

# MODE OF TRANSPORT

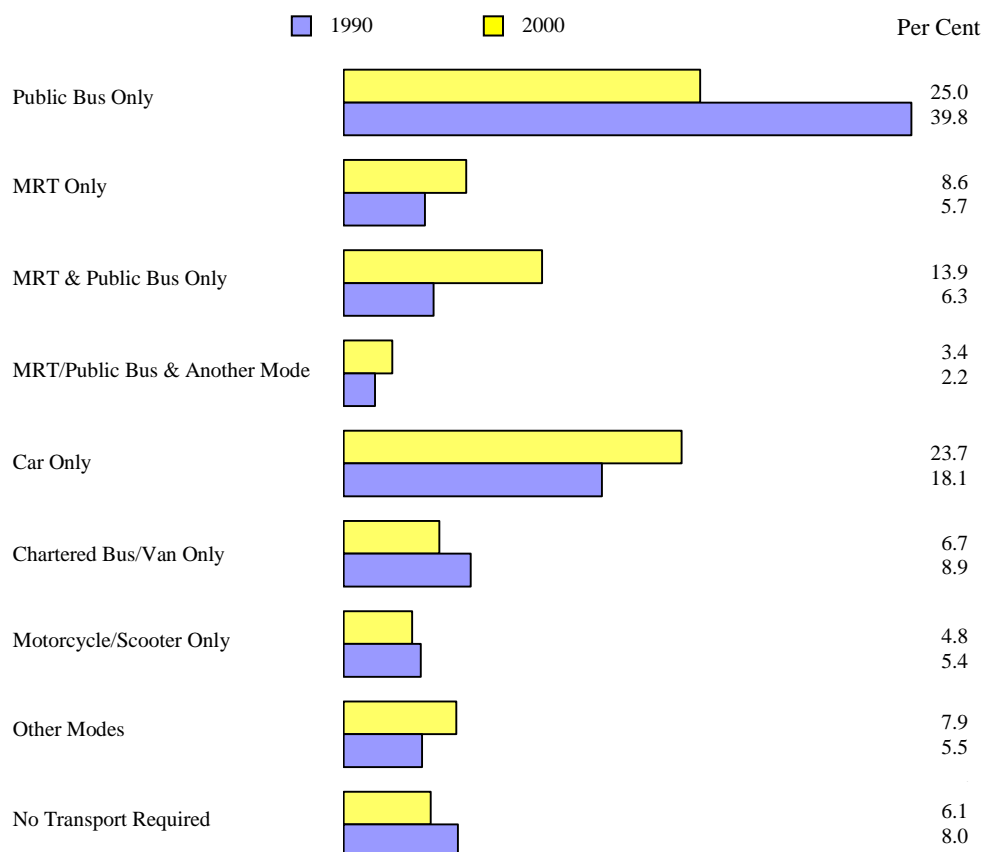
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## USUAL MODE OF TRANSPORT TO WORK

Public bus and MRT remained the most important modes of transport to work in Singapore. In 2000, one in two resident workers commuted to work by public bus and/or MRT (Chart 1). Compared with 1990, there had been only a small decline in the proportion taking public bus and/or MRT, despite increased ownership and usage of cars.

**CHART 1 RESIDENT WORKING PERSONS AGED 15 YEARS AND OVER BY MODE OF TRANSPORT TO WORK**



Among those taking public bus and/or MRT to work, there had been a clear shift from bus to MRT. The MRT had become a more popular mode of transport with the extension of the MRT network in the last decade. The proportion commuting to work by MRT only or MRT with transfer to/from public bus increased from 12 per cent in 1990 to 23 per cent in 2000. Workers commuting by public bus only declined from 40 per cent to 25 per cent over the same period.

Usage of cars continued to increase, with the proportion of workers commuting to work by car only rising from 18 per cent in 1990 to 24 per cent in 2000. However, fewer workers used private chartered bus/van and motor cycle/scooter in 2000 than 1990.

The proportion who worked within walking distance of their homes and those who worked at home decreased in the last ten years. The proportion who did not require any transport to work declined from 8.0 per cent to 6.1 per cent.

### Correlation between Mode of Transport Used and Income

The proportion commuting to work by public bus and/or MRT decreased with household income. Correspondingly, a higher proportion of workers in higher-income households travelled to work by car (Table 1).

**TABLE 1 RESIDENT WORKING PERSONS AGED 15 YEARS AND OVER  
BY MODE OF TRANSPORT TO WORK AND HOUSEHOLD INCOME**

Transport Mode	Per Cent							
	Below \$2,000		\$2,000–\$4,999		\$5,000–\$7,999		\$8,000 & Over	
	1990	2000	1990	2000	1990	2000	1990	2000
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Public Bus Only	42.2	36.0	42.1	28.1	36.2	23.5	25.2	15.7
MRT Only	4.6	7.1	6.2	8.7	6.3	9.7	5.3	8.1
MRT & Public Bus Only	4.8	12.6	6.8	14.8	7.3	15.5	5.9	11.4
MRT/Public Bus & Another Mode	1.8	2.4	2.2	3.1	2.9	3.8	3.2	4.1
Car Only	9.4	6.4	15.4	15.2	27.2	25.0	46.5	45.4
Private Chartered Bus/Van Only	10.3	7.7	9.4	8.7	7.2	6.3	4.5	3.1
Lorry/Pickup Only	4.9	3.8	2.6	3.0	1.9	1.4	1.1	0.6
Motorcycle/Scooter Only	7.6	6.1	5.4	6.5	3.4	4.3	1.8	1.8
Other Modes	2.9	4.7	2.2	5.0	2.2	6.2	2.3	7.1
No Transport Required	11.5	13.0	7.6	7.1	5.5	4.3	4.3	2.7

Among workers with monthly household income of \$8,000 or more in 2000, 45 per cent relied on the car compared with 6.4 per cent of those with \$2,000 or less. Workers in lower-income households were more likely to use chartered bus/van, lorry/pick-up and motorcycle/scooter than those in higher-income households.

### Higher Car Ownership

The increased usage of cars was related to higher car ownership. More households owned cars in 2000 (32 per cent) than ten years ago (28 per cent) (Table 2). There was a strong, positive correlation between car ownership and income. Higher-income households had greater affordability and hence were more likely to own cars. The higher car ownership rate among households living in bigger and better housing reflected their higher income-earning capability.

**TABLE 2 PROPORTION OF RESIDENT HOUSEHOLDS WITH CARS**

	Per Cent	
	1990	2000
<b>Total</b>	<b>28.0</b>	<b>31.7</b>
<b>Household Income from Work</b>		
Less than \$2,000	12.5	9.8
\$2,000 – \$4,999	30.1	23.4
\$5,000 – \$7,999	59.1	45.2
\$8,000 & Over	76.5	71.5
<b>Type of Dwelling</b>		
HDB 1- & 2-Room	4.3	2.9
HDB 3-Room	12.3	12.0
HDB 4-Room	25.6	24.1
HDB 5-Room & Executive	52.6	49.1
Condominiums & Private Flats	61.1	68.6
Landed Property	72.3	79.0

### High Usage of Public Bus and MRT among HDB Dwellers

As HDB estates were well-served by extensive networks of public bus services and the MRT system, a high proportion of HDB flat dwellers used public bus and/or MRT to commute to work (Table 3). Among occupants of private flats and houses, there was greater reliance on the car as the mode of transport to work.

Some 60 per cent of working persons living in private housing commuted to work by car only as against 23 per cent by public bus and/or MRT only in 2000. This was partly because of their greater affluence, and partly because public transport was generally less accessible in private housing estates than HDB estates.

**TABLE 3 RESIDENT WORKING PERSONS AGED 15 YEARS AND OVER  
BY MODE OF TRANSPORT TO WORK AND TYPE OF DWELLING**

Transport Mode	Per Cent			
	HDB Dwellings		Private Flats & Houses	
	1990	2000	1990	2000
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Public Bus Only	42.5	26.7	22.5	12.2
MRT Only	6.1	9.2	3.6	4.5
MRT & Public Bus Only	6.6	14.9	4.9	6.7
MRT/Public Bus & Another Mode	2.1	3.3	3.4	3.9
Car Only	13.4	18.7	52.7	59.7
Private Chartered Bus/Van Only	9.7	7.4	3.2	1.5
Lorry/Pick-Up Only	3.2	2.4	1.3	0.5
Motorcycle/Scooter Only	6.1	5.4	1.1	0.7
Other Modes	2.3	5.6	2.7	7.2
No Transport Required	8.0	6.5	4.7	3.0

### Differentials in Mode of Transport by Occupation

Public bus and MRT were most commonly used by white-collar workers. In 2000, 54 per cent of professional workers, 72 per cent of clerical workers, and 58 per cent of sales and services workers commuted to work by public bus or MRT either in a single journey or with transfers to/from other modes of transport (Table 4). However, those in managerial jobs tended to rely on car, with 62 per cent commuting to work by car.

For workers employed in production jobs, about half used private chartered bus/van, car and motor-cycle/scooter to travel to work. The high proportion of 13 per cent requiring no transport reflected the large group of transport operators and drivers who were classified in this category.

**TABLE 4 RESIDENT WORKING PERSONS AGED 15 YEARS AND OVER  
BY MODE OF TRANSPORT TO WORK AND OCCUPATION, 2000**

Transport Mode	Per Cent					
	Managers	Professional & Technical	Clerical	Sales & Services	Production & Related	Cleaners & Labourers
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Public Bus Only	7.7	21.3	33.4	32.0	23.6	46.4
MRT Only	4.9	11.1	14.4	9.0	4.1	6.5
MRT & Public Bus Only	6.2	17.5	20.5	13.7	8.4	11.8
MRT/Public Bus & Another Mode	3.0	4.2	3.7	2.9	2.8	2.8
Car Only	62.3	28.8	10.8	14.2	11.0	4.5
Private Chartered Bus/Van Only	2.6	4.3	6.3	2.9	17.1	6.4
Lorry/Pick-Up Only	2.4	0.4	0.4	2.3	6.3	2.0
Motorcycle/Scooter Only	1.1	3.1	2.9	6.2	10.2	4.7
Other Modes	6.6	6.8	3.8	7.6	4.0	4.8
No Transport Required	3.2	2.6	3.8	9.3	12.6	10.2

## USUAL MODE OF TRANSPORT TO SCHOOL

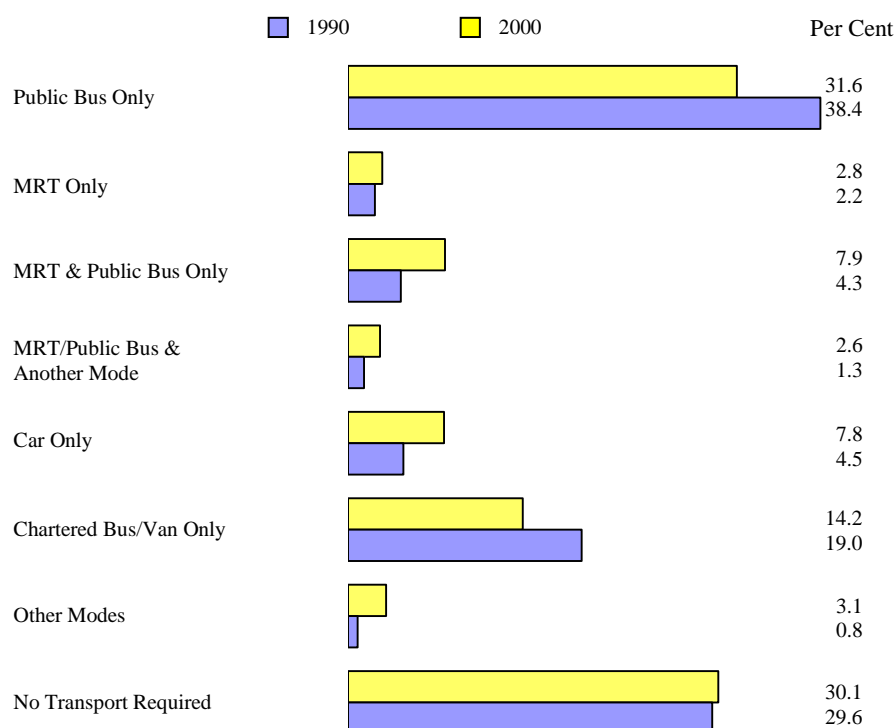
### No Significant Change in Transport Pattern

On the whole, the mode of transport to school remained relatively stable for the student population in the last ten years (Chart 2). Three in ten students did not require any transport to school. This could be associated with the preference of some parents for nearby schools for their children, and the primary schools' general practice of according priority to registrants living close to the school.

Some four in ten students travelled to school by public bus and/or MRT only. Public bus remained the most important mode of transport for the students, with only a slight shift to MRT.

Another one fifth of students used car or chartered bus/van to school. With the increased usage of cars to travel to school, fewer students took chartered bus/van than before.

**CHART 2 RESIDENT STUDENTS AGED 5 YEARS AND OVER  
BY MODE OF TRANSPORT TO SCHOOL**



### **High Proportion of Students in HDB Estates Required No Transport**

Reflecting the presence of schools within HDB estates, many students living in HDB flats were able to walk to school from their homes. One third of them required no transport to school in 2000 (Table 5). For those who needed to travel further to school, the public bus was the principal means of transport, being the only mode used by 33 per cent.

Among students who lived in private flats and houses, some 27 per cent travelled to school by car only and 25 per cent by chartered bus or van in 2000.

**TABLE 5 RESIDENT STUDENTS AGED 5 YEARS AND OVER  
BY MODE OF TRANSPORT TO SCHOOL AND TYPE OF DWELLING**

Transport Mode	Per Cent			
	HDB Dwellings		Private Flats & Houses	
	1990	2000	1990	2000
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Public Bus Only	38.8	33.2	33.8	20.6
MRT Only	2.2	3.0	1.7	1.3
MRT & Public Bus Only	4.2	8.3	4.9	5.4
MRT/Public Bus & Another Mode	0.8	2.1	4.3	6.0
Car Only	2.4	4.9	19.5	27.2
Private Chartered Bus/Van Only	17.8	12.5	26.1	24.5
Other Modes	0.7	2.8	2.0	5.8
No Transport Required	33.1	33.4	7.7	9.1

### **Differentials in Mode of Transport by Level of Education Attending**

The majority of students attending secondary or higher levels continued to take public bus only to school, but the proportion had fallen over the last ten years. The decline was most significant for university students – from 69 per cent to 37 per cent – due to the shift to the MRT (Table 6). In 2000, 41 per cent of university students took the MRT (MRT only or MRT with transfer to/from public bus) compared with about 18 per cent in 1990.

Among the young students, there was an increase in the proportion who did not require any transport to school. In 2000, 46 per cent of pre-primary and primary school students walked to school because of the close proximity of the schools to their homes. The corresponding proportion was 43 per cent in 1990. In contrast, there was a significant drop in the proportion relying on chartered bus or van that provided residence to school service, from 33 per cent in 1990 to 25 per cent in 2000.

**TABLE 6 RESIDENT STUDENTS AGED 5 YEARS AND OVER  
BY MODE OF TRANSPORT TO SCHOOL AND LEVEL ATTENDING**

Per Cent

Transport Mode	Primary & Below		Secondary		Post-Secondary		University	
	1990	2000	1990	2000	1990	2000	1990	2000
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Public Bus Only	15.6	14.2	64.6	54.4	72.4	54.5	68.6	37.3
MRT Only	0.7	0.6	3.4	3.8	5.7	8.4	4.2	6.8
MRT & Public Bus Only	0.8	1.0	6.2	9.7	12.8	23.3	13.9	34.2
MRT/Public Bus & Another Mode	0.9	1.7	1.8	4.3	1.7	2.8	1.4	3.1
Car Only	5.3	8.7	3.4	7.7	2.5	4.0	6.1	7.2
Private Chartered Bus/Van Only	33.0	25.2	1.8	1.1	0.7	0.2	0.1	0.1
Other Modes	1.0	2.9	0.5	2.6	1.2	3.9	1.3	7.4
No Transport Required	42.7	45.7	18.3	16.5	3.0	2.9	4.4	3.9