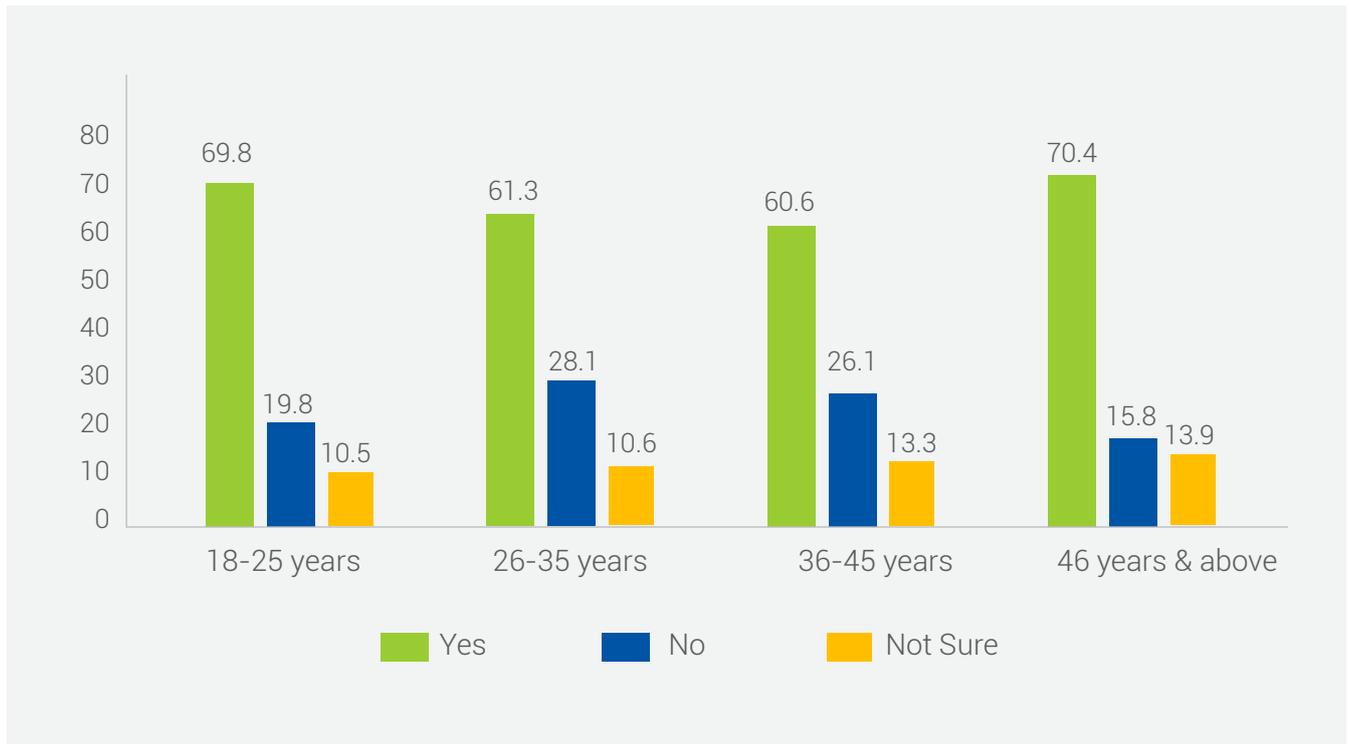
Additionally, more women (12.8%) than men (10.4%) stated being unsure whether companies should be proactive and take responsibility to make the shift to electric vehicles.

Fig 9: Percentage distribution of respondents stating their views on company's responsibility for being proactive in the transition to electric vehicles by gender (n=9048)



Age group-wise analysis shows that a greater number of respondents in the 46 and above and 18-25 age groups (70% each) believed that delivery companies have a responsibility to be proactive in making the shift to electric vehicles.

Fig 10: Percentage distribution of respondents stating their views on company's responsibility for being proactive in the transition to electric vehicles by age-group (n=9048)



A greater number of respondents who were Graduates/ Diploma holders (71%), Post graduates (62%) and had Senior Secondary education (62%) believed that companies should play a proactive role in the

transition to EVs to address environmental concerns as compared to those who were educated up to the secondary level (52%).

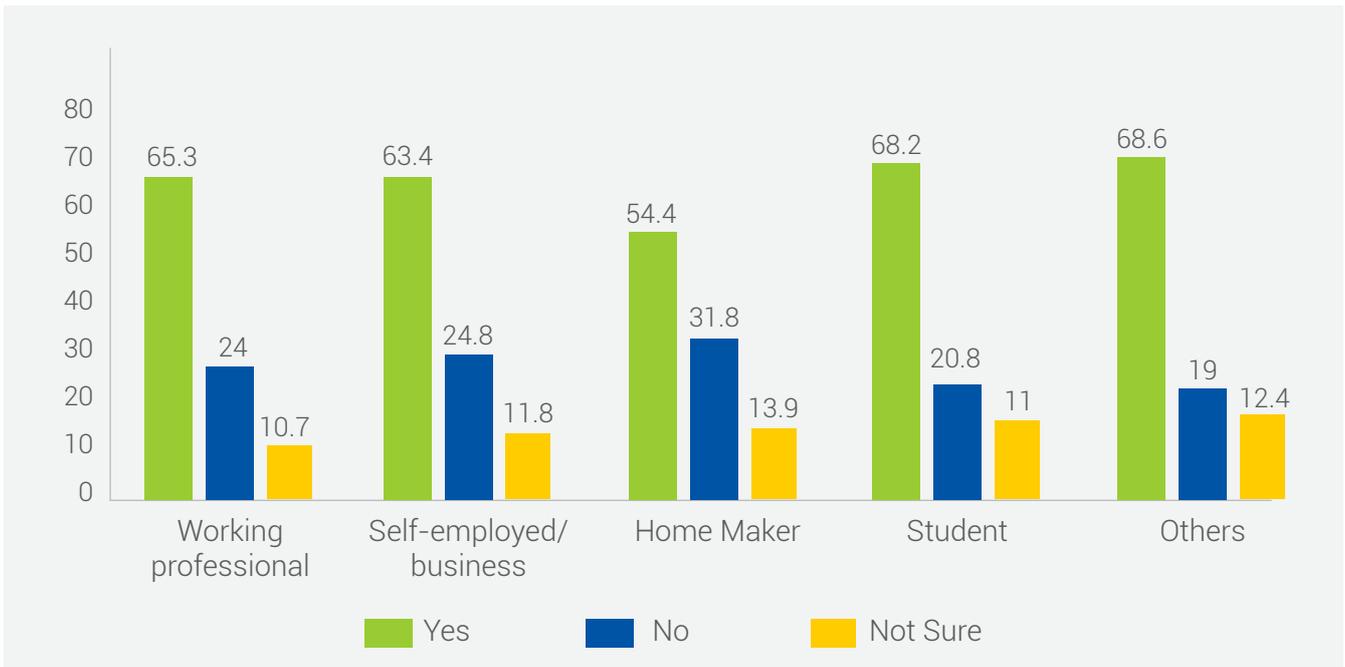
Table 11: Percentage distribution of respondents stating their views on company's responsibility for being proactive in the transition to electric vehicles by educational status

	Upto Secondary level (10th)	Senior Secondary (12th)	Graduate/ Diploma	Post Graduate	Others
Yes	56.0	59.7	65.0	66.7	69.2
No	29.6	28.2	23.6	23.0	15.4
Not Sure	14.4	12.1	11.4	10.2	15.4

Analysis by occupation revealed that as compared to home makers (55%), a greater number of students, (68%) working professionals (65%) and self-employed

people or business owners (63%) felt that companies should play an active role in transitioning to electric vehicles.

Fig 11: Percentage distribution of respondents stating their views on company's responsibility for being proactive in the transition to electric vehicles by occupation (n=9048)

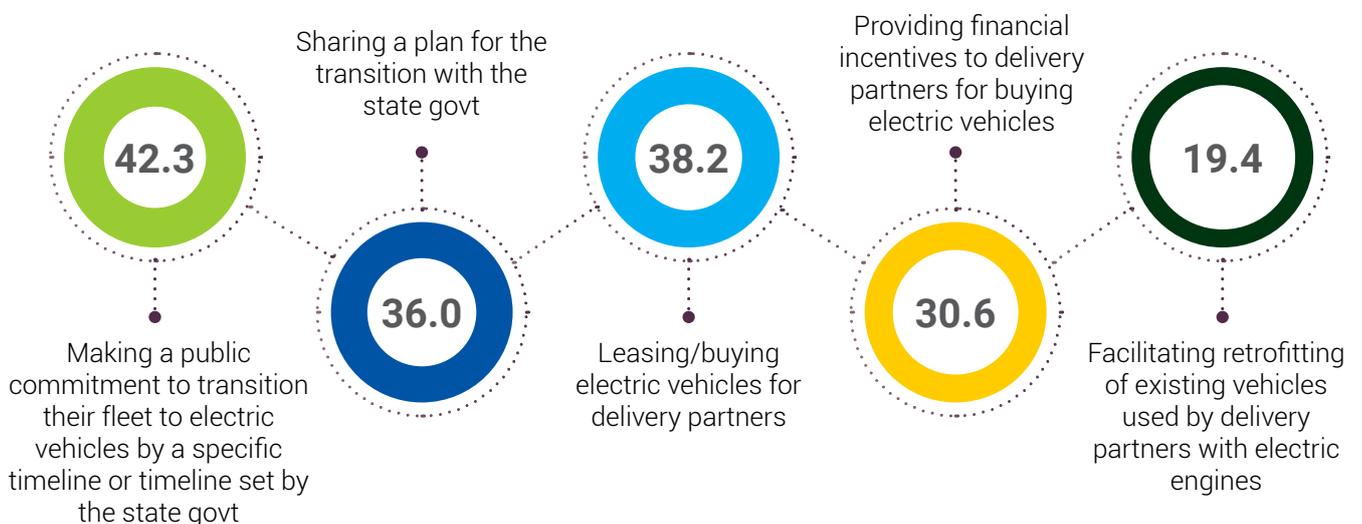


3.8 Components of a proactive role on the transition to electric vehicles

Respondents who affirmed that companies have a responsibility to be proactive in the transition to electric vehicles were asked what role the companies could play. Overall, 42 percent were of the view that companies should commit to adhere to timelines set by the state government while another 38 percent opined that companies should either lease or purchase electric vehicles for delivery workers. About 36 percent

of the respondents felt that they should share plans for the transition with the state government and around 31 percent mentioned that providing financial incentives to delivery workers for buying electric vehicles could be a good initiative. Those who believed that the existing delivery vehicles used by delivery workers could be retrofitted with electric engines constituted 19 percent of the sample.

Fig 12: Insights on how to transition to electric vehicles (n=9048)



*NB: Multiple choice response

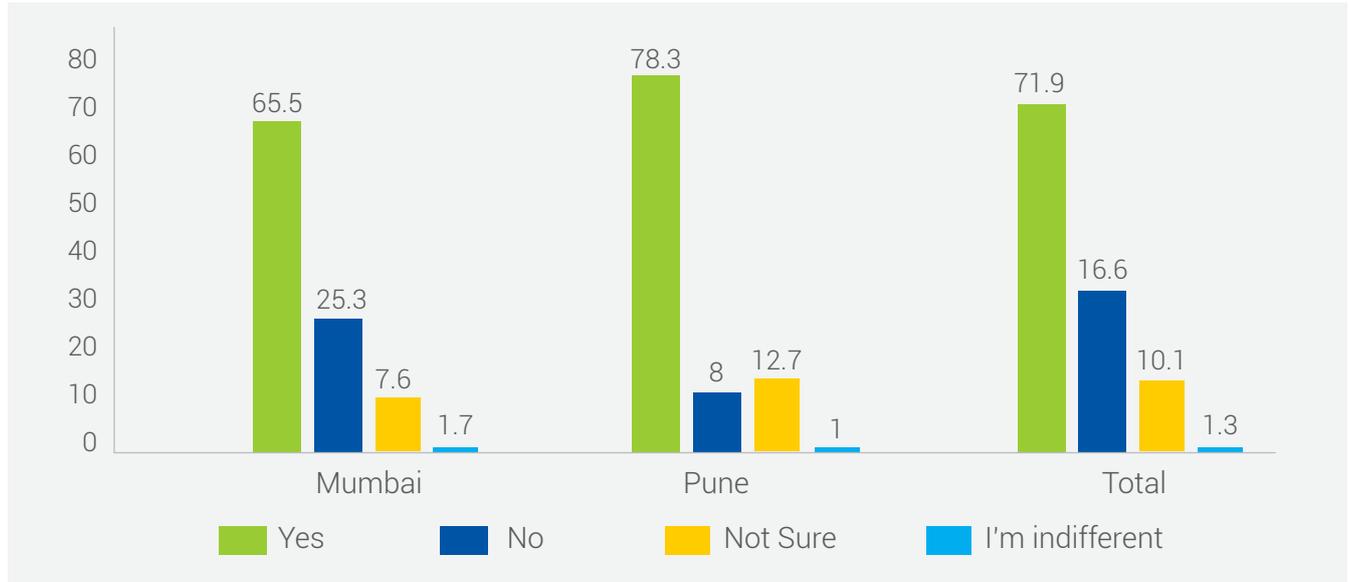
3.9 Preference of Pune & Mumbai respondents to shop from companies that switch to EVs

The EV policy of the State Government of Maharashtra has asked delivery companies to transition 25 percent of their fleet to electric vehicles by 2025. The respondents of Pune and Mumbai were asked whether they would prefer to shop from delivery companies if they pledge to meet this target to which around 78 percent respondents

from Pune and 66 percent from Mumbai responded in the affirmative.

The respondents who were 'Not Sure' constituted 13 percent and 8 percent from Pune and Mumbai, respectively. Likewise, around 1 percent in both the cities did not think it would change their shopping preferences.

Fig 13: Preference of Pune and Mumbai respondents to shop if delivery companies transitioning 25% of their fleet to electric vehicles by 2025 (n=3016)

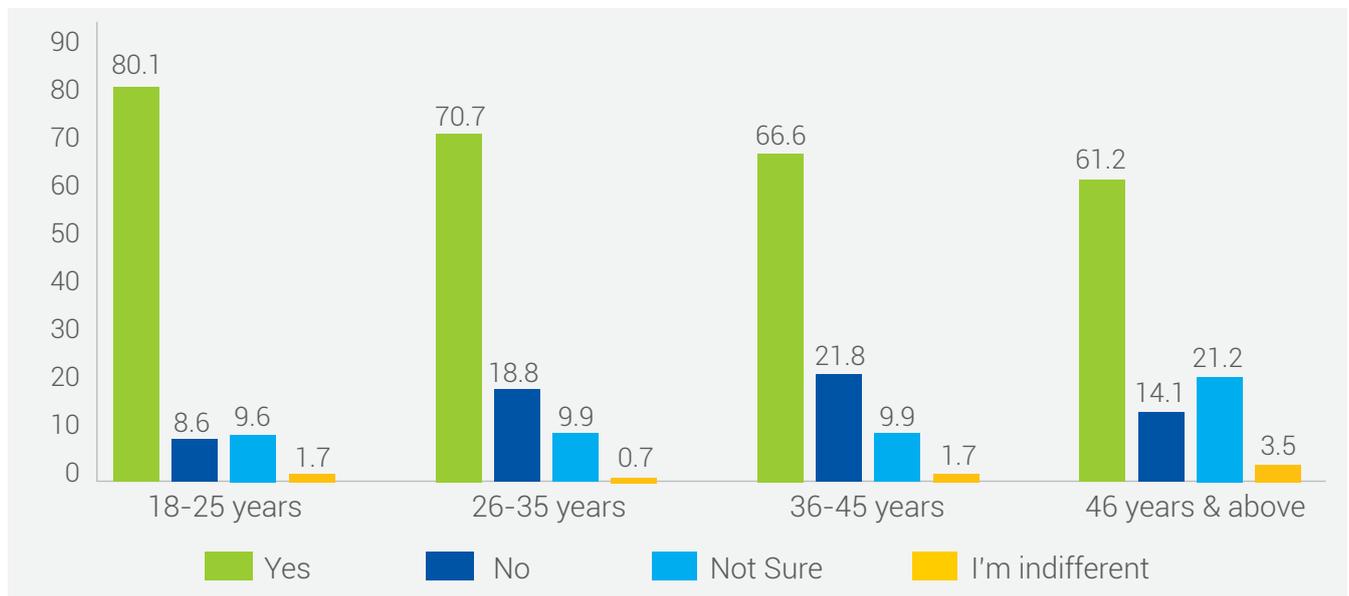


Gender-wise preferences to shop and avail delivery services was also analysed and it was learnt that higher percentage of males (79%) than females (64%) would prefer to shop from companies that pledged transitioned to EVs in line with the state government's policy targets. Yet around 10-11 percent were "Not

Sure" about such a move influencing their shopping preference. Around 1 percent were indifferent.

It was noted that more respondents from younger age groups indicated a preference to shop from companies that pledged to meet the state government's targets.

Fig 14: Age-group wise Preference of Pune and Mumbai respondents to shop if delivery companies transitioning 25% of their fleet to electric vehicles by 2025 (n=3016)



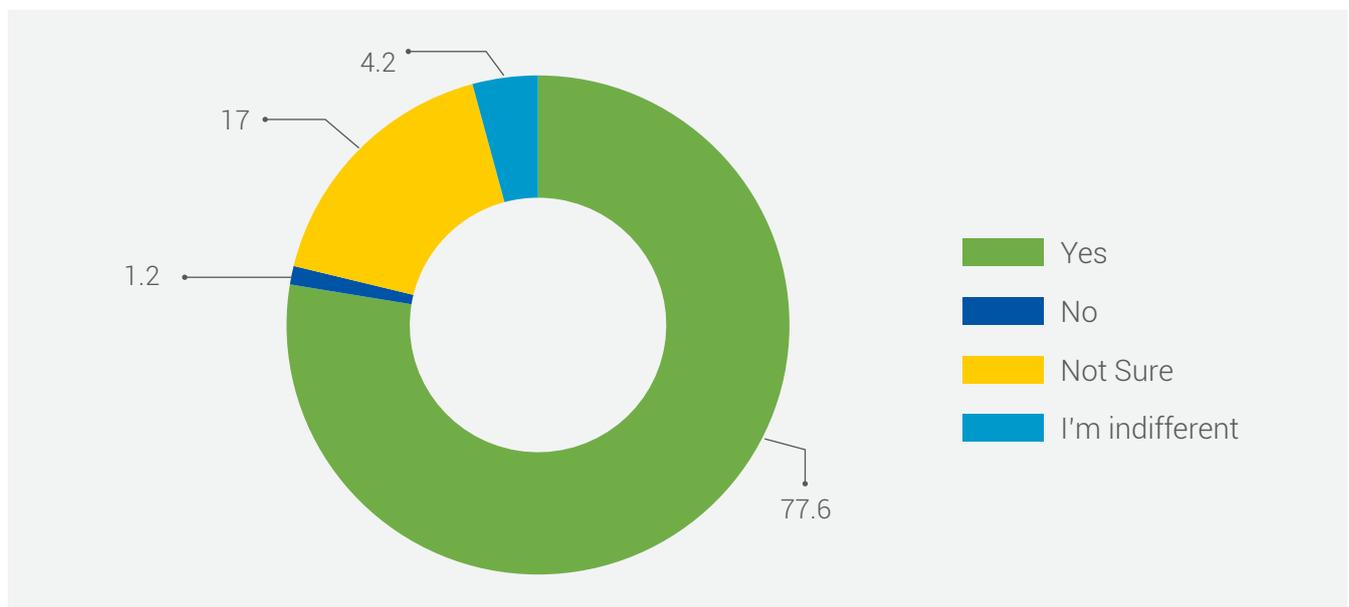
3.10 Preference of Delhi respondents to shop from companies that meet the Draft Aggregator Policy targets on switching to EVs

The Delhi state government has brought out a Draft Aggregator Policy for delivery and fleet aggregator companies in January, 2022 requiring 50 percent of all newly inducted two-wheelers and 25 percent of all newly inducted four-wheelers in their fleets to be electric vehicles by March 2023. While the latest draft of the scheme has revised timelines it does put a final transition timeline of April 1st, 2022. The consumer survey was conducted prior to the changes released in the latest draft, but are indicative of consumer interest and support for strong policy action in the sector and

preference for companies which are at the forefront of adopting sustainability measures. The respondents of Delhi were asked if they would prefer to shop from companies that pledge to meet this target in the future.

Nearly 78 percent of respondents stated that they would prefer to shop from those delivery companies who pledge to meet the target given by the state government in the future. Around 17 percent respondents were not sure whether it would make any difference to their shopping behaviour while 4 percent said they were 'indifferent'.

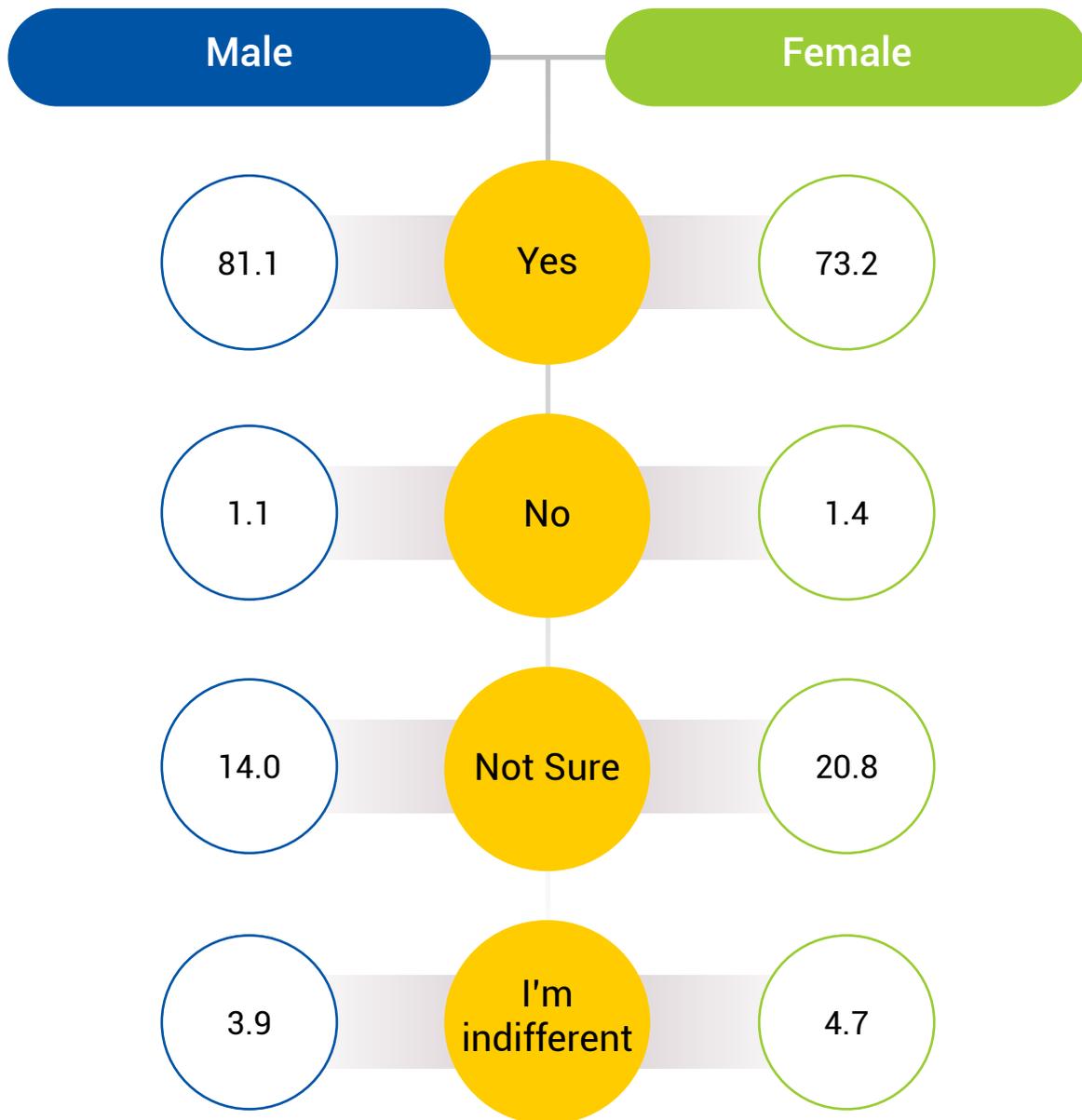
Fig 15: Preference of Delhi respondents to shop from companies that pledge to meet targets set out by state government's Aggregator Policy for delivery and fleet aggregator companies (n=1508)



Gender-wise analysis indicates that more men (81%) than women (73%) would prefer to shop from companies if they pledge to meet the targets in the

Draft Aggregator Policy. Around 14 percent males and 21 percent females were indecisive.

Fig 16: Gender-wise preference of Delhi respondents to shop from companies that pledge to meet targets set out by state government's Aggregator Policy for delivery and fleet aggregator companies (n=1508)



Among all age groups, the preference to avail delivery services from companies that pledge to meet these targets was highest among respondents aged between 26 and 35 years. Around 20 percent of those in the

36-45 age group were not sure if such a move would affect their shopping preferences. Around 14 percent of those in the age group of 46 years and above were indifferent.

04

Insights and Way Forward

The consumer survey shows significant demand from consumers to see accelerated EV transition from e-commerce and delivery companies nationwide to address increasing air pollution and climate change. The youth in particular have voiced overwhelming concern about this sector's contribution to air pollution and climate change. These groups constitute the largest consumer base of the delivery and e-commerce companies.

The findings of the survey point to the need and support for strong policy direction at the state level, as evidenced by the significant support for the Maharashtra and Delhi policies. Other Indian states should rely on the policy framework and direction given by the Union Government's Shooonya Campaign along with the examples and models created by the states of Maharashtra and Delhi to implement measures within their own state EV policies and regulations on the last mile delivery sector. A

significant proportion of the consumers have clearly said they would prefer to shop from companies who pledge a timely transition of their fleets to electric vehicles thus creating a strong business case for the companies to be progressive on EV transition.

It is critical that businesses work closely with our governments to address their last mile and overall emissions and commit to clear, time-bound plans to reduce them.

The respondents stressing on the need for a socially just transition of their delivery fleets by companies is extremely significant since the onus of transition cannot be put on the drivers/ workers but actively led by the companies themselves. Companies should provide financial incentives, support to delivery partners for the transition to electric vehicles.



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About the Report:

Research Agency:

The survey has been conducted by CMSR Consultants Pvt. Ltd., a multidisciplinary research and communication consultancy with specialisation in Social Research, communication research, Policy Research, Evaluations and Development Communications. The organisation has a pan-India presence and a strong network of Regional Partners and Business Associates. CMSR has undertaken several large scale projects and initiatives across the country and is widely known in the sector for its focus on sub-sectors including Agriculture, Livelihood, Gender, Environment & Climate Change, Health & Nutrition, WASH, etc.

www.cmsrconsultants.com

Commissioned by:

The survey has been commissioned by the Sustainable Mobility Network (SMN). The SMN is an informal network of organisations from across India that work on transportation and mobility issues. Key member organisations include:

Climate Group:

Climate Group drives climate action. Fast. Our goal is a world of net zero carbon emissions by 2050, with greater prosperity for all. We focus on systems with the highest emissions and where our networks have the greatest opportunity to drive change. We do this by building large and influential networks and holding organisations accountable, turning their commitments into action. We share what we achieve together to show more organisations what they could do. We are an international non-profit organisation, founded in 2004, with offices in London, Amsterdam, Beijing, New Delhi and New York. We are proud to be part of the We Mean Business coalition. Follow us on Twitter @ClimateGroup.

Jhatkaa.org:

Jhatkaa.org is a group committed to building citizen power across India in effective & innovative ways. We aim to create a progressive India - one that's equitable, inclusive, and sustainable - built and maintained through the democratic power of an engaged citizenry.



CLIMATE GROUP



Jhatkaa.org



**PURPOSE
CLIMATE
LAB**

Purpose Climate Lab:

The Purpose Climate Lab brings innovation and experimentation to solving the climate crisis. We do this with a spirit of movement generosity – sharing our learnings as we go. Our mission is to build and accelerate the ambition of climate solutions around the globe.



Asar Social Impact Advisors:

Asar works actively on decarbonizing urban mobility in India and achieving clean air for all in our cities. Aside from providing strategic advice and analysis, Asar specialises in convening and coordinating multiple stakeholders to create collaborative spaces for transformative change.



Climate Trends:

Climate Trends is a research-based consulting and capacity building initiative that aims to bring greater focus on issues of environment, climate change and sustainable development. We specialise in developing comprehensive analyses of complex issues to enable effective decision making in private and public sector



waatavaran
for a sustainable future

Waatavaran:

Waatavaran is an organisation which works hyper-locally to slow down climate change and mitigate its impact on vulnerable communities. We believe in nurturing the symbiotic relationship that co-exists between humans and nature to create a climate just habitable environment for everyone. We are actively working on resolving air pollution issues that currently plague the urban areas and are building a Sustainable Forest Management in the tribal villages of Maharashtra State.



SwitchOn Foundation:

Established in 2008, Environment Conservation Society (SwitchON Foundation) is a registered non governmental organisation dedicated to work towards equitable and sustainable development. Our journey commenced from a cycle ride undertaken by a handful of socially passionate youth in order to propagate the idea of environmental awareness across the youth and the marginal communities of the country. The seeds of ideas sowed in the journey laid the foundation for SwitchON's work. Over the years we have focussed on a multi-pronged approach to attain sustainable development. We have over a decade of experience in designing programmes to promote clean energy access, sustainable agribusiness, capacity building to enhance rural livelihoods and holistic wellbeing of the marginalised communities across Eastern India. We have also worked extensively across the urban sphere, especially in Kolkata to promote sustainable lifestyle and general well-being of the citizens.



Poovulagin Nanbargal:

Poovulagin Nanbargal is a 30-year-old movement, working on socio-environmental issues in Tamil Nadu.