Gender Sensitive Mobility Policies: Case Studies from Two Indian Cities, Kochi, and Surat

H. M. Shivanand Swamy, Shalini Sinha, G.P. Hari, and Dennis Jose

ABSTRACT

Women constitute 48.5 per cent and the transgender community constitutes 0.04 per cent of the general population of India (Census, 2011). Due to various socio-cultural factors, their participation in outdoor work and other socio-economic activities is limited. Inadequate access to education, social gatherings and travel, and lack of family support are some of the well-known factors that restrict women to their homes. The situation is evolving with diverse job market and technological advancements, but still, the involvement of women in the workforce is limited and needs a fillip through policies to encourage their participation.

The interventions in the transport sector are expected to enhance the participation of women by providing safe and affordable access and catalyse the impact on women’s empowerment. Transport is often considered to be a gender-neutral service that benefits all equally. Transport services as well as its workplaces are designed without the inclusion of adequate requirements of women and the transgender community—due to this, the objectives of gender sensitiveness are not achievable. The aim of this paper is to fill this gap by presenting how two Indian cities, Kochi, and Surat, have successfully framed, and implemented gender sensitive transport policies and programmes. The challenges faced and efforts made towards sustainability will also be articulated.

Keywords: Women, Gender, Transport System, Mobility

1. INTRODUCTION

Gender is described as the characteristics of women and men that are socially constructed (WHO, 2021) and the paper articulates the gender terminology from the perspective of women and the transgender community. Women constitute 48.5 per cent and the transgender community constitutes 0.04 per cent of the general population of India (Census, 2011). Due to various socio-cultural factors, their participation in outdoor work and other activities has been limited. Traditionally, the community has been allocating the work area based on gender—ergo, women have been restricted mainly to household work. In India, the overall Female Labour Force Participation Rate (FLFPR) for the age group 15 and above status (Principal status + Subsidiary status) for 2020-21 is 24.6 per cent in rural areas as compared to 20.4 per cent in urban areas (MoLE, 2021). The FLFPR observed a decrease of 25 per cent in rural areas and 4 per cent in urban areas compared to the 2004-05 levels (MoLE, 2005). The overall unemployment rate of females is 5.6 per cent, wherein the unemployment rate of females in rural areas is 3.8 per cent and 10.8 per cent in urban areas (MoLE, 2021). Mostly, women contribute to the family-owned production economy without receiving any income in return and lack adequate working conditions, favourable social protection, and formal work arrangements. The descent in women’s workforce participation is mostly attributed to the lack of accessibility to better education, livelihood, and social opportunities, thereby restricting them to their homes. The transport sector has the potential to enhance the participation of women by providing safe and affordable access and has a huge bearing on women’s empowerment.

Women’s mobility choices are unique compared to that of men and act as the fulcrum connecting women to social and economic independence (Bandagi, 2021). The travel patterns of women are characterised by multiple shorter trip lengths, with high dependency on public and non-motorised transport, restricted travel times and more social trips (SMART-SUT, 2021). The mobility choices are attributed to safety, affordability, information, faster system, better comfort, and reliability (Regmi & Yamamoto, 2021). Infrastructure elements such as design of access to the system, terminal stations, and mode of mobility, hinders the mobility of women in society, blurring the possible livelihood and

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1 If a person has engaged in any economic activity for a period of 30 days or more during the preceding 365 days to the date of survey, a person is considered as employed under the Principal Status+ Subsidiary Status approach.
education opportunities. Factors like mobility patterns, infrastructural provisions, and the nature of the choice of system by women define the need for a shift from gender neutral to gender sensitive mobility systems.

The transport system has various mobility actors, leading to serve the purpose of derived demand of people. Mobility actors could be gender divided and classified based on the work area within the organisation. Women in transport have been evolving from idea generators to front-runners of mobility management in many cities. However, the efforts on these lines are still limited, given the under-representation of women in technical jobs within the mobility sector. Education, access to jobs, retention and leadership could be the four pillars necessary to advance the role of women in transport (APEC Women in Transportation Forum, 2012). Globally, women represent less than 15 per cent of the public transport workforce, while the majority of the passengers are women (Suciu, Sadoux, & Gonzá, 2019). This does not include informal transport workers, who represent a significant portion of employment in the transport sector in some cities (Suciu, Sadoux, & Gonzá, 2019).

Currently, both transport services and transport workplaces are not designed keeping in mind the requirements of women and the transgender community, resulting in not achieving the gender sensitiveness objective. The transport systems for women are expected to be better delivered with more women’s participation in the mobility sector, providing better perspectives for gender sensitive mobility planning for the cities. The paper articulates the approaches followed by two Indian cities, namely Kochi in the state of Kerala and Surat in the state of Gujarat, for better women’s participation in the mobility sector, thereby highlighting the initiatives and replicability potential.

2. LITERATURE REVIEW

“The difficulties faced by women with regard to their mobility are a form of social exclusion which affects all aspects of their lives and in particular hinders their economic output and health” (Duchene, 2011).

With better access to transport systems, the presence and participation of women in public places and events have increased over time but it is still limited in offering equal and safe access to urban streets and spaces (Sameera, Sankar, Shilpa, & Ranade, 2010). Gender mainstreaming is an urgent need, given that for cities such as Mumbai, housing a population of 22 million, only one-third of the approximately 11,000 pay-to-use public toilets are accessible to women (Mishra, 2016). Henri Lefebvre defines the right to the city as a right of no exclusion of urban society from qualities and benefits of urban life (Lefebvre, 1968). The design of cities with the concept of invisible women constrains the transport system, limits access to opportunities and hinders mobility. Women have a sustainable attitude of mobility like use of energy efficient choice of modes, promoting public transport systems, predominantly choosing walking as the first and last mile access to system. With a long-term vision for the system, it could be mainly attributed to the plethora of activities undertaken by them in society (Maffii, Malgieri, & Bartolo, 2020).

Women’s travel is characterised by trip chaining, i.e., combining multiple destinations within a trip (National Academies of Sciences, Engineering, and Medicine, 2004). Women make shorter and more trips, which often require them to change, divert and break their journeys to pick up children, run errands, shop, or take on other family obligations (Allen & Vanderschuren, 2016). This trip chaining directly impacts the mode choice considering the affordability of system and the system is gauged with the safety parameter to initiate the commute. Worldwide, women dedicate an average of 4.5 hours a day to unpaid work, much of which occurs outside the home, such as grocery shopping and it is more than double the number of hours men spend on such work (Khanna, 2020). About 84 per cent of women’s trips are by walking, cycling or public transport (Census, 2011). More than 60 per cent of rural and urban households use the bus as their main mode of public transport, followed by auto-rickshaw, taxi, railway, and cycle rickshaw (NSSO, 2016). Women are more dependent on public transport systems than men and especially when they are from lower-income groups. In Mumbai, women made 45 per cent more trips by bus than by train, which increased to 67 per cent for households with incomes less than INR² 5000 per month (World Bank, 2011).

The greater dependence of women on the public transport mode has also made the cases of sexual violence predominant, which acts as the major deterrent in using the system. Sexual harassment

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² Indian Rupee (INR)
reduces the confidence of women in the system, increases the dependency on others and finally restricts their access to work, education, and social opportunities. The forced immobility faced by women, which is caused by several factors, including, but not limited to, economic poverty, time poverty, social norms and the perception of safety also reduces the trust in the mobility system (Bandagi, 2021). While there are occurrences of gruesome and violent crimes, the defining characteristic of violence against women is its normalisation and ordinary and continuous nature (Viswanath, 2013).

In 2015, the Government of India (GoI) allotted INR 2000 crores as Nirbhaya Fund to improve women’s safety in public transport and this has been a key project to create a national vehicle security and tracking system in 32 cities in India with a population of over one million (Kaul, 2016). Under this project, public transport vehicles in the 32 selected cities were required to have CCTV cameras (if the vehicle capacity is more than 23 passengers), GPS devices and panic buttons. These electronic devices will be connected to a Central Control Room and will be controlled by the respective City Police Department (Shah, Viswanath, Vyas, & Gadepalli, 2017).

3. LEARNINGS FROM BEST PRACTICES OF GENDER INCLUSIVENESS

The City of Vienna has taken a proactive approach to advance gender equality over 30 years by practising gender mainstreaming in city building and policy making (Wood, 2020). Introduction of more women in the architectural design had impacted the design of buildings to low height to ensure eyes upon the streets; infrastructural provisions such as wider footpaths, ramps for bikes and prams, better lighting facilities have reduced the anxiety for mobility; and gender budgeting has improved the access to the city (Hunt, 2019). An interesting initiative in transport service is the inclusion of gender-balanced public signages such as female pictograms on the pedestrian crossing and road worker signages (Peters, 2013).

In the city of London, Transport for London (TfL) uses big data analytics and perception survey to analyse customer travel patterns and issues faced by users of different communities, based on which actions targeted towards safety and security, accessibility, affordability, workforce participation, and information and communication have been taken (TfL, 2012). TfL has also developed internship programmes with advertisements targeted to different communities and releases an annual workforce diversity report which captures data on women’s employment (SMART-SUT, 2021).

In the City of Bolzano, Italy, the Time and Schedules Plan has been initiated with ‘Taxi Rosa’ (Pink Taxi) which is a dedicated taxi service available to all women in the evening and night hours at a discounted rate when public transport is less frequent while ‘Parcheggi Rosa’ (Pink Parking) are reserved for women around the city at easily accessible, well-lit and near exit garages (Maffii, Malgieri, & Bartolo, 2020). In India, as part of the Cycles 4 Change Challenge, the core working team of 52 cities included women members to better address the needs of women for a safer cycling experience. The perception survey brought out an important concern of one out of every five women who said that they fear eve-teasing while cycling on the streets (Balanagendran, 2020). As part of the challenge, Vadodara has appointed an ‘inclusivity manager’ to understand the challenges faced by women cyclists (Balanagendran, 2020). The Capital Region Urban Transport (CRUT), Bhubaneshwar, India, collects gender disaggregated tickets to take evidence-based decisions. The E-ride initiative in the city has its entire staff of drivers as women and transgender (Mahapatro, 2021). Impact of the informed decisions in the city bus system has led to 63 per cent of women users rating the system as safe and affordable, 85 per cent women are highly satisfied with the availability of the priority seats, 98 per cent of the elderly city bus users have rated ease of boarding and alighting as very good, and 57 per cent of the passengers have shifted from other modes to the city bus system (Mahapatro, 2021).

Perception surveys and safety audits on the transport infrastructure have been carried out to increase the customer experience and gender inclusiveness by creating an accessible system, level boarding and alighting stations, providing real time information through journey planners and redesigning bus stops, interchanges, and terminals. Disaggregated data, better women’s participation in the mobility sector and gender sensitive infrastructure upgradations could be the agents of change in defining a gender inclusive transport system.
4. OBJECTIVES

To enhance women’s accessibility to livelihood, education and social opportunities, the following objectives have been derived:

- To understand the gender sensitive transport approaches by two Indian case cities.
- To discern the effectiveness of the gender sensitive transport approaches in achieving safety, security, and empowerment of women in transport.
- To identify whether the gender sensitive transport approaches are scalable and transferable.

5. CASE CITIES

Kochi, Kerala

The state of Kerala has been implementing measures to ensure women’s security, equality, and empowerment over the past few decades. The Department of Social Justice, Government of Kerala (GoK) had approved a Gender Equality and Women Empowerment Policy as per G.O. (M.S) 27/2015/SJD dated 16-04-2015. This policy aims to lay down a basis for the harmonious co-existence of all genders. It aims to do so within a framework of mutual respect, for the equal access of women and men to economic, social, and political opportunities, resources, and benefits (GoK, 2017). The Kerala Police Department has taken initiatives such as Vanitha Police (Women Police), Women Cell (women and child friendly police stations), Pink Patrolls and control room, and installation of CCTV cameras, which focus on the inclusion of women and improvement in surveillance coverage of public areas. The Kerala State Road Transport Corporation (KSRTC) had opened the position of conductors and drivers for women candidates in 1992. KSRTC and MVD (Motor Vehicles Department) are developing a Suraksha-Mitra command and control centre, with real time tracking of buses and with provision of panic buttons in them. Even when the initiatives are in place, women’s participation has been very miniscule, with only 6.3 per cent of Kerala’s police personnel as women and a trend of ever-decreasing women conductors within the KSRTC (Paliath, 2020). The decreasing trend of women’s participation within the transport sector could be attributed to unsafe working conditions, operational tiredness, differing working hours and lack of supporting infrastructure within organisations.

Kochi is known as the commercial capital of Kerala and it accounts for 2 million passenger trips per day (CMP, 2017). The study area comprises the Greater Cochin Development Authority (GCDA) and the Goshree Islands Development Authority (GIDA) area of 632 sq. km with a population of 2.1 million (Census, 2011; CMP, 2017). The public transport modes present in the city are private cum state-run buses, ferry system and metro system. The motorised trip rate is 0.86 and the average trip length for the public transport system is 10.64km (CMP, 2017). The demand for public transport is 8.87 lakh passenger trips per day. The average trip cost of public transport in Kochi is INR 16.98 (CMP, 2017).

The study area has a male workforce participation rate of 51.5 per cent, while the female workforce participation rate is 17.2 per cent (Census, 2011). Among the women workforce, 45 per cent do not commute to work and prefer to work in places near their home or at home, mainly due to the dual role of women at home and in the workplace (Census, 2011). This is more prevalent in rural than in urban areas. The major share of the passengers is catered to by the bus system in Kochi, which accounts for 94.6 per cent of total boarding in a day. It is also observed that the share of women passengers in all the trips to the city from urban agglomerations is nearly 60 per cent (Antony, 2021). The high dependency on the public and non-motorised transport modes for commuting could be mainly due to the inaccessibility of private modes or due to the larger commuting distance in Kochi. The purpose of the trip is mainly work, education and social opportunities at city centres. The trip timing is mostly scattered among the morning peak, off-peak and the evening off-peak hours.

The study has employed focus group discussions and stakeholder consultations for assessing the gender sensitive approaches in the city. Some of the stakeholders consulted were:

1. Kochi Metropolitan Transport Authority (KMTA)
2. Motor Vehicles Department (MVD)
3. Kochi Metro Rail Limited (KMRL)
4. Kochi Smart Bus Limited (KSBL)
5. Ernakulam Jilla Auto Drivers Cooperative Society (EJADCS)
6. Better Kochi Response Group (BKRG) – Community Collective

Some of the approaches followed by the Kochi city to have better women’s participation have been articulated below.

*Kochi Metro Rail Limited (KMRL)*

Kochi Metro Rail Limited (KMRL) undertakes the operation of metro system in Kochi. Established in 2017, the metro system has been operational for over 25 kms with 22 stations. KMRL is the only organisation in the mobility arena of Kochi to undertake a better women-centric approach in its functioning and systems operation from inception.

*Kudumbashree Community*

Launched in 1998, Kudumbashree is a women’s empowerment and poverty reduction project of the Government of Kerala (GoK). It focuses on the empowerment of women through supporting women’s self-help groups. Kudumbashree functions under the Local Self-Government Department and is one of the largest projects in India aimed at empowering women. The programme has 3.7 million members and covers more than 50 per cent of the households in Kerala (KSUDP, 2016). Kudumbashree works primarily with women living below the poverty line.

Kudumbashree community undertakes ticketing to housekeeping works of the KMRL at 22 stations and office buildings. The community also runs the canteen for the office staff. A total workforce of 640 community women works for the KMRL. The commuter experience on the metro system had more than 85 per cent of commuters choosing cleanliness as one of the prime factors for choosing the system, and the credit goes to the Kudumbashree community (CPPR, 2019).

A 23-member transgender group is part of the Kudumbashree community since the initiation of the project in 2017. The KMRL became the first government-owned company in India to formally appoint transgenders. The community believes that the opportunity has enabled a change in the attitude of society towards them and has instilled a belief that they can also do any job like any other person. The pandemic has been a hard time for them as the strength of the group has reduced to 11, with constraints on salary and higher accommodation costs within the city (Varghese, 2020).

*KMRL Technical and Office Staff Community*

KMRL, from its inception, has 16 per cent of its staff as women. They are working under different domains, from senior managers to architects to pilots in trains. Currently, there are seven women pilots among a total of 39 pilots running the metro. The women-centric approach of KMRL is also evident in the customer satisfaction of commuters, with more than 80 per cent of the people stating safety, security, comfort, and reliability to be the best characteristics of the metro system in the city (CPPR, 2019).

Women commuters comprise 34 per cent of Kochi 1 Transit Card users. The perception of the metro women passengers was that the stations are very well lit during the operational hours and the security officers at the boarding have instilled a sense of security among the commuters. The separate entry gates for women and the infrastructural provisions of mother care rooms and clean toilets with napkin vending machines have ensured comfort of travel in the metro system. The reliability of the system, with commuters having to spend less time in one mode, is also found to be a feature of interest to attract women passengers. Level boarding at stations has also been preferred by all the commuters, as it allows faster boarding and alighting, thereby reducing the dwell time. The universally accessible approach roads to the metro stations were also mentioned by the stakeholders as a positive stride towards the development path. It was understood from the metro passenger survey that 58 per cent of the metro commuters have shifted from the bus system, considering the safety, comfort, and reliability parameters (CPPR, 2019). The hindrance parameter of the metro system and the higher patronage of the bus system are attributed to the affordability and better coverage of the system (Jose & Swamy, 2018).

*KLeen Smart Bus Limited (KSBL)*

KLeen Smart Bus Limited (KSBL) was formed in 2020, aggregating the bus owners under seven bus
operating LLPs (Limited Liability Partnerships) in Kochi. The private buses in Kochi constitute more than 94 per cent of the bus share and have been historically operating under individual operators having independent operational characteristics (Jose & Swamy, 2018). Efforts were made by the Urban Transport Division of the KMRL to unite them under one umbrella body of operations. The operators have found it to be a better choice, with benefits such as single procurement of spare parts, increased non-fare revenue and fuel expenditure payment discounts. The elements of the smart city bus system are: National Common Mobility Card (NCMC) based ticketing system, passenger information system (PIS), two night-vision surveillance cameras per bus, women ticket checkers, five panic buttons per bus and an online operator monitoring app. The panic button system has been linked with the SURAKSHA-MITRA command and control centre of the Kerala state. The buses operating under the smart bus programme were awarded the ‘Best City Bus System’ in Urban Mobility India (UMI) Conference 2019. The women checkers in smart bus are 10 in number for the 100 buses under the KSBL.

The KSBL, with the safety and security measures and incorporating women in bus mobility, has increased the confidence that the widely used bus system is a gender sensitive one. There are 1380 buses running in Kochi including both state and private run buses, and the initiative can be taken as an approach for better service delivery in the future.

The perceptions of the women bus passengers were mostly on the infrastructural provisions of the system including poorly maintained bus shelters, interchanges, and terminals, little or no provision for comfort zones and greater chances of harassment with overcrowding during peak hours. The approach by the KSBL, coupled with gender sensitive infrastructure, could sustain, and attract more bus commuters in the city.

**Ernakulam Jilla Auto Rickshaw Drivers Cooperative Society (EJADCS)**

The Ernakulam Jilla Auto Rickshaw Drivers Cooperative Society (EJADCS) was registered in 2019 under the Kerala State Co-operative Societies Act, 1969. The EJADCS was formed with the basic purpose of functioning as a support structure for the benefit of the side-lined auto-rickshaw drivers, without considering political or other interests, and to deliver standardised services to the customers. The society now comprises nearly 3000 drivers of the total 15,000 drivers in the Ernakulum district (Antony, 2021). Among the society, 10 women drivers have been registered till date. The society had initiated the auto ambulance service during the pandemic and had one women driver of the total 16 drivers who had come up for the service. Women’s participation in the service, even though less, has already received great feedback from the passengers for its increased safety and affordability.

Seamless Mobility in Kochi was one of the flagship projects of the Transport Department, GoK, wherein a common ticketing system, integrated fare and institutional integration were identified as the prime focal points of change. The institutional integration approach has been initiated with India’s first Metropolitan Transport Authority (MTA) constituted by a legislative enactment named the Kochi Metropolitan Transport Authority (KMTA) on 1st November 2020. The fare integration is expected to increase the metro patronage with competitive prices (Jose & Swamy, 2018) and increase the comfort cum reliability of the bus system in the city.

With some of the approaches in place, the KMTA believes that some of the following proposed initiatives are a necessity to increase women’s representation in the mobility sector. They are:

- Need for gender disaggregated commuter data: it is expected to help in better planning of the policies for women. Demand driven mobility planning, considering gender sensitivity will be possible with the disaggregated commuter data.
- Monitoring of surveillance cameras: the constant monitoring of the system would encourage more women commuters to take night trips and would thereby reduce the hesitancy to work in distant work centres.
- Discounted women commuters: the gender disaggregated data would ensure the discount amount possible for the women commuters and integrated ticketing would ensure that more people would use the system. Discounting the women commuters would also encourage the family members to undertake the journey in public transport system thereby increasing the overall patronage and reducing the dependency on private motorised modes and its externalities of congestion, accidents, and pollution.
- Transit Police: the metro system had initiated the idea of metro police; wherein dedicated
members of the Kerala Police were assigned to work in the metro system. Transit police shall ensure the safety of commuters in transit with frequent checking in public transport modes and ensure enforcement of best practices in the mobility system.

- Unified Redressal Mechanism: it was found during the interviews that most of the women’s harassment complaints appear in the social media platforms in Kochi due to the lack of a unified redressal mechanism for the mobility sector. The redressal mechanism is also expected to increase the confidence of women commuters in travelling in public and non-motorised transit modes.

**Surat, Gujarat**

Surat is the second-largest city in Gujarat state both in terms of area and population. It is one of India’s most dynamic cities, with a decadal population growth rate of 63.3 per cent between 2001 and 2011 (Census, 2011). The city is home to about 41.76 lakh migrant labourers (from 21 states of India and 33 districts of Gujarat), constituting about 58 per cent of its total population (Patel & Behera, 2020). They work in textile manufacturing, dyeing, and printing, power loom, embroidery, cutting and packing of cloth, construction, diamond cutting, packing, and polishing; among these, about 60 per cent of the migrants work as contractual labourers and daily wagers.

The women workforce participation in Surat city was nine per cent (Saha, Gandhi, Devi, & Sinha, 2013) in 2001 and had slightly increased to 10.7 per cent in 2011 (Census, 2011). In Surat city, shared auto rickshaw is the most prominent form of public transport and has a motorised mode share of 17 per cent (CEPT University, 2018). Thus, the predominant mode used by women commuters was shared auto before the introduction of the public transport system in 2014. With the implementation of integrated public transport system, women have started using the bus service for their daily commute due to the availability of seats or space to stand in the bus. Women feel safe and secure while travelling by bus compared to the shared auto rickshaw services.

As per the safety audit in Surat city, 893 dark spots with no streetlights, 690 audit points with no existing footpath, 1329 vendors were mapped, improving visibility on streets and among the 494 bus stops audited 196 were under poor lighting and 206 under poor footpath accessibility conditions (Safetipin, 2021). The safety audit clearly defined the need for better gender sensitive infrastructural planning and improved accessibility of the public transport system.

Surat city had inaugurated Bus Rapid Transport System (BRTS) in January 2014 and the City bus service in November 2016 under the leadership of Surat Municipal Corporation (SMC). Various departments and companies have been involved in the successful implementation of the public transport system and the same has been instrumental in daily bus operations. The various departments involved in the daily bus operations are as below.

- BRTS and Traffic Department, SMC
- Surat Sitilink Limited, SMC
- Traffic Police Department
- Intelligent Transport System Management Agency
- Automatic Fare Collection System Agency
- Bus Operator and Driver Agency
- Conductor Agency
- Security and Housekeeping Agency
- Admin Staff

All the above listed departments or agencies have a combined women's worker participation of eight per cent. The conductor, housekeeping, and administrative agency fare well in terms of women’s participation, with almost 90 per cent of women workers compared to other agencies. In 2018, the city prepared a Comprehensive Mobility Plan 2046 for Surat city. The plan has been prepared with the vision to have a ‘Safe Accessible Reliable Advance and Low Carbon Mobility’ in Surat (CEPT University, 2018). One of the strategic goals has been to focus on improving the quality of life of the people and providing a safe and sustainable transport system that focuses on women’s safety and empowerment in the public transport system.
Pink Auto Project

The Urban Community Development (UCD) department under the SMC has been actively implementing various government schemes to reduce poverty and vulnerable poor households by enabling them to access self-employment and skilled wage employment opportunities. The department has been very active for women's empowerment in the city and tries to involve women in all possible sectors where they can earn comparatively more than household work.

On 28 November 2016, during a regular meeting with the representatives of the area in the SMC, the idea of ‘women as drivers in the public transport system’ emerged and subsequently ‘Woman as an Auto Rickshaw Driver’ emerged after detailed discussion about the sector and benefits to the women. After discussions with the municipal commissioner and board members on the government’s role, finance details and flexible timings, everyone praised and supported the Pink Auto project and enabled it to be converted into reality on 2nd June 2017. This project has been implemented with all stakeholders' support, including the SMC, Training Centre - Bank of Baroda - Rural Self-Employment Training Institutes (BOB-RSETIs), beneficiaries and family, bank, Regional Transport Office (RTO), and Auto Rickshaw Agency.

The aim of the Pink Auto project is ‘For the Women, By the Women’ (Jariwala, 2021). This project aims to employ women through Pink Auto driving, safe alternatives for women, and safe transport services for school children. Currently, there are 50 Pink Auto rickshaws on the road to cater to the requirement of women and children of Surat city, and more than 80 women drivers have displayed their eagerness to join the crew (Aashishbhai, 2021). The UCD department had set up meetings with various schools and parents to make them aware of the Pink Auto project and its benefits. The parents of school children have started using the Pink Auto service for their children’s school pick-up and drop-off. It has created a fixed income of INR 8000 to 10,000 per month for the drivers. The UCD department has also helped Pink Auto beneficiaries to connect with aggregator service providers, thereby enhancing the lean period demand of the system.

Initially, there were very few passengers per day as people were not aware of this project and due to the limited number of autos; women drivers found it difficult to stand and wait for passengers near other auto drivers. The beneficiaries then decided to stand at major locations in group. This change made the people aware about the project and women passengers from major locations such as railway station, Gujarat State Road Transport Corporation (GSRTC) bus depots, major BRTS stations and other market areas started using the system. The SMC also banned other auto rickshaws except Pink Auto rickshaws in the old city area (Rajpath Road) to reduce traffic congestion during the morning and evening peak hours. The Rajpath road connects the major market area and the railway station. This also led to increased awareness about the project in the city and increased the passenger demand during peak hours. As per passenger responses, they feel safe and secure while they are travelling in Pink Auto, and they are now able to travel even late at night. After launching the Pink Auto project, various social organisations have even tried to adequately patronise, support, and motivate these beneficiaries by honouring them at various public functions.

The major challenges faced in the process of implementing the project were:

a) Traditional mind-set of family members – Auto driving by a woman is perceived to be a tough, challenging, and insecure profession by the family members. Several one-to-one meetings with beneficiaries and their families, effectively dispelled any doubts that emerged.

b) Licencing for auto rickshaw – The computer skills to acquire the license were found to be a challenge for the applicants by the department. The Bank of Baroda had set up the Rural Self-Employment Training Institutes (BOB-RSETIs), intending to impart training to unemployed youths, particularly from rural and semi-urban areas, to engage them to be in self-employment enterprises (Aashishbhai, 2021). The SMC had tied up with BOB-RSETI for women’s training.

c) Training women to drive auto rickshaw – Each one of the beneficiaries was trained to drive the auto rickshaw at the training programme organised by the UCD department. Most women were able to drive the auto rickshaw confidently within 10 days. The women were also given the opportunity to train other beneficiaries, improving their overall skillset.

d) Loan for auto rickshaw – The women who were approached for the Pink Auto project belonged to the economically backward class, and they did not have enough money to buy auto rickshaw. After several meetings with banks and detailed discussions, the Bank of Baroda showed its
willingness to provide loans to beneficiaries under this project with a seven per cent interest rate on 95 per cent of the vehicle cost, i.e., INR 1.7 lakh approved for the loan. The auto rickshaw agencies also supported this project and agreed to take the down payment in instalments.

Some of the major findings from the interview of Pink Auto beneficiaries were:

- Before joining the project, they were earning a maximum of INR 8000 per month after a 10-hour work every day. After becoming Pink Auto Rickshaw driver, they are earning INR 18,000 per month and have flexibility in working hours.
- The flexibility in working hours is the major factor for all the women and it allows them to handle household work and earn by working during peak hours.

The firm determination of the SMC officials and administrators has steered this project to take off. The project has opened opportunities for socially backward women to better livelihood, education facilities and social well-being. The project has acted as a catalyst for women to work in the public transport sector as conductors, ticket checkers and in vigilance teams. With the two shift timings, women can handle household as well as work responsibilities. This has made women commuters feel safe in the public transport system. The approach by the city is, however, small considering the area of the city and the project has the potential for scalability.

The UCD department is planning to develop exclusive Pink Auto stoppages at active locations such as railway stations, schools, colleges, airports, and hospitals. The department is also identifying the possibility of the system to act as a feeder to BRTS in the city. The talks are in progress with the government to purchase Electric Auto rickshaws in collaboration with the Gujarat CSR Authority with a vision to Sustainable Urban Mobility through E-mobility. Gujarat CSR Authority is expected to provide 20–30 per cent of the financial assistance to beneficiaries for the procurement of E-Rickshaw. The UCD department is planning to develop exclusive Pink Auto stoppages at active locations such as railway stations, schools, colleges, airports, and hospitals. The department is also identifying the possibility of the system to act as a feeder to BRTS in the city. The talks are in progress with the government to purchase Electric Auto rickshaws in collaboration with the Gujarat CSR Authority with a vision to Sustainable Urban Mobility through E-mobility. Gujarat CSR Authority is expected to provide 20–30 per cent of the financial assistance to beneficiaries for the procurement of E-Rickshaw. Under this project, E-autos will also be provided on daily rent to the urban poor who are not able to purchase the auto.

6. DISCUSSION

The case cities—Kochi and Surat—have been discussed based on the effectiveness, scalability, and transferability of the gender sensitive initiatives.

Kochi has observed an inclusivity of women and transgender community within the work force of the metro system. The inclusion of women in different work domains has been able to instill belief among the public that the work is not divided based on gender. The metro system in Kochi has empowered 640 women under Kudumbashree community and has 16 per cent of the staff as women which has a direct impact on the user perspective of the system. The cleanliness of the metro system was considered by 85 per cent of the commuters as the key factor to choose the system and the travel characteristics such as safety, security, comfort, and reliability have been attributed by 80 per cent of commuters for customer satisfaction. The widely used bus system in Kochi, was understood to command ridership, given the affordable and wider network connectivity of the system (Jose & Swamy, 2018) and the user perspective is improving with the induction of women as ticket checkers in the system. The infrastructural constraints such as poorly maintained bus shelters, interchanges, terminals, and lack of comfort zones have kept the captive riders in the bus system, whereas better infrastructural amenities in the metro system have attracted the choice riders to it.

Surat has empowered eight per cent of women in the different mobility departments with almost 90 per cent of them working as conductor, housekeeping staff and at the administrative agency. The Pink Auto project has been preferred by parents for school trips, defining the safety and security instilled within the system. The initiative has also been found to be preferred by young boys and girls, considering the behaviour and safe driving nature of women. Before joining the project, women were earning a maximum of INR 8000 per month after 10-hour work every day but now they are earning INR 18,000 per month and have flexibility about the working hours, enabling them to undertake multiple trips within a day. The amenities for the women in the project have been found to be constrained, with little or no parking space for the rickshaws and lack of access to public toilets.

The scalability of the initiatives in Kochi has been understood from the future plans derived under the
legislatively enacted Kochi Metropolitan Transport Authority (KMTA). The integration of the mobility actors with the KMTA shall be able to generate gender disaggregated data thereby enabling demand driven planning; installation of surveillance cameras at identified dark spots; discounted rides for women commuters which in turn shall enable increased empowerment and also encourage other family members to choose public transport system as a commuter mode; the concept of transit police which shall assure enforcement of safety and security and create a unified redressal mechanism to enact on the issues of commuters. Nearly 68 more women drivers were interested to join the Pink Auto project, in addition to the existing 50 drivers, indicating the impact and scalability potential of the project in Surat. The UCD department has also initiated procurement of Electric Auto rickshaws and has preferred women drivers for the programme. The infrastructural provisions such as designated parking locations and improved access to public toilets will influence the scalability of the women in transport in Surat.

The informed decisions from the disaggregated data collected at CRUT, Bhubaneshwar within the city bus system has 63 per cent of women users rating the system as safe and affordable, 85 per cent women are highly satisfied with the availability of the priority seats, 98 per cent of the elderly city bus users have rated ease of boarding and alighting as very good; and 57 per cent of the passengers have shifted from other modes to the city bus system (Mahapatro, 2021). The increasing driver participation of the Bangalore Pink Taxi and the user perspectives of safe and secure service are some of the transferability cases in India. The replicable initiatives have been run mostly on pilot phase and thereby have no greater impact at the macro-level of the cities. Transferable initiatives have also enlightened the need for better gender sensitive law enactment at the national level thereby having an impact on the enforcement activities.

7. CONCLUSIONS

Developing gender sensitive projects has been found to be effective in both the case cities, both at the transport and the city environment levels. The projects are also understood to have scalable and transferable impact by prioritising the regulatory measures thereby ensuring the safety and security of women. The Motor Vehicle Act, 1988 (Amendment in 2019) has been understood not to be gender sensitive with the increased cumbersomeness for obtaining the driving license. This directly implies the need for national level law enactment for better empowerment of women in transport. Infrastructural constraints have been understood from the case cities as the major deterrent for women’s participation in the transport workforce, wherein it is hoped that the initiatives such as smart toilets under smart city mission of the Ministry of Housing and Urban Affairs (MoHUA) will create an expansive network, enabling access to public toilets. Institutional integration will have a pivotal role in determining gender sensitive mobility planning in cities and shall ensure access to safe mobility choices thereby achieving transport justice for the commuters.

REFERENCES


