Organizing the Role of the Intermediate Public Transport Sector: Focus on Auto rickshaw services.

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Urban transport scenario in Indian cities:

Urban travel mode in Indian cities is a predominant composition of walking, cycling and public transport including Intermediate Public Transport. (i.e taxis, auto rickshaws etc.)

<table>
<thead>
<tr>
<th>Travel Mode</th>
<th>share range in cities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walk</td>
<td>20% - 40%</td>
</tr>
<tr>
<td>Cycle</td>
<td>10% - 15%</td>
</tr>
<tr>
<td>2w</td>
<td>8%-20%</td>
</tr>
<tr>
<td>PT</td>
<td>0% -50%</td>
</tr>
<tr>
<td>Car</td>
<td>10% - 40%</td>
</tr>
<tr>
<td>IPT</td>
<td>5% - 15%</td>
</tr>
</tbody>
</table>

Source: MoUD, 2010

The variation is function of (1) city size and (2) per capita income.
Defining IPT:

Definition of Intermediate Public Transport:
Fill the gap between private transport & formal public transport modes in cities.

1. Taxi services / Autorickshaw Services
   - flexible,
   - demand-based,
   - door to door services

2. Informal public transport - (bus-like) services provided by shuttle autorickshaws
   - shared fixed-route services
   - intermediate stops for boarding and alighting

Source: Fouracre and Maunder, 1979 and Cervero, 2010

Benefits of IPT:
1. Mobility and Connectivity
2. Source of Employment
3. Complementarity role
4. Efficient, Low-cost Service
5. Market Responsive

Source: Cervero, 2000 and Tiwari, 2006
### Issues and Concerns:

| Minimum regulations for certifications by transport authorities. |
| Operations left to private operators |
| Safety & regulatory violations, Serious emissions. |
| Fare policy by authorities not honored by operators |
| Road infrastructure facilities not in compliance to the IPT modes. |


- **Introduction of mass transit systems** – Immense progress in cities today.
- **IPT modes, inevitable part of any Indian City** - not given any due acknowledgement, so far.
- **Integrated urban transport policy approach** - not been formulated yet.
- **Planning & development of road infrastructure, regulation for vehicles, licensing procedures and operations** - of IPT undertakings continue in isolation.
- **Urban transport planning and policy response focus** - limiting IPT, very little is done to incorporate IPT as part of inclusive PT system.
  
  Eg. Practices like Permit raj, Sugggestions Banning of Autorickshaws etc.

*Source: WRI Sustainable Policy Brief, Embarq, 2010*
Understanding the role that IPT plays,

IPT is a part of given any city, irrespective to size and class of city.

<table>
<thead>
<tr>
<th>City type</th>
<th>IPT function</th>
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</table>
| Big cities         | ▪ PT in place  
                     ▪ IPT serves as competition  
                     ▪ Acts as feeder |
| Medium sized cities| ▪ Plays large role in absence of or insufficient PT system |
| Small sized cities | ▪ Sole responsible mode for Public transport needs |
Auto rickshaws are the most common IPT mode in Indian cities,

The research focuses on:
“Reorganizing And Estimating The Potential Of The Auto Rickshaw Services Of The IPT Modes As A Part Of Integrated Transport System Using Policy Intervention As A Tool.”
Intermediate Public Transport is an inevitable part of a city’s transportation system in presence / absence of a public transportation system

However the function it plays in the city may vary

Hence to understand the role the Intermediate Public Transport plays, for the research purpose, 3 cities of Gujarat are selected on the basis of:

- A city where the Public transportation is in place
- A city where the Public transportation is skeletal in nature
- A city where the Public transportation is not at all present

**AHMEDABAD CITY**
Population – 55,70,585*
Public Transportation systems such as:
1. AMTS (since 1947, 1022 buses on 194 routes)
2. BRTS (initiated 2009)
3. Metro rail under construction

**SURAT CITY**
Population – 44,62,002*
Public Transportation systems such as:
1. City bus service by SMC (since 2008, 80 buses on 42 routes)
2. BRTS under construction

**NADIAD CITY**
Population – 2,18,150*
No public transportation system present.

Source: Census 2011
Stakeholder involvement

Service Provider
- Auto Rickshaw Owners
  - Provides auto rickshaw on rent to drivers on a per day basis

- Auto Rickshaw Driver

Service User
- Autorickshaw User

Service Regulators
- Transport Commissioner Council
  - Decides Regulations
  - Decides Fares

- RTO
  - Decides Regulations
  - Issues & Renews Licenses
  - Decided Fares

- City Traffic Police
  - Monitors Regulations
  - In charge of penalizing autorickshaw drivers in case of rule violations

- Autorickshaw Unions
  - Virtually do not exist as registered/legal unions
  - Confined as smaller groups at local levels

- Municipal Authorities
  - Assist in providing infrastructure facilities
### Ahmedabad autorickshaw service

- 3 seater – meter based, door to door service
- 3 & 6 seater – shuttle service, on predecided fare on fixed route.

### Nadiad and Surat autorickshaw service

- 3 seater
- shuttle service, on predecided fare on fixed route.
- Private service; though fare not decided on meter.

### SAMPLE SURVEYS

<table>
<thead>
<tr>
<th></th>
<th>Ahmedabad</th>
<th>Nadiad</th>
<th>Surat</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total no. of registered Vehicles</strong></td>
<td>9,67,904</td>
<td>1,52,928</td>
<td>6,62,429</td>
</tr>
<tr>
<td>(RTO office, 2005 - Nov 2011)</td>
<td></td>
<td></td>
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<tr>
<td><strong>No. of registered Auto rickshaws</strong></td>
<td>69,540 (7.18%)</td>
<td>15,494 (10.13%)</td>
<td>29,211 (4.4%)</td>
</tr>
<tr>
<td>(RTO office, 2000 - Nov 2011)</td>
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<td></td>
</tr>
<tr>
<td><strong>Sample Size</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of the total registered auto rickshaws</td>
<td>0.1 %</td>
<td>0.3 %</td>
<td>0.2%</td>
</tr>
<tr>
<td><strong>No. of surveyed autorickshaws</strong></td>
<td>86</td>
<td>46</td>
<td>60</td>
</tr>
<tr>
<td><strong>No. of Passengers surveyed</strong></td>
<td>100</td>
<td>50</td>
<td>80</td>
</tr>
</tbody>
</table>

**Survey location Selection.**

- Major city locations segregated zone wise, selected for driver & user survey where presence of autorickshaws & its movement are prominent.
**Reason for becoming an Auto Driver**

- **No other job**: Ahmedabad: 10%, Nadiad: 15%, Surat: 12%
- **Gives higher earning**: Ahmedabad: 78%, Nadiad: 75%, Surat: 80%
- **Family Business**: Ahmedabad: 6%, Nadiad: 8%, Surat: 9%
- **Friends/family suggested**: Ahmedabad: 5%, Nadiad: 4%, Surat: 6%

**Rickshaw owners/ rented drivers**

- **Ahmedabad**: 60% Rented, 40% Owner
- **Nadiad**: 70% Rented, 30% Owner
- **Surat**: 80% Rented, 20% Owner

**Owning a Rickshaw is a Costly Affair.**

- Majority of Auto drivers are Rented drivers (60-80%)
- Reason being difficulty in loan availability, too much documentation required, and higher interests charged by private loan lenders.

**Other findings-driver survey.**

- 100% drivers engage an agent to get a license – reason being lack of complete documents and a time consuming process
- Lack of appropriate positioning of auto stands
- 75% of auto drivers lack a feeling of future security.
- Demand a Pension scheme
- drivers feel need of basic training programmes, driving safety(45%) and vehicle maintenance awareness programmes.(25%)
**Shuttle service Affordable as well as Convenient for all.**

- Ahmedabad - only city which has private auto running through meter system.
- In Surat and Nadiad - shuttle auto system is a preferred mode .
- Shared auto is more affordable, accessible for short distances compared to other modes
- Nearly, 75% users find autorickshaw more accessible, convenient, affordable, and comfortable.
**USER SURVEY FINDINGS**

**Choice of mode – Preference over PT modes**

- Easy **availability**
- More **comfortable**,
- Door to door service, with **easy connectivity**
- **Cheap rates** for shuttle service.

**Perception**

**Negative image** driver perceived often find the **driver rude** and,

- **Not honest**, meter card/ revised meter card unavailability in case of Ahmedabad.
- Fare haggling issues
- In **absence of fare system, actual rates are not known to the passengers** and some times **end up paying more** for private autos in Surat and Nadiad
- Consider **Shuttle service a safer option** than private auto service in Surat and Nadiad.

**Suggestion**

- Feel the requirement of formal training to be given to drivers in terms of driving skills as they find them to be rash drivers.
- **Strong emphasis** over a **complaint authority to be set up.**
## Functioning of IPT System - Comparing the three cities.

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<th>Surat</th>
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<tr>
<td>• IPT – both main &amp; feeder mode.</td>
<td>• Autorickshaws have developed to function as PT</td>
<td>• Serves as gap filler</td>
</tr>
<tr>
<td>• Informality limited to certain areas</td>
<td>• Performs dual role of both IPT and PT</td>
<td>• Performs dual role of both IPT and PT</td>
</tr>
<tr>
<td>• More defined role.</td>
<td>• Shared system is illegal, however the system is practiced and demanded</td>
<td>• Wide demand based system, lucrative profession, stiff competition by both IPT and PT</td>
</tr>
<tr>
<td>• Though formalized, its unorganized</td>
<td>• IPT a better solution to meet demands of PT in such cities.</td>
<td>• Corruption widely spread</td>
</tr>
<tr>
<td>• Informal chakkdas bound to stay.</td>
<td></td>
<td>• City requires IPT in absence of PT</td>
</tr>
<tr>
<td>• Reorganization &amp; formalization scope</td>
<td></td>
<td>• Development of complementary service</td>
</tr>
</tbody>
</table>
Strategies For Organizing, Formalizing And Enhancing The Autorickshaw Services.

“Spaces of Overlap“:

- IPT works well with “enabling infrastructure”
- Organizes vehicles, Improves passenger way-finding.
- Physical Spaces - intermodal exchanges occur – Form Spaces of Overlap.
- Common Issue in all three cities:
  - Encroachment and Congestion creation on major junction and arterials –
    i. to attract passengers,
    ii. Context of antagonistic govt. policies makes them create their own infrastructure.
- Shuttle service is bound to stay.
- Formalized on low frequency PT routes.
- Reduces load on mass transit modes for passengers opting for shorter distances.
- Available to user at higher frequencies.
- Can increase ridership by integrating to mass transits.
Strategies For Organizing, Formalizing And Enhancing The Autorickshaw Services.

Ahmedabad:

- Designated improvised spaces – reduce sense of chaos and confusion.
- Integrated travel card system
- Improved parking infrastructure in accordance to user demand at important transfer points
- Shared autorickshaws – to be made formal to ply on interior areas.

Nadiad:

- Drivers work on a mutual understanding for stands – only issue arising is competition.
- Authorities can come forward
  i. Adopt a regulatory approach
  ii. Autorickshaws play the responsibility of providing city transport
  iii. Drivers can be registered
  iv. Dedicated stands – in accordance to demand and vehicle registration

Surat:

- Authorities should –
  i. Formalize the system
  ii. Drivers to be registered to reduce the competition
  iii. Designated stands/ areas to collect passengers
  iv. Stops to be designed / provided in accordance to the number of vehicles registered
Strategies For Organizing, Formalizing And Enhancing The Autorickshaw Services.

“CREATION OF TRANSPORT FACILITATORS:”

- Transport Facilitators – smooth flow and safety for users and drivers
- Creation of Infrastructure by government acts as incentive for IPT providers.

SIGNAGES –

- Easier for passengers to recognize and access transportation
- Reduces commotion and encroachment at interchange and access stops

PARKING RAILS –

- To address encroachments created by the autorickshaws on major junctions.

RECOGNITION –

- Accountable to responsibility provided by the government.
- Recognition & provision of benefits like pensions, insurance, health & education facilities.

“DRIVER COOPERATIVES:”

- Set up of a local level body in city transport authorities -
  i. precise training needs
  ii. improving & creating awareness on traffic rules & laws + labour legislations

Forming:

- Autorickshaw Fleet Companies – like G- Auto and driver co-operatives.
- Uniforms + Identity Cards
- Advertisement
<table>
<thead>
<tr>
<th>Sector</th>
<th>Policy Initiatives</th>
<th>Institutional Involvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructure</td>
<td>Policy guidance on <strong>provision of autorickshaw stands</strong> in cities, including selection of types of locations and appropriate infrastructure design characteristics.</td>
<td>• Central Level institution/authority</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Creation of IPT cell at Central Level</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Consequently at State level</td>
</tr>
<tr>
<td></td>
<td>Policy guidance on <strong>definition and coordination of roles of various stakeholders</strong> in infrastructure provision, including the RTO, Traffic Police, and the Municipal Corporation.</td>
<td>• Local Level – Municipal Authorities</td>
</tr>
<tr>
<td></td>
<td>Policy guidance on <strong>infrastructure such as servicing centers for four stroke vehicles.</strong></td>
<td></td>
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<tr>
<td></td>
<td>Policy guidance on <strong>roadway improvements such as possibility segregated lanes and speed controls to avoid conflicts between autorickshaws and faster moving motor vehicles.</strong></td>
<td>State level policy enhancements for autorickshaw sector</td>
</tr>
<tr>
<td>Training</td>
<td><strong>Inclusion of mandatory training sessions to be passed to procure license.</strong></td>
<td>• Central Level</td>
</tr>
<tr>
<td></td>
<td>Policy guidance in <strong>improving the authority responsibilities and for provision of IPT cell in Local Transport Authorities</strong></td>
<td>• State level authority to improve IPT service in the cities.</td>
</tr>
</tbody>
</table>

Source – Primary Survey Analysis and referred from WRI, Sustainable Urban Transportation Policy brief
## Policy Recommendations.

<table>
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<th>Policy Initiatives</th>
<th>Institutional Involvement</th>
</tr>
</thead>
</table>
| **Fares**                       | An analytical framework to **improve transparency and decision making in setting and revising fares** in the autorickshaw sector in cities, based on inputs including capital costs, fuel prices, and cost of living indices; Policy guidance on **setting fares so that autorickshaw services do not compete with public transport**, for long distance trips; Electromagnetic meter fare system to be developed and adopted to ensure correct rates, and to keep a check on overcrowding of autorickshaws. Policy guidance on the key stakeholders **that should participate in setting and revising fares**, including the RTAs, Municipal Corporation, driver unions, citizens and civil society.                                                                                                                                                                                                 | - Central level policy measure on fare setting system and stakeholders to be involved  
- To be formulated at state level transport authorities  
- City Transport Authorities                                                                 |
| **Permits (For cities where practiced)** | A policy framework for **improved transparency and decision making in implementing the right permit policy** for cities, based on considerations including city size, demographics/socio-economics, transport supply characteristics, and rate of growth of population and transport demand. **Formalization of share autos.** **Enabling environment for the entry of fleet companies** through appropriate legislative changes and permit policies. | - Central level policy guidance from the central level institution / authority.  
- Local Transport Authorities  
- Local Level Authorities  
- Local Level Authorities                                                                 |
| **Technology**                  | **Guidance on vehicle design improvements to address safety and public health issues and environmental concerns** for autorickshaw drivers and passengers.                                                                                                                                         | - Central Level Policy guidance  
- NGO’s, Local Transport Autho.                                                                                                                                     |
CONCLUSION – Autorickshaws as IPT mode in Indian Cities.

- **Future of transportation in cities.**
  Cities are growing, increasing needs for transportation

- **Responds to growth and changing demands more rapidly**

- **Harnessing the capacity of IPT providers to self organize and offer low-cost services, IPT will continue to fill gaps where other services just are not extended.**

- **Local governments would be well complemented by managing a blend of formal and IPT modes**

- **Ability to manage independent and public providers in a coordinated way can offer city governments potential capacity to increase mobility – diversifying options for passengers at low costs**

- **Tends to complete a missing link in the integrated formal transportation system.**

- **IPT needs to be supported, encouraged to be organized and formalized towards attaining a balance with the demands – achieving a sustainable system in urban transportation**
“Problems cannot be solved with the same mindset we created them”
- Albert Einstein

THANK YOU ..