



## **Intermediate Para-Transit (IPT) systems: A case of private players in a sector of government monopoly**

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### **ABSTRACT**

The transport sector in India has immense growth opportunities and is poised to grow enormously in the future. However, the public transport sector has been found wanting thanks to government monopoly and limited private sector involvement. Bucking this trend has been the slow growth of Intermediate Para-Transit vehicles which have silently started a transport revolution, as a mass transport mode for poor in India. The paper analyses their role and identifies the need to recognise and legalise their existence for the benefit of the people of India

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# Intermediate Para-Transit (IPT) systems: A case of private players in a sector of government monopoly

## Executive Summary

Sustainable Transport has often been the buzzword for transport planners and policy makers; the systemic design of a transportation network which fully integrates, involves and evolves various modes of transport for providing a seamless, affordable and efficient service for the people. This also takes into regard the cultural, social and economic scenarios of regions and the behavioural patterns of the commuters. This means, the transport plan for a particular region shall cater to the realities and requirements of the people living or commuting there. This is a market-driven mechanism where the operation of services is designed to cater to the demands of the commuting segment. Developing of Metro Rail/Light networks, introduction of buses and boats shall presuppose a market analysis which generates information on the number of passengers, origin and destination, type and preferred mode of service etc. This would mean recognising those transport modes which are considered as an integral part of a daily commuter's life. Cycles of Amsterdam<sup>1</sup>, walking in Great Britain<sup>2</sup>, and suburban trains in Mumbai are fine examples of this proposition. It is in this context that the role of Intermediate Para-Transit systems (IPT) exist which acts as a bridge between the people and their destinations. This paper is aimed at highlighting the role of IPTs in the mobility requirements of the vast population in India and inquires into the barriers facing the sector..

### 1. What Ails Transportation in India

The urbanisation trends in India from 17.3 per cent (2001 Census) to 31.2 per cent (2011) is indicative of the increasing shift from rural to urban which is scheduled to grow by 37.2 per cent by 2031 (Ribero, 2003). Intra-state migration comes to 84.2 per cent with a total of 314 migrants as per Census 2001 which largely shows the increasing mobility of the people in India. Transport is therefore an important factor in supporting the cause of mobility (See **Figure 1**). India has the largest railway network (64,460 km rail lines<sup>3</sup>) and one of the largest automobile industries. According to the Society of Indian Automobile Manufacturers (SIAM), the annual vehicle sales are projected to increase by 9 million by 2020; the industry currently provides direct and indirect employment to 13 million people.<sup>4</sup>

<sup>1</sup><http://iamsterdam.com/en/visiting/plan-your-trip/getting-around/cycling>

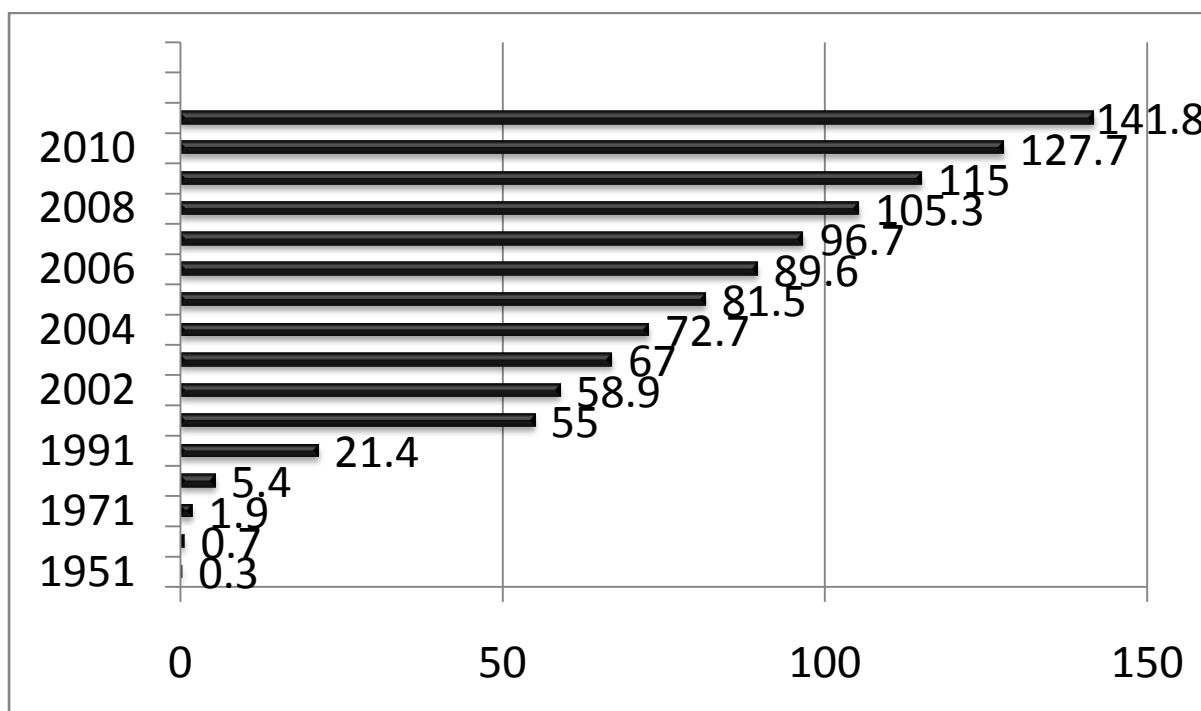
<sup>2</sup>OECD (1998), *Safety of vulnerable road users* Organisation for Economic Co-operation and Development OECD, Paris.

<sup>3</sup>World Bank WDI 2010-2014

<sup>4</sup>Demographic Change and Urban Transportation systems: A view from India, Sain/Keuschen/Klump, July 2012

There has been a staggering 100 fold increase in the number of motorized vehicles in India since 2000. The transition from bullock carts to BMW's has been aided by the increasing private consumption (60 per cent of GDP<sup>5</sup>), per capita income (USD 1,570 in 2013<sup>6</sup>) and mobility of people (See Graph 1). However, the demand clearly outweighs the supply.

**Graph 1: Total Motor Vehicle Registrations in India (1951-2010)**



The public bus sector is monopolised by the federal/state governments through various forms of interventions, primarily nationalisation<sup>7</sup>, while the railways are entirely operated by the Indian Railways under the Ministry of Railways. Similarly, the water transport sector is operated through various federal state machineries and has very limited involvement of private players. This has not helped the cause of the growth of public transport in India.

The sector has been witnessing a significant decline due to various factors, particularly the failure of the government in sustaining the growth of the sector. Public buses have been running into losses (Rs 6,303 crore in 2010-11<sup>8</sup>), and the railways have added only 11,000 km in the last 62 years<sup>9</sup>, while the

<sup>5</sup> World Bank WDI 2010-2014

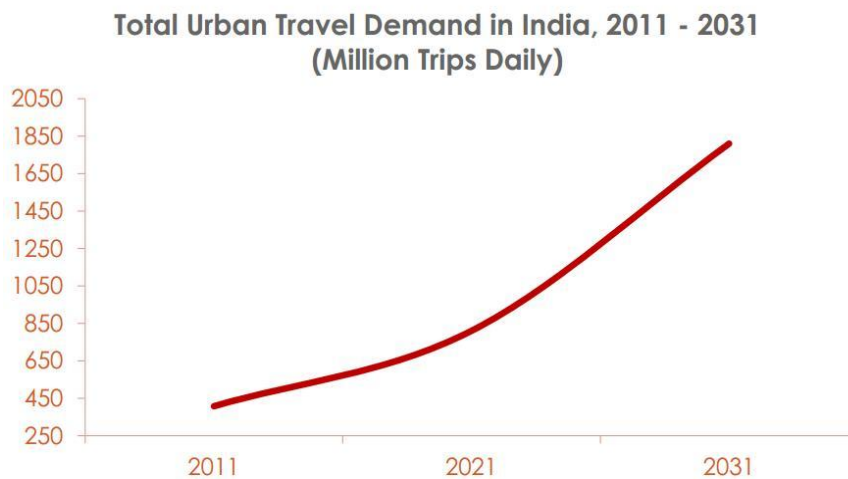
<sup>6</sup> [http://en.wikipedia.org/wiki/Income\\_in\\_India](http://en.wikipedia.org/wiki/Income_in_India)

<sup>7</sup> Section 99 of Central Motor Vehicles Act, 1988

<sup>8</sup> Key Statistics of Public Transport, Ministry for Road and Highways

share of water transport is a miniscule 2 per cent for passenger and 7 per cent for goods traffic in India<sup>10</sup>. This is despite increased trip volumes and travel demands (See Figure 1). 1, 20,252 buses run by government run state transport corporations carry an estimated 2,573.33 crore people (2 buses for every 10 million passengers). This shows the huge shortfall in transport systems for supporting the mobility requirements of the Indian population. The 6,000-odd trains of the Indian Railways have been identified to carry 23 million passengers per day. Calls for privatization of and private investment in public transport sector have slowly gained momentum in India. The government's call for 100 per cent FDI and privatization of railways has shown visible signs of the changing mindset.<sup>11</sup>

**Figure 1: Total Urban Travel Demand in India, 2011-2031**



### 1.1 The Issue of Last Mile

People travel for work, education and markets. Most planners and governments have been investing maximum time and resources for connecting people with their destinations, ordinarily called the last mile issue. Major transport systems however fail or face limitations in getting last mile connectivity, so people have to walk or seek alternatives.

The Mobility share of various transport modes is interesting considering the fact that a huge section of people rely on informal private passenger vehicles. This segment consists of autorickshaws, which are largely regulated across federal states in India, and other IPT vehicles called chakdas/share autos, operated by private players. Currently, the urban poor are the major users of this service, given their affordability and accessibility. The fact that the urban poor constitute around 21 per cent of the urban

<sup>9</sup> <http://www.ndtv.com/article/india/indian-rail-network-added-11-004-kilometres-in-62-years-305579>

<sup>10</sup> <http://www.livemint.com/Opinion/hkC9ZcvCbqIWbB141LnDwK/After-years-of-neglect-India-wakes-up-to-coastal-inland-wa.html>

<sup>11</sup> <http://www.hindustantimes.com/india-news/govt-likely-to-permit-100-fdi-in-railways/article1-1236839.aspx>

population (World Bank Indicators, 2010)<sup>12</sup> and is unable to own or use private vehicles is a good reason for studying the role of IPTs in India. The paper attempts to analyse the role of IPTs in India and suggests why the government need to understand, recognise and integrate IPTs into the public transport network of the country.

## 2. Defining IPT: The Indian Way

Para-transit vehicles are a for-hire flexible passenger transportation that does not necessarily follow fixed routes and schedules. They provide two types of services: one involving trips along a more or less defined route with stops to pick up or drop passengers on request. The other is a demand-responsive transport, which can offer a door-to-door service from any place of origin to any destination in a service area.

IPT systems across the world cater to different segments of the population and have been considered an informal means of transit. In a country with a billion populations; IPTs such as share autos, share taxis, maxi cabs, cycle rickshaws etc has been moving people across short distances in an effective manner. They have been found to be an efficient, accessible and safe transit system facilitating as feeder systems and solving the last mile issue.<sup>13</sup> The definition and scope of the para-transit system differs in developed and developing countries. In developed countries, the para-transit mode is usually 'Demand Responsive Transit', which works by a 'Dial- a- Ride' system managed by single or multiple operators through a call centre. Even in India innovative systems like the EcoCabs or dial-a-cycle-rickshaw scheme in Fazilika in the state of Punjab has been successful. . This mode of transportation complements the main public transportation system. In developing countries, on the other hand, the supply deficit of public transportation has led to the mushrooming of a bewildering range of varying modes of transit, in a bid to bridge the gap between public transportation and private vehicles. In several Asian, African and Latin American cities, it is perhaps the most common and widely used form of public transport. Some of the major para-transit systems include the angkots in Indonesia, tuk-tuk in Thailand, mini-buses in Dakar, Senegal and Matatus, dallas in Uganda and Kenya. In the seminal paper 'Review of IPT in Third World Countries', P.R. Fouracre, DAC Maunder (1979) mentions the diverse nature of IPT

<sup>12</sup> <http://www.tradingeconomics.com/india/poverty-headcount-ratio-at-urban-poverty-line-percent-of-urban-population-wb-data.html>

<sup>13</sup> Role of Para-Transit in India, Institute of Urban Transport

systems which largely acted as ‘taxi-like’ and ‘bus-like’ services. In India, chakdas, auto taxis, and Vikram autos act as a major feeder system in spite of the poor infrastructure support and have been largely used by the urban poor. IPT has been playing an important role for the urban poor in providing both mobility and employment. It is accessible, available, flexible, adaptable and affordable (Anvita Arora, Mata Jarnhammas, 2010).

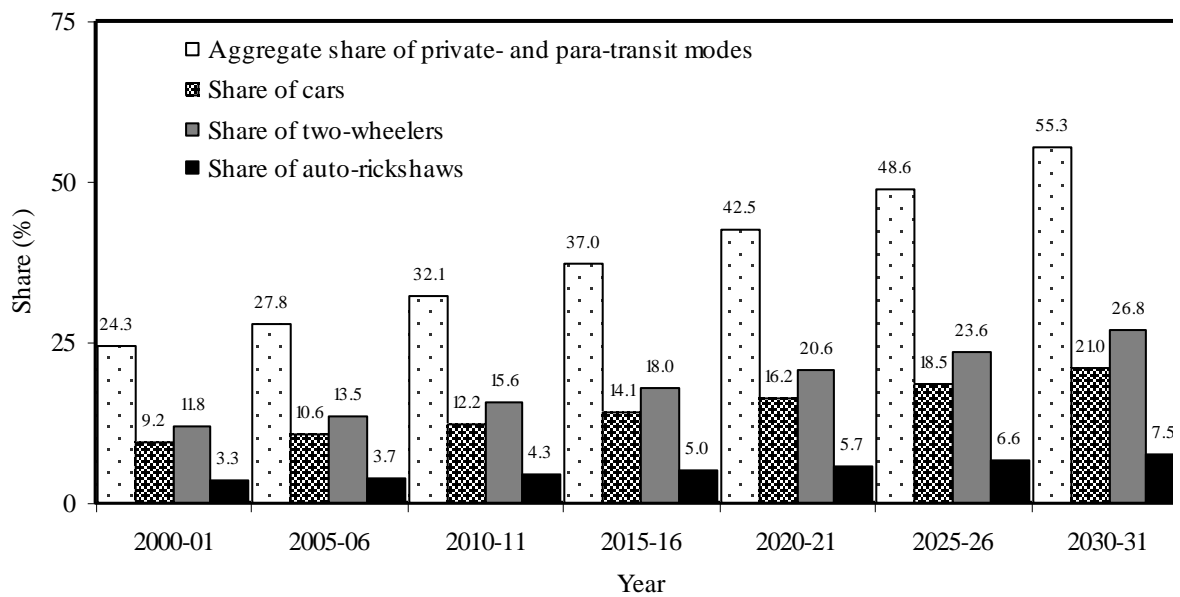
**Table1: Prominent Cities with IPT’s in India**

City	Type	Remarks
Alwar, Rajasthan	Three-wheeled share autos (Vikram)	Approximately 1,400 vehicles run on around seven notified routes seating around 15 people
Jaipur, Rajasthan	Minibuses and Vikram share autos	Operates in 36 routes carrying 0.5 million passengers
Mumbai Metropolitan Region	Three-wheeled autos and share taxis in Mumbai-Pune route	Ordinary autos converted as share autos and taxis (300-500)
Rajkot, Gujarat	Autorikshaw taxis, called as chakdas	Around 6,000 chakdas covering 0.4 million passenger trips
Indore, Madhya Pradesh	Minibuses and vans, Tata Ace magic and Maruti Vans, LPG autos	Around 500 minibuses and 550 mini vans, Vikram share autos were banned
Lucknow, Uttar Pradesh	Three-wheeled shared autos (Vikram)	Around 4,000 autos
Chennai, Tamil Nadu	Three-wheeled share autos (Vikram), maxi Cabs	Around 15,000 carrying two million passenger
Kochi, Kerala	Maxi Cabs as autotaxis	-
Fazilka, Punjab	Eco cabs or cycle rickshaws	Operated on dial-a-ride basis, intended to benefit 25,000 cycle rickshaws

Current policies do not however recognise their contribution or consider it as a public transport. Currently, two-wheeled motorcycles dominate and are 71 per cent of the entire vehicle population, followed by car at 13 per cent while the share of buses which carry more than 90 per cent of public

transport<sup>14</sup> has declined from 11.1 per cent in 1951 to 1.1 per cent in 2011. This is in a scenario where the per capita mobility by two-wheelers, auto-rickshaws and cars had increased by 124 per cent, 130 per cent and 97 per cent respectively against the corresponding increase of 60 per cent for buses in India. Due to this, mobility share of private and para-transit modes increased from 19.4 per cent in 1990-91 to 24.3 per cent in 2000-01.<sup>15</sup> See Graph 2.

**Graph 2: Projected share of Private and Para-Transit modes (cars, two-wheelers, autorikshaws etc) during next three decades)**



### 3. Government and the State of Transportation

The current public transport scenario has largely been influenced by the policies of the government which has prevented the entry and operation of IPTs. Policy and infrastructural barriers have affected its growth as service provider for the urban poor in India.

**3.1. Policy Barrier:** The wordings of National Urban Transport Policy (NUTP) are however clear on the role of IPT's and negate the existence of this service. "Para transit is normally expected to fulfill a need that neither public transport nor personal vehicles are able to fulfill.... Para transit would not normally be used for regular commute trips to work or school....As such, this policy would seek to restore para-transit to its normal role by

<sup>14</sup> The Crisis of Public Transport in India: Overwhelming needs but limited resources, Pucher, Korattyswaroopam, Ittyerah, Journal of Public Transportation, Vol 7, No.4, 2004

<sup>15</sup> The Demand for Road Based Passenger Mobility in India: 1950-2030 and relevance for developing and developed countries, Sanjay Kumar Singh, EJTI, 6, No 3 (2006), p 247 to 274

persuading on the improvement of public transport.” This clearly shows government attitude in not recognising IPTs and limiting its functionality, while in reality, IPTs have become a major mode of transport and have even substituted mass transport systems in some cities.<sup>16</sup>The important and pertinent role of IPTs needs to be considered by the state while undertaking transport planning and policymaking process in the sector.

### 3.1.1. IPTs: A Case of Private Sector Efficiency vs Government Apathy

Vitality, the IPT system in India connects cities with other parts of the state, including rural areas. They flourish where public bus and rail systems, a state monopoly, are absent. IPTs systems provide effective ways of transporting people; linking them to jobs or employment opportunities. IPT users comprise largely of the urban poor, and so it is considered as the transport system for the poor, a tagline which may be deprecating but vital in its function. The ease of procuring licences for plying IPTs has helped the large scale entry of private players. They brought in efficiency by increasing trip frequency, miles travelled, shared resources and facilitating better experience in riding. The flexibility of the system allowed accessibility, through better penetration into the market, while a market-based pricing system enabled them to compete by reducing fares and providing customized offerings (free wifi, GPS, audio systems etc) which was hitherto not prevalent in the transport scenario of the country. The affordability factor attracted the masses and helped them gain traction especially in rural areas where other transport systems did not operate.<sup>17</sup>

However, the informal and unregulated environment created by the state had a debilitating affect on IPT operations across states. Being operated by private players, the state often uses its authority to create barriers for their functioning, such as in the case of e-rickshaws in Delhi. The Delhi Transport Department banned the electrically powered rickshaws from its roads backed by a Delhi High Court ruling in August, 2014<sup>18</sup> which suddenly stopped the livelihood of around 0.1 million rickshaw drivers. The existing rules did not make a provision for e-rickshaws, which had sprouted thanks to the absence of any norms.

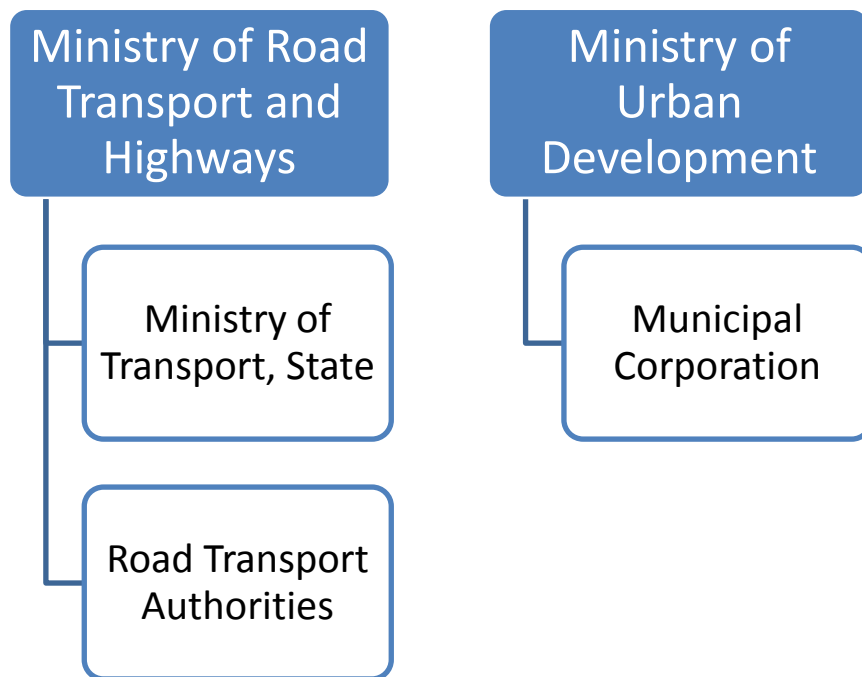
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<sup>16</sup> Informal Public Transport, GTZ , June 2010

<sup>17</sup> IPT Policy for Tamil Nadu, <http://embarqindia.org/ipt-policy-for-tn>

<sup>18</sup><http://indiatoday.intoday.in/story/e-rickshaws-delhi-high-court-motor-vehicles-act-gadkari/1/374933.html>



**Figure 2: Stakeholders of the IPT Sector in India**

Licenses for all forms of IPTs are provided by a regional-level transport office (RTO) with specific regulations for the categories of autorickshaws. The absence of rules for share autos, share taxis, chakdas, etc created distortions in the market as it occupied a space unauthorised by law. The policy apparatus of the state failed to respond to the demands of the market given the high acceptance and usage of IPTs. The ban of chakdas in city of Surat in Gujarat, e-rickshaws in Delhi, and maxi cabs in Tumkur in Karnataka have affected the passenger community as the existing public transport systems were neither able to replace nor supplement the role of IPTs. A lack of institutional support also affected the operators as they were not able to seek monetary support or avail loans from banks; procure social benefits like insurance which directly impacted their livelihood.

### 3.1.2 Why does the State not help IPTs to innovate? The Legal Dilemma

The actual number of IPTs in India has not been documented, which highlights the official apathy towards this system. IPTs are largely registered as maxicabs and taxis and the state-level road

transport authorities issue permits for IPTs to operate only as “contract carriage”, under the Motor Vehicles Act, 1988 and allied state rules. This means they can only operate from one destination ie, point A to point B and are disallowed to pick up passengers en route confining their operate to functions like marriages, carrying employees to work, tour packages etc. “stage carriages” like public buses and other utility vehicles are given the option to have scheduled stops and pick passengers on the routes identified. Given the nature of operation of IPTs; they are supposedly intended to cater to those classes of commuters who travel to markets, offices, schools etc and facilitate the last mile connectivity. However, the contract carriage permits restricts their usage and flexibility. The current system does not facilitate this nature of service which forces IPTs to operate illegally. These paradigms have pushed the operation of IPT’s into unscrupulous elements who bribe and neglect traffic laws. This could have been easily solved and facilitated through proper legal mechanisms and structural changes. The case of the privately funded *Alwar Vahini model* in the city of Alwar in the federal state of Rajasthan is a point worth mentioning as the city administration has legalised IPTs.<sup>19</sup> Legalisation has helped operators innovate and facilitate the mobility of the people in the city. They currently have GPS devices for tracking with a full-fledged call centre operation for facilitating their services and catering to market demands. A complaint system, with proper identification and permits, has helped people look for employment and create a livelihood. Through private investment and government recognition, the Alwar Vahini has transcended as a brand which prompted the Central government to replicate the model in other cities or towns in India. This has not moved as expected thanks to bureaucratic hurdles. There is a lack of comprehensive understanding and analysis of IPTs across federal states in India. In spite of the huge demand and increasing role of IPTs; the state has failed to integrate and envisage a proper sustainable transport system. Private participation will bring innovation and efficiency in public transport as seen in Alwar and Chennai.<sup>20</sup> The fact that these services are a major transport mode of urban poor should have been a major criterion for facilitating its operation in India.

### 3.1.3 How city of Chennai Showed the Way

Chennai city, in the state of Tamil Nadu, has shown the way forward in the transport sector for India. The transport department of the state took the landmark step in 2012 by regularizing IPTs in the state. The state had permitted the operation of share autos which facilitated short distance travel in the city. More than 2 million passengers utilised IPTs in the city, making it the second largest transport

<sup>19</sup> <http://timesofindia.indiatimes.com/india/Centre-wants-other-cities-to-follow-Alwar-Vahini-model/articleshow/18141120.cms>

<sup>20</sup> <http://timesofindia.indiatimes.com/city/chennai/Free-Wi-Fi-magazines-Auto-driver-offers-a-ride-to-remember/articleshow/17620568.cms>

provider after public buses.<sup>21</sup> They generated INR 20 million per day by carrying seven passengers per vehicle, which was ideal for the narrow roads, and fixed the gaps in the transport sector for a city with a population of 5 million (Census 2011), as per a study conducted by Civitas Consultancies on the IPT system in Chennai city<sup>22</sup>. Chennai City Connect Foundation lobbied for inclusion of IPTs as a formal transport system which was successfully implemented by the state government. The Tamil Nadu Motor Vehicle Rules were amended allowing IPTs to ply as stage carriage and ‘maxi cabs’ were allowed to take and drop passengers in routes chosen by the operators. The fares were fixed competitively and could be altered as per market conditions.

**3.2 Infrastructural barrier:** Local or state governments in India are responsible for facilitating transport systems in India. Bus terminals, shelters, walkways, parking spaces etc are identified, designated and managed by the government. However, such institutional support for IPTs operation has been largely ignored in India. No federal state or local governments have provided dedicated lanes, or designated parking spaces, or successfully integrated IPTs as a transport mode which discourages private players to venture into this sector, leaving poor infrastructural support for their mobility needs. Buses and railways, which are the major transport systems, work in isolation. IPTs are not allowed to enter Railway or Bus Terminals in most of cities. Transport and city planners do not envisage designs and facilities for seamless travel connectivity integrating IPTs. City corporations and other local self governments do not have mobility plans which are intended to develop the framework for transport systems in cities or towns, while institutional supports are vital for sustainable transport to exist.

**Table 2: Institutional support for IPT’s in cities**

City	Policy	Institutional support	Integration
New Delhi	E-Rickshaw Policy	No	Proposed with Delhi Metro
Chennai	-	Parking space provided	Proposed with Chennai Metro
Alwar	Alwar Vahini Scheme	Parking space	-
Kochi	-	Parking space	Proposed with Kochi Metro

<sup>21</sup> <http://www.thehindu.com/news/cities/chennai/into-the-gap-rise-and-growth-of-paratransit-vehicles/article425756.ece>

<sup>22</sup> Para-Transit Study in Chennai, 2013, Chennai City Connect Foundation and Civitas Consultancies

#### 4. Suggestions

It should be the call of the hour to realise the important role of IPTs in the transport sector in India. Here are few suggestions which could aid in the growth of the sector and help in realising the mobility needs of the people.

1. **Recognise and legalise IPTs:** The bureaucratic mindset needs to be removed to make way for a policy which considers the IPT public transport system. The Motor Vehicle Act should be suitably amended to categorise IPT and allow them to ply as stage carriages. The National Urban Transport Policy, state road and transport policies need to include IPTs while planning for cities or towns.
2. **Market intervention in IPT sector:** The market should decide the number of IPTs required in a regulatory environment of permit and driver identification system. Issuing of permits should be liberalised with fare prices regulated through market pricing strategies.
3. **Local governments to have the decision making power:** Municipal corporations, municipalities and panchayaths (local self-governments) shall be given the power to take decisions on IPT regulations. Permits shall be given and norms laid down by these bodies for seamless mobility.
4. **Integration:** The mandate of IPTs shall be to act as a feeder system to other transport systems. This requires integration at different levels. Integration is only possible through route rationalisation, infrastructure and design makeovers. Passenger growth shall be possible through this process which will minimise time loss and increase economic gains.
5. **Adapting technology:** One of the principal benefits of allowing private players in public transport operations is innovation. From Android apps to GPS systems, private players are quick in adapting the latest technologies which increase the efficiency of the transport systems and provide better customer satisfaction. The case of IPTs in Alwar and Chennai has shown how private players have responded to market demands.

We have argued that IPTs perform an integral role in supporting the mobility needs of the country. The government should not ignore this while devising transport policies for the country. IPTs have set the right example for private intervention in delivering public goods. Private efficiency and innovation shall be encouraged in Indian transport through effective mechanisms by opening up the sector. IPTs shall grow in a market situation which is not impeded by any barriers and which can be easily absorbed and integrated by other major transport systems like rail or bus. The next decade can usher better growth for India through swift and seamless mobility of the people through effective utilization of IPT systems.