

11 May, 2011

Clerk to Bills Committee on Motor Vehicles  
(First Registration Tax) (Amendment) Bill 2011  
Legislative Council Secretariat  
3rd floor Citibank Tower  
3 Garden Road, Central, Hong Kong

Dear Sir/Madam,

**Re: Bills Committee on Motor Vehicles (First Registration Tax) (Amendment) Bill 2011**

We are writing in support of the government's proposal to increase the first registration tax (FRT) for private cars to cope with the surge in the number of private vehicles.

Overarching Principles for Transport Policies in Hong Kong

Hong Kong benefits immensely from an excellent public transport system, which is renowned for its quality and ability to accommodate the mobility need for the city. Not only does public transport provide nearly ubiquitous coverage for the territory, it also carries over 90% of Hong Kong's 11 million daily trips. Due to the success of this public transport system, private car ownership and usage remain non-essential for the majority, which leads to manifold benefits – reducing the need for extensive highway infrastructure expansion, curbing growth in vehicular emissions, and contributing to the long-term sustainability of Hong Kong.

Indeed, sustaining the quality of our public transport system is a key policy objective for Hong Kong, as was recognized in the first White Paper on internal transport policy in 1979, reiterated in the second White Paper on Transport Policy in 1990, and again at the conclusion of the third Comprehensive Transport Studies “Hong Kong Moving Ahead” in 1999. Pillars contributing to the success of our public transport system include managing road usage such as controlling the growth in number of vehicles and giving priority to public transport, as set out in the 1990 White Paper.

Hong Kong is a small city with a total area of 1,104 km<sup>2</sup> but only 20% of the land has been used for urban development due to topographical constraints. As a result, the urban population density of Hong Kong is about 34,000 persons/km<sup>2</sup>, which is among the highest in the world. In comparison, the urban population densities of Los Angeles, Tokyo and Taipei are, respectively, 3,144, 7,100 and 9,650 persons/km<sup>2</sup>. Hong Kong's high population density requires an efficient transport system to facilitate mobility and economic development for the territory. On the other hand, this high density also provides the essential condition for the development of public transport. The synergy between high density development, priority for public transport, and managing road usage needs to be carefully preserved. Shake one element; the synergy may falter. Our high population density allows for high public transport usage, which in turn facilitates efficiency and financial sustainability of our public transport services without direct government subsidy. Quality public transport makes private car ownership and usage non-essential. Lower private car ownership leads to higher public transport usage, lower roadway congestion, which further improves the efficiency of public transport. Loosening on the control of private car ownership and usage, roadway congestion

will increase; public transport usage will decrease, possibly initiating a vicious cycle of declining public transport quality, which will further increase private car usage, as is often observed in many developed countries. Hong Kong should do our very best to guard against the initiation of this vicious cycle.

*To this end, FRT, an effective policy measure that has been practiced for a long time, needs to be appropriately adjusted over time to limit the growth of the private car fleet, hence containing traffic congestion and encouraging the use of public transport.* Some argue that newly added private cars are mainly used on holidays or weekends, and hence would not add substantially to the congestion on major corridors during weekdays. This argument is not supported by evidence, as we will show below. The fact of the matter is that once a private car is registered and added to the roadway network, there are no other ways in Hong Kong to precisely manage its time or location of usage. *FRT is the first line of protection to manage usage of private cars in congested facilities.*

### Some Observations

To understand the recent trend of private car traffic pattern in our transport system, we compare the recent changes from 2006 to 2009, which would avoid certain major events that may obscure the analysis. The following analysis is based on data readily available in the public domain.

We first analyze the traffic flows on all core stations, i.e., those roads that fall on the cordons and screenlines of the Hong Kong road network, from the Annual Traffic Census (ATC) from 2006 to 2009, and focus on the weekday morning peak traffic from 8:00-9:00 a.m. The point is to verify whether there is evidence to support the claim that private car trips on major corridors during the peak period remain stable despite the increase in licensed vehicles from 2006 to 2009. From the ATC, we obtain the morning peak hour percentages of private cars on 35 core stations, with 10, 9 and 16 on Hong Kong Island (HKI), Kowloon (KLN) and New Territories (NT), respectively. The results are shown in the Annex. From 2006 to 2009, the percentage of private car flow increased by 1.7% (from 42.8% to 44.5%). Geographically, the pattern is quite similar with a rising trend, with the percentages of private car flow increasing by 0.8%, 5.0% and 0.4% on HKI, KLN and NT, respectively.

As far as the annual vehicle mileage is concerned, the changes are similar, with the private car mileage increasing by 8% (from 4,201 to 4,537 million veh-km) and other vehicle mileage decreasing by 1% (from 7,320 to 7,248 million veh-km) from 2006 to 2009. These results clearly demonstrate the trend that private cars have been displacing other traffic on major roads, with a significant growth not just on the annual vehicle mileage but also during the critical weekday morning peak, which obviously contradict the claim that additional licensed vehicles do not add to the congestion on major corridors during the peak period.

These undesirable trends, both morning peak traffic condition and annual vehicle mileage, are obviously a result of the growth in private car ownership. From 2006 and 2009, the private car fleet increased by 9.3% from 360,427 to 393,812 vehicles, whereas other vehicles decreased by 1.2% from 192,553 to 190,258 vehicles.

As of now, the ATC data for 2010 have yet to be released, but there are already several indicators that reveal the emerging congestion problems. First, compared with a roughly 3% increase per annum in private cars in the past few years, a sharp 5.4% rise in the private car fleet was observed from 2009 to 2010, which doubled the average growth in the past few

years. Furthermore, the increase in first-registered private cars from 2009 to 2010 was at an alarming 45%. The consequential effect leads to a significant drop in average speed for the whole territory, with HKI decreasing from 21.3 in 2009 to 19.8 km/h in 2010 (a significant drop of 7% in one year), KLN decreasing from 24.9 to 23.7 km/h (a significant drop of 5%), and NT also decreasing sharply from 42.9 to 39.9 km/h (a significant drop of 7%). Evidently, in addition to the rapid deterioration of traffic conditions in the urban areas, HKI and KLN, the congestion problem has spilled over to the rural areas in NT, with a record low average speed in the past decade.

Let's examine another example, the case of cross-harbor private car traffic on a typical weekday. The three cross-harbor tunnels constitute critical transport facilities for Hong Kong, which are critical not only because of their own congestion but also ramifications on their connecting regional networks which span the most congested part of the territory. Analyzing the private car vehicular trips using the three cross-harbor tunnels from 2006-2009, the average private car trip rate on a typical weekday is about 0.28 per licensed private car, which has been very steady over the past four years. The number of licensed private cars in 2009 was 393,812. Now that it has grown to 414,966 in 2010, which implies an additional 5,900 cross-harbor private car trips per weekday as compared with 2009, or approximately an additional 2.5% of the annual average daily cross-harbor traffic. If the growth of the private car fleet is left as is, adding 2.5% per year to the cross-harbor tunnel traffic certainly makes managing the three tunnels very challenging, on top of the current difficulty of unbalanced tunnel traffic among the three tunnels. If we do not act now, the problem will not go away but will only get worse, year by year.

*In summary, the evidence is clear that increases in the private car fleet lead to increases in weekday traffic across the board in a substantial manner, resulting in more severe congestion throughout the territory, spilling over from HKI and KLN to NT.*

### Concluding Remarks

To address traffic congestion over the medium term, the government should seriously reconsider electronic road pricing (ERP), which can target the congestion problem when and where it is likely to occur. Moreover, the revenue generated could be used to improve the public transport system, which would benefit the public at large. In the Second ERP Study, ERP was considered unnecessary by the government, on the grounds that the then private car growth was lower than 3% and the traffic speed was reasonably good and steady. With the recent trends of brisk increases in the private car fleet and rapid deterioration of traffic conditions on major corridors, it is an opportune time for the government to reconsider ERP to tackle the congestion problem.

FRT, even though not as versatile as ERP, can effectively suppress private car ownership in the short run, and is the first line of protection against rapid deterioration in traffic congestion before ERP is fully implemented.

*In conclusion, before the more contentious ERP measure is put in place, we support the proposed increases in FRT, which will be effective in curbing traffic growth and slowing down the deterioration in congestion in a timely manner.*

Thank you for your kind attention.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'William H.K. Lam', with a long horizontal stroke extending to the right.

Professor William H.K. Lam  
c/o Department of Civil and Structural Engineering, The Hong Kong Polytechnic University

A handwritten signature in black ink, appearing to read 'Hong K. Lo', with a stylized, cursive style.

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A handwritten signature in black ink, appearing to read 'S.C. Wong', with a cursive style.

Professor S.C. Wong  
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Hong Kong Island		% of Private Cars			
Station	Road	2009	2008	2007	2006
1001	HARCOURT RD (from TAMAR ST to ARSENAL ST)	37.6	38.2	42.0	39.6
1002	VICTORIA PARK RD (from HOUSTON ST to ISLAND	43.7	39.1	39.6	42.9
1004	ABERDEEN TUNNEL (from TOLL PLAZA to NORTH	47.6	45.9	46.4	39.7
1007	QUEENSWAY (from RODNEY ST to QUEEN'S RD E)	33.6	34.8	34.8	34.3
1009	CHAI WAN RD (from ISLAND EASTERN CORRIDORAPPR	46.3	41.3	47.8	47.9
1021	TAI TAM RD (from CHAI WAN RD to SHEK O RD)	70.8	63.5	67.6	70.3
1022	CROSS HARBOUR TUNNEL (from TOLL PLAZA to SOUTH	44.4	43.7	39.0	43.9
1025	EASTERN HARBOUR CROSSING (from TOLL PLAZA toSO	54.3	55.0	53.4	55.5
1026	WESTERN HARBOUR CROSSING (from TOLL PLAZA toSC	45.4	45.8	43.8	44.7
1107	TUNG LO WAN RD (from CAUSEWAY RD to MORETONT	63.4	62.2	58.6	60.6
	Average	48.7	47.0	47.3	47.9
Kowloon		% of Private Cars			
Station	Road	2009	2008	2007	2006
3001	PRINCESS MARGARET RD (from WYLIE RD to PUICHING	62.2	59.8	60.5	57.4
3002	LUNG CHEUNG RD (from NAM CHEONG ST to LIONROC	38.2	36.5	31.8	32.4
3004	KAI TAK TUNNEL (from SUNG WONG TOI RD to KAICHE	37.0	35.1	34.1	36.3
3006	NATHAN RD (from SHANTUNG ST to DUNDAS ST)	23.9	28.2	18.7	20.5
3014	MA TAU WAI RD & TO KWA WAN RD (from SAN LAU ST	22.0	16.8	14.0	19.6
3024	WEST KOWLOON HIGHWAY (from SLIP RDS TO & FROM	46.4	46.7	49.4	49.7
3025	LIN CHEUNG RD (from YAU MA TEI INT to CHERRY STU	35.1	31.6	35.7	36.1
3026	LIN CHEUNG RD (from CHERRY ST to YAU MA TEI INT)	47.4	33.7	37.5	28.7
3103	KO SHAN RD (from PAK KUNG ST to CHI KIANG ST)	42.3	35.8	32.7	28.6
	Average	39.4	36.0	34.9	34.4
New Territories		% of Private Cars			
Station	Road	2009	2008	2007	2006
5003	FANLING HIGHWAY (from SO KWUN PO INT to WO HO	55.1	50.0	51.7	53.3
5012	TUEN MUN RD (from SHAM TSENG to TSING LONG	43.1	41.6	44.7	42.0
5013	TOLO HIGHWAY (from NORTH OF MA LIU SHUI INT to	55.8	44.1	53.1	55.0
5014	ROUTE TWISK (from CHUEN LUNG to CHEUNG PEI	50.6	56.5	55.6	52.6
5016	(excluded due to unavailability of data in 2007)				
5017	(excluded due to unavailability of data in 2006)				
5018	TSING YI NORTH BRIDGE (from TSUEN TSING INT to	25.9	26.9	27.9	28.1
5021	TSEUNG KWAN O TUNNEL (from TOLL PLAZA to	46.9	44.8	45.9	47.9
5022	TATE'S CAIRN TUNNEL (from TOLL PLAZA to SOUTH	57.7	60.9	57.1	59.7
5023	PO LAM RD (from ANDERSON RD to TSUI LAM RD)	29.2	23.9	29.3	24.3
5024	LION ROCK TUNNEL (from TOLL PLAZA to SOUTH	54.2	46.6	48.0	51.0
5025	YUEN LONG HIGHWAY (from HUNG TIN RD INT to LAM	39.2	37.4	38.6	35.8
5026	TSING KWAI HIGHWAY (from CHING LAI COURT SLIP	41.0	23.4	45.9	42.6
5027	LANTAU LINK (from TSING MA BRIDGE EASTERN END	40.7	40.7	43.5	46.4
5029	TSING LONG HIGHWAY - TAI LAM TUNNEL (from AU	50.5	47.8	52.7	50.2
5030	KWAI CHUNG RD (from PMH INT SLIP RD TO KWAI	32.7	32.7	29.7	27.7
5033	TSING LONG HIGHWAY - TING KAU BRIDGE (from	44.6	43.5	45.9	44.2
5034	CHEUNG TSING TUNNEL & RAMBLER BRIDGE (from	47.6	46.6	46.9	47.4
	Average	44.7	41.7	44.8	44.3
Overall average		44.5	41.7	43.0	42.8