Adjusting Work Hours to Reduce Traffic Congestion in Colombo

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Chairman, National Transport Commission

Presentation to Ministry of Public Administration
1st Dec 2008
People Coming to Colombo

• 830,000 people arrive to the City from outside every day.

• Of this, 90% arrive by road 10% by rail.

• The road passengers enter the city through 12 roads and 3 railway lines.
Vehicles Coming to Colombo

- 750,000 people arrive to the city by road.
- They arrive in 200,000 vehicles made up as:
  - 11,000 buses
  - 15,000 goods vehicles and
  - 175,000 private vehicles

- Presently 15% of the road space is utilized for buses and vans even though they transport 80% of the road passengers.

- On the other hand, 65% of the road space is used by private and hired vehicles which in sum total carry only 38% of the passengers.

- The balance 20% are for goods vehicles.

- In addition to the vehicles entering the city, there are a further 250,000 vehicles registered within the Colombo Municipal Area.
Vehicular Flow into Colombo City

Mainly 10 Major Corridors provide access to Colombo City Centre
Passenger growth was 4-5% per year from 1965 to 1995, but has become negative after 1995.
## Growth of ‘traffic’ to Colombo (in and out)

<table>
<thead>
<tr>
<th>Year</th>
<th>Private Vehicles</th>
<th>Buses</th>
<th>Goods Vehicles</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>1995</td>
<td>203,215</td>
<td>27,084</td>
<td>24,158</td>
<td>254,457</td>
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<tr>
<td>2005</td>
<td>321,249</td>
<td>22,835</td>
<td>30,296</td>
<td>374,381</td>
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<tr>
<td>Period Growth</td>
<td>58%</td>
<td>-16%</td>
<td>25%</td>
<td>47%</td>
</tr>
<tr>
<td>Growth p.a.</td>
<td>4.7%</td>
<td>-1.7%</td>
<td>2.3%</td>
<td>3.9%</td>
</tr>
</tbody>
</table>

**Period 1995-2005**

- Growth of Passenger Traffic: - 06%
- Growth of Vehicle Traffic: + 47%
- Growth of Demand for Road Space: + 32%
Where are these private vehicles traveling?

12hr Flow towards Colombo City at the boundary of CMC

- **Generation of Traffic**
- **Attraction of Traffic**
1. To study and implement flexible work hours and staggered work hours. To reduce traffic peaks by smoothening demand

A letter has been sent to the Secretary of Ministry of Public Administration requesting a meeting for further action on 08.10.2008. A reminder has been sent last week.

NTC
• Solution 1: More Roads/Expressways/Flyovers?

Impossible! Will need to add 1 new road to City every 4 years.

• Solution 2: Transferring people coming in low occupancy vehicles to public transport?

Possible! – Many projects such as Premium Bus Service, Park and Ride, Bus Lane, New Terminals, Improving existing rail and bus etc. On going under 3 year plan submitted to Supreme Court

• Solution 3: Reducing traffic at Peak Periods?

Possible! - Three practices in other countries,
• Flexible Hours
• Staggered Hours
• Compressed Work Weeks
Identification of Peak Period Phenomenon

Impact of Peak depends on the *duration of peak* and its *magnitude*. 
General Pattern of Corridor Flows to CMC

Total Vehicle Flow (Smoothened)

Corridor: Colombo-Negombo Road        Location: Peliyagoda        Link No: A003-030        Date: 09/06/04

Average Flow

Flow/30 minutes

Time

To Colombo

From Colombo

Average Flow
If at any peak, Area A > 0.3 x Area B, Then peak has to be treated to reduce the economic loss incurred due to time loss.
Composition of Trips by their Purposes of Traveling

(CMC Boundary)

- HRW Trips
- LHRU Trips
- NNH Trips

% of Trip Category vs. Time

7:00-7:30
7:30-8:00
8:00-8:30
8:30-9:00
9:00-9:30
9:30-10:00
10:00-10:30
10:30-11:00
11:00-11:30
11:30-12:00
12:00-12:30
12:30-13:00
13:00-13:30
13:30-14:00
14:00-14:30
14:30-15:00
15:00-15:30
15:30-16:00
16:00-16:30
16:30-17:00
17:00-17:30
17:30-18:00
18:00-18:30
**Flex- time**

- Employees work five eight-hour days in each week but they are allowed to choose their work arrival and departure times as well as the length of the lunch hour.

- Employees has to be present during a specific “core” time when meetings or company other wide events are scheduled.

<table>
<thead>
<tr>
<th>7.00 am</th>
<th>9.00 am</th>
<th>12.00 noon</th>
<th>2.00 pm</th>
<th>4.00 pm</th>
<th>6.00 pm</th>
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</thead>
<tbody>
<tr>
<td><strong>Flex time Work Hours</strong></td>
<td></td>
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<tr>
<td>Flex-Arrival</td>
<td>Core Time</td>
<td>Flex Lunch</td>
<td>Core time</td>
<td>Flex-Departure</td>
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<td><strong>Standard Work Hours</strong></td>
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<td>8.00 am</td>
<td>5.00 pm</td>
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<tr>
<td>Time Interval</td>
<td>Flow in MC C</td>
<td>Probable HBW Trips</td>
<td>Divided Flow components</td>
<td>Probable After 1 FH</td>
<td>Reduction in total Flow</td>
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<td></td>
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<td></td>
<td>7.00-7.30</td>
<td>7.30-8.00</td>
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<td>6046</td>
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<td>18.00-18.30</td>
<td>3997</td>
<td>1999</td>
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</table>
Who would personally benefit from Flexible Hours,

1. Early rising- person who prefers starting work at 7.00 am........
2. A person who prefers to enjoy leisure in the evening........
3. Working Parent who has a child to drop school at 8.00 am and then report to work at 8.45am...........
4. A person who likes to avoid rush hour traffic and crowded public transport........

Work Place Issues

1. Making arrangements for opening and closing hours.
2. Additional energy costs.
3. Some organisations require all employees to be at station to begin work
Benefits of Variable Working Hours

For the Institution,

✓ Increased employee productivity as they can arrive less tired
✓ Improved employee morale
✓ Reduced employee absenteeism and tardiness
✓ Greater ability to recruit and retain working parents
✓ Recognition as a good corporate citizen for helping reduce traffic congestion and air pollution
✓ Good reputation among workers
For your Employees,

- Improved job satisfaction
- Reduced commuting time and stress
- More flexibility for leisure activities and regular family affairs
- Fewer problems with child care pick-up and drop-off arrangements
- Opportunities to work during peak productive hours
- Better able to manage personal and professional responsibilities
- Be a part of the congestion and air pollution solution
Present Flex Hours

- National Transport Commission- has 45 minute flex window since 2005. A recent survey showed nearly 70% are more satisfied than before, with around 20% saying they are not effected either way and about 10% saying they are worse off.

- The latter are train travellers who are actually not worse off but do not benefit when trains arrive late in the morning as the time they arrive is then not under their control.

- Similar results from CEB offices, some private sector offices
Staggered Work Hours

This concept involves spreading out employee arrival and departure times by sector anywhere from 15 minutes to two hours.

A city that has staggered work hour may be open from 7:30 a.m. to 5:30 p.m., with the following schedule choices:

- **Group A**: 7:30 - 4:30 with 1 hour lunch
- **Group B**: 8:00 - 5:00 with 1 hour lunch
- **Group C**: 8:30 - 5:30 with 1 hour lunch
Some Suggestions for Colombo

• Schools
  – Government – 730 AM to 130PM
  – Private – 745AM to 145 PM
  – International – 8AM onwards
  – Tertiary – 830 AM onwards

• Offices
  – Government – 815 AM to 445 PM
  – Semi-Government – 830 AM to 5PM
  – Private 845 to 515 PM

• Trade
  – Banking Sector – 9 AM onwards
  – Retail Trade – 9 30 onwards
Compressed Work Week

Employees complete their required number of work hours in fewer-than-normal days per week.

- This arrangement allows employees to have one or two days off each week or one day off every other week, depending upon which type of compressed work week program you prefer.

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</thead>
<tbody>
<tr>
<td>8 hr Schedule</td>
<td>on</td>
<td>on</td>
<td>on</td>
<td>on</td>
<td>on</td>
<td>off</td>
<td>off</td>
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<tr>
<td>10 hr Schedule</td>
<td>on</td>
<td>on</td>
<td>on</td>
<td>on</td>
<td>off</td>
<td>off</td>
<td>off</td>
</tr>
</tbody>
</table>
The two most popular compressed work week schedules are the 4/40 and 9/80 programs, although other variations also exist.

4/40 Program

Employees work four 10-hour days each week, with the fifth day off. To ensure five-day coverage, you may want to consider having half the company take Mondays off and half take Fridays off.

9/80 Program

Employees work 80 hours in nine days, with the 10th day off. This schedule usually translates to eight 9-hour days and one 8-hour day.
Compressed Work Week Considerations

- There must be adequate coverage in the office for employees who are taking their day off. Generally, this means that not everyone takes the same day off. Given the choice, most employees elect to take Friday as their day off, followed in order of preference by Monday, Wednesday, Thursday, and Tuesday.

- Rotate days off every six months so that every employee gets a three-day weekend

- For small departments or work groups to have everyone take the same day off and simply close down the department for the day

- Employees who must attend important meetings may change their scheduled day off with advance notice.

- Some employees may need to be exempt from the compressed work week program because of childcare duties, medical reasons, transportation problems or conflicts with school and also considering the nature of the job.
Thank You