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**Coping with paratransit in developing cities, a
scheme of complementarity
with institutional transport
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A first question of definition and terminology

- informal transport
- paratransit
- illegal or clandestine?
- *artisanat* in French, artisans?
- small size operators
- micro-operators

Types of Vehicles used by micro-operators

Some cases of non motorized vehicles

A set of small size motorized vehicles

- individual taxis, metered or not
- motorcycle-taxis (1-2 seats),
- shared taxis (4-5 seats), sometimes 6 seats, exceptionally to 8
- micro buses (9-15 seats)
- minibuses (16-24 seats)...
- midibuses (25-45 seats) : under the 50 passengers capacity beyond which one considers usually the vehicle as a bus.

Diagnosis of an important role of micro-operators in many developing cities

Sub-Saharan African cities

Table: Share of public transport modes (%)

source: Godard 2005, from many sources

	Institutional transport	Motorcycle taxi	Metered taxi	Shared taxi	Minibus	Total micro-operators	Total public transport
Abidjan	32	N	18	21	29	68	100
Accra	13	N	N	27	60	87	100
Addis Ababa	27	N	1	N	72	73	100
Conakry	3	N	N	52	45	97	100
Cotonou	2	90	2	N	6	98	100
Dakar	5	N	10	15	70	95	100
Dar Es Salam	3	N	3	na	na	97	100
Douala	2	30	N	60	8	98	100
Harare	5	N	na	na	na	95	100
Nairobi	30	N	N	N	70	70	100
Ouagadougou	25	N	N	75	N	75	100

**Diagnosis of an important role of micro-operators
in many developing cities, other regions
Table: Share of public transport modes (%)
source Uitp or other (*)**

	Institutional transport	Shared taxi	Minibus	Other	Total micro-operators	Total Public transport
Algiers*	6	4	77	13	94	100
Cairo	48	N	52	N	52	100
Casablanca*	46	50	N	4	28	100
Tunis	100	N	N	N	N	100
Mexico	27	25	48	N	73	100
Sao Paulo	100	N	N	N	N	100
Delhi*	92	N	N	8	8	100
Jakarta	66	N	34	N	34	100
Manilla	24	3	73	N	76	100
Tehran	44	29	27	N	56	100

A parallel crisis of large companies of public transport in Africa

- **Case of Sub-saharan cities:**
 - disappearance of bus companies in a majority of cities
 - Examples of KBS in Nairobi or Sogetrag in Conakry presented as success in 1990:
 - loss of influence for KBS
 - Disappearance of Sogetrag
 - Attempts for new private or mixt companies, not yet convincing
- **Case of Maghreb :**
 - difficulties of State owned companies in Algeria and Marocco,
 - New emerging companies
 - Resistance of stateowned companies in Tunisia

Advantages of paratransit, factors of success

- **Unfair competition with bus companies**
- **Adaptable and flexible operation**
- **Operation rule favouring high vehicle occupancy**
- **High length of driving daily time**
- **Low level of investment**
- **Better risk management**
- **Vehicle industrial production cost and price**
- **Lobbying power**
- **Arrangements with the Police**
- **Employment**

The Employment dimension

- A large bus operator : Sotra in Abidjan in 90s: 6000 jobs
- Artisan micro-operators in Dakar: around 30 000 jobs
- Motorcycle taxis in Cotonou: 60 000 jobs at minimum
- Another example outside Africa, Dakka in Bangladesh, around 500 000 jobs...

Collective external costs of transport operated by artisans

- External cost of congestion
- Unsafety
- Pollution
- The energy consumption and Green House effect

they depend on the urban density.

The extreme example of motorcycle taxis

Factors of success:

- crisis in the institutional public transport (political strikes in Douala or in Lomé)
- quality of service : door to door service
- flexibility of operation
- low cost of manpower
- very rapid mode, specially in congested areas
- bad state of roads : motorbikes can go where buses and minibuses cannot go in peripheral areas
- low cost of fuel distributed by smuggling networks (from Nigeria in Cotonou and in Lomé)
- low cost of investment : imported second hand vehicles from Asia are very cheap; furthermore there is a new local Chinese industry of motorcycles located in Douala.

This success is obtained despite of important shortcomings of motorcycles taxis according to the modalities they are used:

- pollution due to: 2-stroke engines, too much oil in mixture, bad engine maintenance
- accidents, with a danger due to different factors: driver behaviour, no use of helm, vulnerability of two wheels, state of the roads...

The classical evolution of Authorities attitudes concerning small size operators

- ignoring them
- minimising their weight
- fighting them
- recognizing their role
- formalizing and regulating their operation
- helping them to evolve towards modernisation inside an integrated scheme

Organising the complementarity

- **A scheme of complementarity, is it realistic or an illusion?**
- **It is a necessity!**
- **Avoiding the mistakes in the transfer of large companies model**

Need for an organizing authority

- **Coordinating the multiple actions on the field of urban transport and eventually urban roads and traffic management**
- **Focusing at minimum on regulating public transport operators and managing their complementarity**
- **Interesting experiences in Africa:**
 - **Dakar: Cetud created in 1997**
 - **Abidjan: Agetu created in 2000**
 - **Many difficulties, nevertheless a progress**

Conclusion: towards an adaptation of the public transport scheme in developing cities

- **Designing responsive PT companies**
- **Pushing micro-operators toward more efficiency, organisation and respect of environment and safety requirements**
- **Managing complementarity of operators**
- **Organizing Authorities acting first in coordination of public bodies**
- **Finally the challenge is to manage the complexity of multiple components. That is modernity**

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