

Traffic and vehicle growth trends in the PRD – blue skies in the future?

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Economic Development of PRD Cities

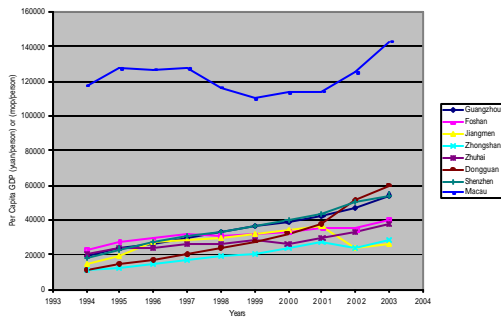
	2010 ¹ Population (million)	2002 GDP ² (RMB billion)	2005 GDP ² (RMB billion)
East Bank Cities			
Guangzhou	9.5	300	488
Dongguan	6.4	67	96
Shenzhen	7.0	226	300
Huzhou ³	3.2	53	81
Sub-Total	26.5	646	964
West Bank Cities			
Zhongshan	2.4	42	51
Zhuhai	1.2	41	56
Foshan ⁴	5.3	118	146
Zhaoqing ⁵	3.4	45	75
Jiangmen ⁶	4.0	66	100
Sub-Total	16.3	311	438
Total	42.8	957	1,402

¹Only part of Huzhou and Zhaoqing are included in the PRD Region but the figures cover the whole of the two municipal cities.

²Foshan includes Nanhai & Shunde and Jiangmen includes Xinhui

Source: 2030 working paper No. 37

Per Capita GDP



While HK brings up east PRD cities, Macau does not have the same effect

Demands

- In 2002, estimated number of HK Permanent Residents (HKPRs) usually living in the Mainland is 249300 (average annual growth rate of 6.6%)

2030 Study Info. Note No. 17

Mainland Visitors

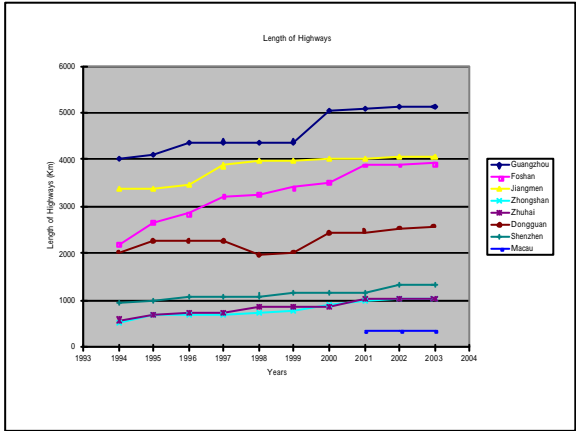
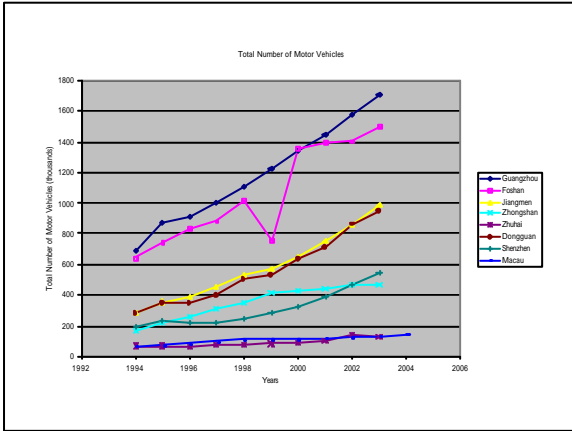
Year	No. of Visitors (Million)
2002	6.8
2011	23.1
2016	31.2
2020	37.5
2030	53

Traffic Prediction

Year	Total Cross-boundary Vehicle Trips (Average Weekday Daily)
2020	141,000 [*] (48,000 to/from west bank ²⁹ (34%) and 93,000 to/from east bank ³⁰ (66%))
2030	181,000 [*] (69,000 to/from west bank (38%) and 112,000 to/from east bank (52%))

^{*} Figures are rounded up/down to the nearest 500.

Source: 2030 working paper No. 37



Shenzhen Western Corridor

The average total daily vehicular traffic at boundary crossings is expected to reach 65,000 vehicles in 2006, far beyond the daily capacity of 42,000 vehicles, which the three existing crossings offer now. Upon its completion, the Western Corridor will provide additional daily traffic capacity of 80,000 vehicles, raising the overall daily traffic capacity to 122 000 vehicles, thereby easing the current congestion.

Chief Executive's speech about HK-Shenzhen Western Corridor, August 28, 2003

Hong Kong-Zhuhai-Macau Bridge

- Length = approx. 35 km
- Travelling time < 30 minutes
- Construction Period = 2005 – 2011
- Traffic Flow at Opening = 12000 – 16000 vehicles per day
- Ultimate capacity = approx. 80000 vehicles per day

Total cross boundary capacity of over 200000 vehicles per day > demands in 2030



Air Pollution Impacts

	Hong Kong	Macau and Mainland cities
Fuel Standard	0.005% Sulphur	0.05 -0.2% Sulphur
Vehicle Standard	Euro IV	Euro II

Clean up Technologies

- Change to Cleaner Fuelled Vehicles, CNG, LPG etc..
- Retrofit in-use vehicles with Diesel Catalysts and Continuous Regeneration Traps

Costs Implications for Retrofitting

- Total number of vehicles in the 7 Mainland cities and Macau is 6.4 million in 2003
- Assuming 20% of the entire fleet are diesel vehicles that requires retrofitting and costs of equipment range from HK\$20000 to 60000 per vehicle
- The costs for cleaning up the vehicle exhaust ranges from HK\$26 – 77 billion.

Can city authorities afford it?