



DEPARTMENT OF TRANSPORT

**KEY RESULTS OF THE NATIONAL HOUSEHOLD
TRAVEL SURVEY**

The First South African National Household Travel Survey 2003

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The full National Household Travel Survey (NHTS) dataset will be available from the DoT after the Cabinet approved the release thereof. Please direct your enquiries to the office of the Chief Director: Transport Policy and Impact Monitoring.	
SYNOPSIS: The first national survey of the travel habits of individuals and households is the subject of this report. It summarises the key results of the survey from a national perspective. The results are provided in terms of households and persons in the household. The main emphasis is on workers and commuter trips and trips to various educational institutions. The information provided includes the modes of travel, periods of travel, travel times and travel costs.	
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MINISTERIAL FOREWORD

I am pleased to release this Summary Report on the *First South African National Household Travel Survey 2003 (NHTS)* to all stakeholders. The Ministry and Department of Transport look forward to the discussions and feedback that this report, as well as the ongoing NHTS-related research programme, will stimulate. The main objective of the NHTS is to understand the domestic travel behaviour and needs of individuals and households in South Africa. As such, it places



the spotlight squarely on the users of transport services, in the spirit of *Batho Pele*. For far too long in the course of our history, the users of transport have either been ignored, or they have been listened to, but not really heard. This applies especially to the majority, who (the NHTS shows) are dependent on walking and public transport.

Ordinary South Africans from all corners of our land have spoken through the NHTS, which was based on a representative sample that covered approximately 50 000 households. Over 45 000 successful household interviews were held that covered all nine provinces as well as every metropolitan and district municipality. From the initial results, South Africans are telling us as a transport sector that they need transport services to be safer, more available, more affordable and more secure. We have heard this message and plan to move swiftly to make significant improvements in public transport services. Already, I have asked the Department to work towards: increasing investment in public transport infrastructure, to restructure current subsidies in order to promote integrated settlements and to develop public transport projects that will improve access to opportunities for the urban and rural poor.

The NHTS promises to be a rich resource for Government in its quest to accelerate the improvement of transport services, in line with the mandate the electorate has given us, as we enter the second decade of our freedom.

Immediately following the release of the Technical Report and Key Results, the DoT will engage in a process of further analysis and consultation that will cover all provinces as well as the transport sector more broadly. I would like to encourage all stakeholders to make their inputs. Last but not least, I would like to acknowledge the sterling work of *Statistics South Africa*, who were our partners and who contributed massively to ensuring that the sampling, fieldwork and data capturing were of the highest quality.

Jeff T. Radebe, MP
Minister of Transport

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1. BACKGROUND

The National Household Travel Survey (NHTS) is a Department of Transport (DoT) initiative. The DoT was assisted by Statistics South Africa (Stats SA) who designed the survey sample and executed the fieldwork. The household surveys were undertaken in May and June, 2003.

The NHTS was based on a representative sample of 50 000 households throughout South Africa. The sample exceeds the size of samples normally used for national travel surveys, even in the developed world. The sample is also much larger than the normal Stats SA household surveys, such as the Labour Force Survey, which comprises 30 000 households. The reason that such a large sample was used in South Africa was to cater for the great diversity of the population and a wide variety of geographic circumstances. The achieved sample of 45 500 households will enable transport analysis to be undertaken at a municipal geographic scale.

The purpose of this report is to highlight the key results of the NHTS. A separate Technical Report has been prepared, which provides a full description of the survey methodology and all the main results at both national and provincial spheres.

2. OBJECTIVES OF THE NHTS

The objectives of the National Household Travel Survey were as follows:

- (i) to assist in the evaluation and targeting of public transport subsidies;
- (ii) to identify transport disadvantaged regions and communities;
- (iii) to measure key performance indicators (KPIs) as required by the National Land Transport Transition Act and the National Land Transport Strategic Framework;
- (iv) to understand the transport needs of households and travellers;
- (v) to ascertain the cost of transport and assess whether households can afford to pay for the mobility which is essential for their survival;
- (vi) to assess attitudes towards transport services and facilities;
- (vii) to measure the availability and use of motor cars;
- (viii) to understand the travel choices of different market segments;
- (ix) to assess households' access to activities such as work and education; and services such as markets and medical, police and welfare services.

3. DEMOGRAPHICS

The following section is intended to provide the demographic context for the travel parts of the survey. The information was obtained from the survey and Statistics South Africa who provided weighting factors for the NHTS sample households, to scale them to the RSA population, as measured by Census 2001 and updated during 2003.

Table 1 provides a breakdown of the achieved NHTS sample, the number of households, the population and household income in each of the settlement types which have been used for strategic analysis in this report.

Table 1: NHTS sample, number of households, population and household income by settlement type*

Settlement type	NHTS Sample	Weighted number of households	Population	Monthly household income (% of households)					
				Up to R500	R501 - R1000	R1001 - R3000	R3001 - R6000	> R6000	Missing
Metropolitan	13 024	4 560 000	15 440 000	15.0	15.3	29.7	13.8	16.6	9.6
Urban	15 495	3 483 000	11 971 000	20.0	20.5	27.5	12.8	13.0	6.1
Rural	17 037	4 389 000	18 990 000	32.1	34.9	23.8	5.0	2.8	1.4
RSA	45 556	12 432 000	46 401 000	22.4	23.7	27.0	10.0	10.7	5.7

* Reported data weighted to Stats SA 2003 population mid-year estimates

It is evident from the table that the sample was split fairly evenly between the three settlement types. There were about 13 000 households in the metropolitan sample, rising to about 17 000 in the rural. Because of the different characteristics of the population in the various settlement types, the ratio of population to households in each of these settlement types is different. **Table 1** indicates that in the metropolitan areas there are around 4.6 million households, with 4.4 million in the rural areas, while in the urban areas there are 3.5 million. Rural households average 4.3 persons per household, compared with only 3.4 in metropolitan areas. The total population is 46.4 million. The rural population of nearly 19 million is one and a half times that found in the non-metropolitan urban areas.

Table 1 also shows the household incomes by settlement type. A notable feature in the table is the fact that in metropolitan areas a fairly large proportion (almost 10%) of households refused to provide information about income. The table reveals that, generally, the more affluent population is found in the metropolitan areas, for example, 17 per cent of households in metropolitan areas earn more than R6 000 per month, compared with only 3 per cent in the rural areas. A significant fact relating to the rural households is that over two-thirds have incomes of R1 000 or less per month (67.0%).

Table 2 shows a similar breakdown of achieved sample size, number of households, population and household income by RSA and province.

Table 2: Households, population and household income by province

Province	NHTS Sample	Weighted number of households	Population	Monthly household income (% of households)*					
				Up to R500	R501 - R1000	R1001 - R3000	R3001 - R6000	> R6000	Missing
Western Cape	5 008	1 306 000	4 733 000	7.4	13.3	30.0	16.9	17.0	15.5
Eastern Cape	7 309	1 594 000	6 485 000	30.2	31.8	21.9	7.1	5.6	3.6
Northern Cape	1 427	248 000	888 000	19.3	30.2	26.5	10.9	11.2	2.0
Free State	3 593	772 000	2 737 000	27.6	27.2	26.0	7.9	8.8	2.4
KwaZulu-Natal	9 127	2 224 000	9 806 000	23.3	26.7	26.8	9.9	9.2	4.2
North West	3 817	1 185 000	4 217 000	25.1	22.9	29.4	11.0	6.8	4.9
Gauteng	7 946	2 921 000	8 926 000	16.8	15.6	30.0	12.5	17.1	8.1
Mpumalanga	3 363	865 000	3 326 000	28.4	27.1	24.8	9.1	7.9	2.7
Limpopo	3 966	1 317 000	5 283 000	30.3	32.5	23.9	6.1	5.8	1.4
RSA	45 556	12 432 000	46 401 000	22.4	23.7	27.0	10.4	10.7	5.7

* Reported data weighted to Stats SA 2003 population mid-year estimates

Taken as a whole, there are 12.4 million households in the RSA, the largest number residing in Gauteng. When undertaking any analysis on the basis of income, it is necessary to note that 6 per cent of the household sample refused to provide information about income. The worst case is in the Western Cape where 16 per cent of households did not provide information about income. A noteworthy feature of **Table 2** is the relative poverty of those provinces with a large rural population, such as Eastern Cape and Limpopo. In the Eastern Cape and Limpopo, 30 per cent of households earn less than R500 per month. The Western Cape is in stark contrast to these two, having only seven per cent of households earning less than R500 per month.

The provinces with the largest number of households earning in excess of R6 000 per month are the Western Cape and Gauteng (17%).

Because demographic and socio-economic factors influence travel needs and habits, it is worth recording that there are 10 million commuters in the RSA. On a geographic basis these break down as follows:

Commuters in metropolitan areas	-	4.8 million;
Urban areas	-	3.0 million; and
Rural settlements	-	2.2 million.

4. ACCESS TO PUBLIC TRANSPORT SERVICES

The vast majority (76%) of households reported that they did not have access to train services. This and other differences between transport modes are illustrated in **Figure 1**. It is evident from the figure that 38 percent of households do not have access to bus services (stops). The significance of the taxi mode (minibus-, sedan-, or bakkie-) as a convenient form of public transport is also illustrated in the graph. Only 9 percent of households indicated that there is no available taxi service near their

homes. Nearly three quarters of households can reach a taxi service within about one kilometre of their homes (less than 15 minutes).

Figure 1: Household access to public transport

The average access times from households to public transport are also depicted in **Figure 1**. The relative inaccessibility of trains is evident. On average, households are about half an hour distant from train stations. Bus stops and taxi services can be found within 12 minutes of peoples' homes, on average.

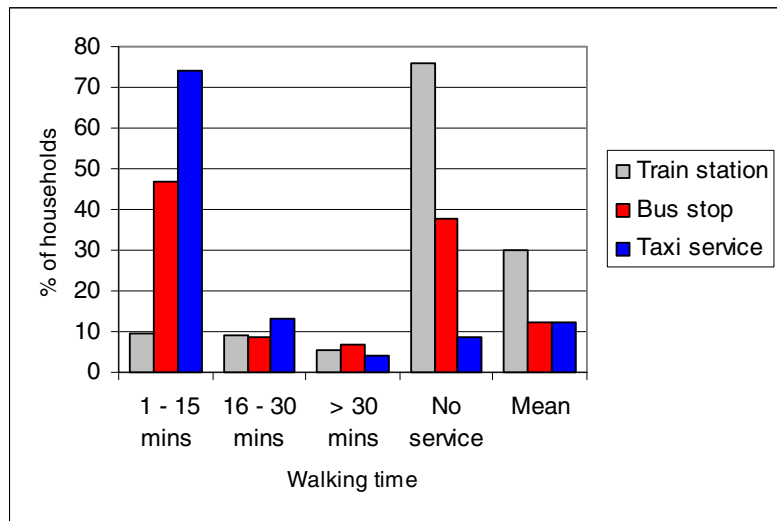
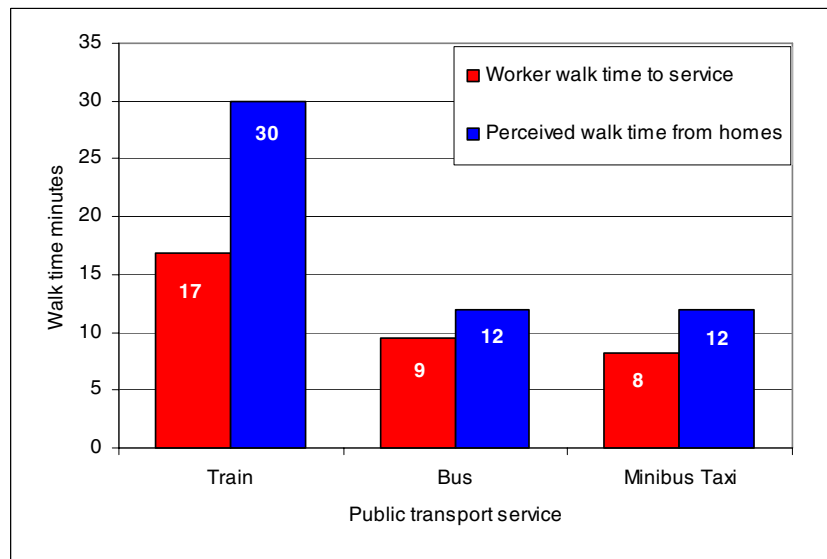


Figure 2: Worker and household access to public transport

It is interesting to compare these perceived walking times to public transport services to those reported by workers who actually use public transport to travel to work. **Figure 2** shows the average walking times to public transport services reported by users, in contrast to those reported by all households (including those households that do not use the services).



5. ACCESS TO ACTIVITIES AND SERVICES

In the household section of the questionnaire, a question was posed to a responsible adult about how members of the household get to the nearest of a named set of facilities. At the same time, they were asked how long it would take to get there from the household door to the facility entrance. Those indicating that they did not need the service were excluded from the analysis.

Medical services, welfare offices and a police station are within 60 minutes of the vast majority of households. **Table 3** shows the percentage of households which can

access these services within either 30, or 60 minutes of their homes. Considering that these services are required relatively infrequently, such as once per month or less, it appears that this aspect of accessibility should not be a major concern to transport authorities. There are a few stand-out cases, such as the Eastern Cape, where the foregoing services are generally less accessible to households.

Table 3: Accessibility to essential services

Service	% of households	
	Within 30 minutes	Within 60 minutes
Medical	78	94
Welfare	68	89
Police Station	76	93

Some 95 per cent of households can get to other essential services such as shops and post offices. Fewer households can get to services such as traditional healers and tribal authorities. **Table 4** shows the access times to services and amenities by households.

Table 4: Travel time to various services

Facility	Percentage of households				
	1 - 15 mins	16 - 30 mins	31 - 60 mins	> 60 mins	Cannot get there
Food shop	81.6	12.3	4.6	1.3	0.1
Other shop	33.2	35.1	22.9	8.3	0.3
Traditional healer	25.8	23.4	18.6	9.7	22.5
Medical service	44.2	34.1	16.1	5.2	0.5
Post office	45.9	33.8	14.4	4.5	1.4
Welfare office	31.9	36.3	21.1	6.9	3.8
Police station	40.2	35.3	17.7	5.7	1.0
Municipal office	38.1	35.8	17.0	5.3	3.8
Tribal authority	27.2	24.0	16.9	7.5	24.5

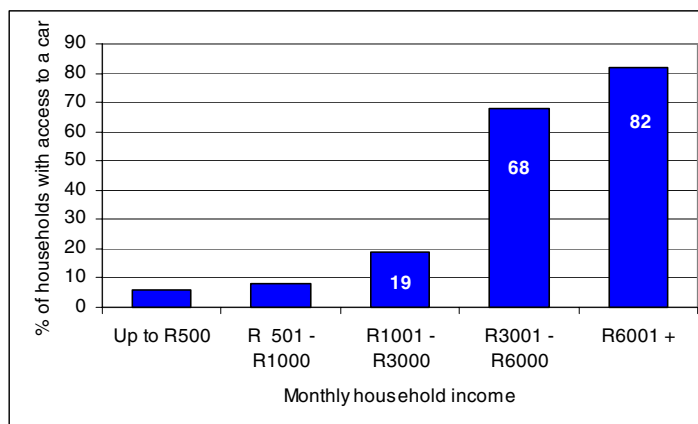
The following are the main points revealed about household accessibility to services:

- the majority can get to most of the services within half an hour;
- the only services which a significant proportion of households claim are inaccessible are traditional healers and tribal authorities; these would not be expected to be generally accessible to people living in metropolitan and urban areas and commercial farmland;
- access to medical services (this includes doctors, clinics and hospitals) appears to be a minor problem as less than 1 per cent of people indicated not being able to get there. The vast majority of all households can reach medical services within half an hour; and
- the most accessible services appear to be food shops: for the RSA as a whole, 82 per cent of households claim they can access a food shop within 15 minutes of their homes.

6. CAR AVAILABILITY AND USE

Figure 3: Household access to cars by income group

In all, 26 percent of households have access to a motor car. Household access to cars by income group is reflected in **Figure 3**. The graph shows that income is an important factor in car access (ownership of one or more privately-owned or use of company-owned cars). In households where income exceeds R6 000 per month, 82 percent have access to one or more cars. On the other hand, households that earn less than R3 000 per month, have minimal access to cars.



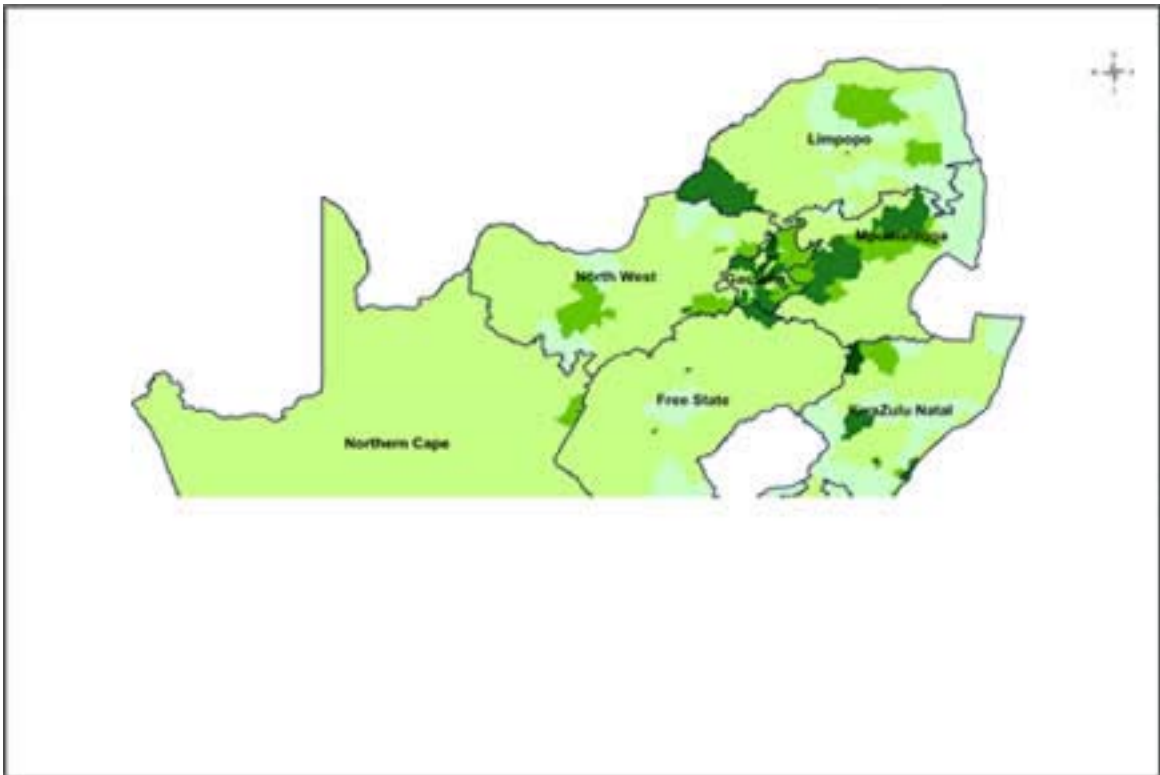
The level of ownership varies considerably from one part of the country to another (**Table 5**). In the Western Cape, over 45 percent of households have access to a car, compared with only about 16 per cent in the Eastern Cape.

Table 5: Household car ownership by province

Province	% of households with car access	No. of cars per household
Western Cape	45.5	0.68
Eastern Cape	15.5	0.23
Northern Cape	25.4	0.41
Free State	21.8	0.32
KwaZulu-Natal	23.2	0.34
North West	22.4	0.33
Gauteng	33.0	0.56
Mpumalanga	23.5	0.37
Limpopo	17.2	0.24
RSA	26.1	0.40

Figure 4 shows the national distribution of the availability of cars to households.

Figure 4: Availability of cars to households in the RSA



The map highlights the fact that urban areas (e.g. Gauteng and the south Western Cape) have the highest car ownership levels.

Figure 5: Car ownership by settlement type in the RSA

Figure 5 shows that cars ownership is relatively high in the metropolitan areas. Saturation levels of car ownership in developed nations are considered to be around 450 cars per thousand population. At 108 cars per 1 000 population for the RSA as a whole, car ownership in the RSA remains in its infancy. Growth of ownership and the resulting demand for road space will be one of the major challenges to transport authorities.

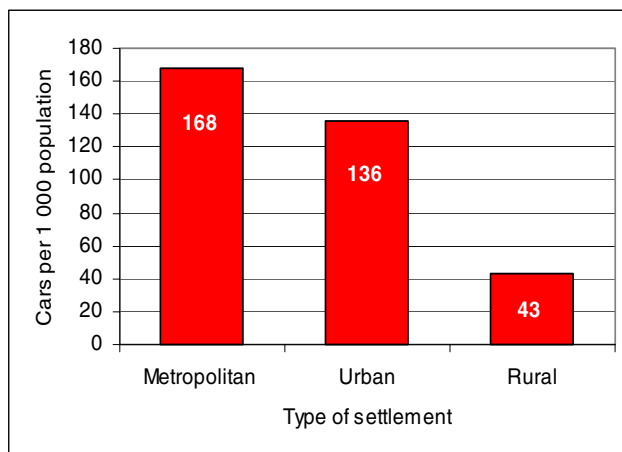


Table 6 shows that 20 per cent of citizens of 18 years and over are in possession of a driver's license. There are major differences between the population groups: of Whites, 83 per cent possess a driver's license, while only 10 per cent of Blacks do.

Table 6: Possession of a driver's licence

Race	% of persons of 18+ years with licences
Black	10
Coloured	21
Asian	56
White	83
RSA	20

7. THE EXTENT OF TRAVEL ON A TYPICAL WEEKDAY

All household members provided information on whether they had made trips on the travel day. Because the NHTS defined travel day for household members as any weekday between (and including) Monday to Friday, the travel day can be considered to be a “typical weekday”. A typical weekday for most household members would include regular daily activities such as working and going to school, and some irregular activities such as visiting or going to the doctor. Activities generate travel and understanding the amount and type of trip-making by households was an important objective of the NHTS. The trip purposes for weekday trips were recorded, as were the modes of transport used.

Table 7 reveals that 76 per cent of the population as a whole (35.2 million people) travelled at least once from their homes on the travel day. While a somewhat higher proportion of metropolitan and urban residents undertook a trip, the actual number of rural people doing so was greater.

Table 7: Proportion and number of household members who made one or more trips on weekdays by settlement type

Settlement type	% of people making a trip	No. making a trip
Metropolitan	80.5	12 410 000
Urban	78.7	9 417 000
Rural	70.4	13 376 000
RSA	75.9	35 203 000

No marked gender differences in trip-making were noted, but the age of the household member was a determining factor. This is reflected in **Table 8**.

Table 8: Weekday trip-making, by age group of household members

Age	% of people making a trip	No. making a trip
0 - 6 years	52.4	3 281 000
7 - 14 years	92.4	7 638 000
15 - 19 years	86.8	4 571 000
20 - 25 years	76.5	3 979 000
26 - 40 years	78.5	8 301 000
41 - 65 years	73.5	6 381 000
> 65 years	49.6	1 035 000

A very high proportion of household members in the 7-19 year age group made weekday trips, while fewer (but still about half) of the youngest and oldest groups made trips. The greatest number of trip-makers was, however, among the school-going age group (7-19 years) and the economically active age group (26-65 years).

Table 9 indicates that, in the RSA as a whole, the main reasons for undertaking weekday trips were to attend educational institutions, to go shopping, to visit friends and relatives, or to go to work. The importance of trips to educational institutions is apparent, particularly in the rural areas, where education is the main trip purpose. This is also the case in urban areas. Only in metropolitan areas did trips to work predominate.

Table 9: Main trip purposes on weekdays, by settlement type

Settlement type	% of household members naming trip purpose			
	Education	Shopping	Visiting	Work
Metropolitan	32.8	35.8	28.3	36.6
Urban	37.1	31.5	31.0	31.0
Rural	51.0	23.4	27.0	15.9
RSA	40.9	29.9	28.6	27.2

These tendencies are also reflected in the remarkable provincial differences in work trips made by household members shown in **Table 10**. Trips to work, often considered the main purpose for weekday trips, only predominated in the Western Cape where 41 per cent of all household members made a work trip on a typical weekday. The incidence of trips to work was lowest in the Eastern Cape and Limpopo, where only about 16 per cent of household members made a work trip on a typical weekday. Trips to educational institutions were the major purpose in five provinces; KwaZulu-Natal, the North West, Mpumalanga and, most notably, in Limpopo and the Eastern Cape. Shopping trips predominated in Gauteng, while visiting friends and relatives was the most frequent weekday trip purpose in both the Northern Cape and the Free State.

Table 10: Main purposes of trips made by household members, by province

Province	% of household members naming purpose			
	Education	Shopping	Visiting	Work
Western Cape	33.4	26.0	19.8	41.0
Eastern Cape	49.2	26.9	27.7	16.5
Northern Cape	34.3	28.3	39.7	30.9
Free State	38.2	33.3	42.9	26.6
KwaZulu-Natal	46.4	24.4	20.1	22.7
North West	39.6	23.7	29.5	26.7
Gauteng	29.9	44.1	33.9	39.3
Mpumalanga	41.4	34.0	36.7	23.7
Limpopo	51.2	22.0	27.0	15.9

Table 11 shows that the most commonly used motorised travel mode in the RSA is the minibus-taxi. Some 22 per cent of the population made use of a minibus-taxi at least once in the week prior to the survey day.

Table 11: Transport modes used by all household members in the week (7 days) prior to survey day, by province and settlement type

Province	Percentage of all people						
	Train	Bus	Metered taxi	Minibus-taxi	Sedan taxi	Bakkie taxi	Car
Western Cape	7.6	4.6	1.2	19.6	0.8	1.2	29.9
Eastern Cape	0.7	3.3	0.5	15.9	1.2	4.9	8.6
Northern Cape	0.3	2.2	0.4	12.7	0.4	0.9	16.1
Free State	0.2	3.3	0.9	22.5	1.5	0.6	12.6
KwaZulu Natal	1.1	8.7	1.6	20.5	0.9	2.8	11.2
North West	1.1	6.7	1.0	22.7	0.4	0.7	11.9
Gauteng	5.7	3.7	1.6	31.8	0.7	1.1	25.0
Mpumalanga	0.2	8.1	1.0	19.7	1.0	1.1	11.8
Limpopo	0.1	5.6	0.6	17.7	0.3	0.7	7.7
RSA	2.3	5.5	1.1	21.7	0.8	1.9	15.3
Metropolitan	5.9	6.3	1.8	29.3	0.8	1.2	24.5
Urban	1.0	3.9	0.9	24.4	1.4	1.2	19.8
Rural	0.3	5.7	0.7	14.0	0.5	2.9	5.0

Use of the minibus-taxi as a travel mode was higher in metropolitan areas (29%) than in rural areas (14%). Amongst the provinces, minibus-taxi use was highest in Gauteng where 32 per cent of all household members used the mode at least once in the week

prior to survey day, and lowest in the Northern Cape where only 13 per cent used a minibus-taxi.

The second most frequently used travel mode was the motor car. In the Western Cape, 30 per cent of all household members used a motor car in the 7 days prior to survey day. The lowest incidence of motor car use was in the provinces with more rural settlements, particularly Limpopo and Eastern Cape, where less than 10 per cent of the population made use of a car at least once during the week prior to survey day.

The only other modes which experienced significant use were trains and buses. Train and bus usage was highest in metropolitan areas, but the use of buses was also significant in rural areas (6% of people used a bus during the week before the survey). The provinces with the highest use of bus services by household members were KwaZulu-Natal (9%), Mpumalanga (8%) and North West Province (7%). Metered-taxi and sedan-taxi use was not significant, with only 1 per cent of the population having used metered-taxis and roughly the same number having used sedan-taxis in the week before the survey. It should be noted, however, that 1 per cent of 46 million is a large number and both modes obviously provide a livelihood for operators.

The National Household Travel Survey did not aim to collect information on household trip generation or for other purposes associated with modelling of household or person travel demand. The question relating to people's trip purposes on a typical weekday enabled an approximation to be made of household trip generation. The approximation assumed that each person who nominated a trip purpose made an outward and inward home-based trip for the nominated trip purpose (2 trips). Because each person either answered "yes" or "no" to each of the nominated trip purposes (including "other"), and was not asked how many times they made trips for each purpose, it had to be assumed that each household member made only one return journey for each purpose. That is, for a single trip from home, there was a corresponding trip from the destination back to the home.

Table 12 shows the percentage of all persons in the household who made one, two and three trips per day.

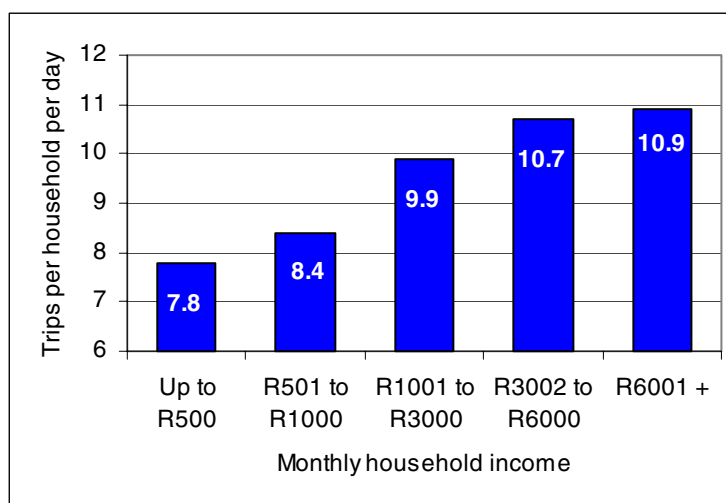
Table 12: An approximation of household trip generation in the RSA

Settlement type	% of all persons				Average no of trips per person ¹	Average no of trips per household ¹
	One-way trips					
	0	1	2	3+		
Metropolitan	20.1	51.1	13.4	15.4	2.80	9.51
Urban	21.7	50.4	15.4	12.6	2.60	8.92
Rural	29.8	51.1	11.2	7.9	2.08	8.98
RSA	24.5	50.9	13.0	11.6	2.46	9.15
Monthly household income	% of all persons				Average no of trips per person ¹	Average no of trips per household ¹
	One-way trips					
	0	1	2	3+		
Up to R500	28.8	47.4	12.4	11.4	2.34	7.79
R501 - R1000	30.0	48.8	11.7	9.6	2.18	8.41
R1001 - R3000	24.5	51.1	13.0	11.4	2.44	9.89
R3001 - R6000	17.8	54.2	14.3	13.7	2.74	10.74
> R6000	12.5	56.0	15.5	16.0	3.06	10.88

1. It was assumed that each trip from home generated a return trip.

Figure 6: Relationship between household income and household "trip generation"

As would be expected, the individuals who made the most trips for many different purposes were found in metropolitan areas (15%) and amongst those earning more than R6 000 (16%). The table shows the average number of trips per person per household and this measure, taken together with the average household size, provided an indication of the average number of trips per household. "Trip generation" is highest amongst house-holds in which the average income exceeds R6 000 (10.9 trips) and as indicated in **Figure 6**, there is a clear relationship between income and "trip generation".



There is no significant difference between these "approximate trip generation rates" in the different settlement types.

8. CUSTOMER PERCEPTIONS ABOUT THE QUALITY OF PUBLIC TRANSPORT SERVICES

Respondents were given the opportunity to report on the main transport problems experienced by the household.

Table 13 shows that many households, in all areas, did not experience any transport problems. This applies particularly to the smaller urban areas where travel distances to services and amenities are relatively short. On the other hand, only 18 per cent of rural households reported no serious transport problems.

Table 13: Absence of transport problems by type of area

Type of area	% of households
Metropolitan	27
Urban	41
Rural	18
RSA	28

The following issues stand out in consideration of the problems mentioned by consumers¹:

- (i) almost **half** of the households in the RSA said that their main transport problem was that public transport was either not available or too far away;
- (ii) **one third** of households reported that safety from accidents and bad driver behaviour was the most **serious transport problem**;
- (iii) **for 20** percent of the households, the cost of transport was a serious problem; and
- (iv) crime was a problem in the **Western Cape**.

Table 14: Transport problems by geographic area

Type of area	Type of problem	% of households
Metropolitan	Taxi safety (bad driver behaviour)	30
Urban	Taxi safety (bad driver behaviour)	26
Rural	Buses not available (too far away)	28
National	Taxi safety (driver behaviour)	24

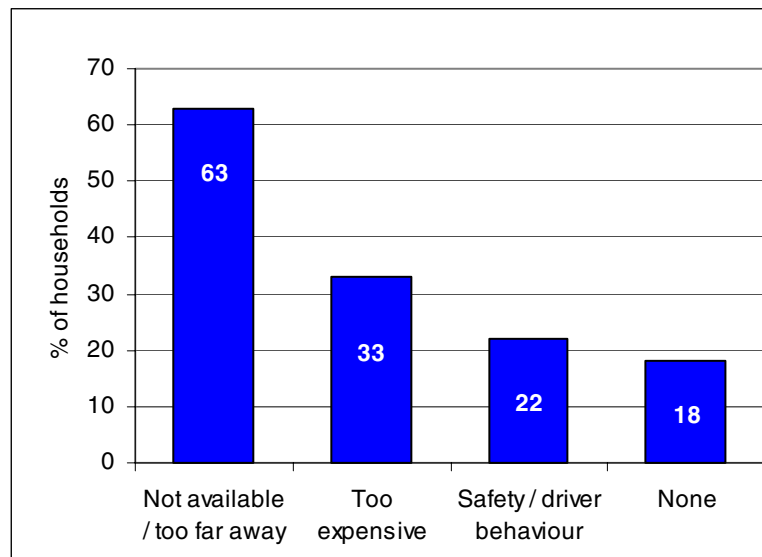
Table 14 shows that the major problem mentioned by households in metropolitan and urban areas was the lack of safety when using minibus-taxis and the associated bad driver behaviour. In rural areas, the main problem was the non-availability of buses.

¹ In the assessment of problems, the household representative was permitted to describe two problems.

Figure 7: Transport problems in rural areas

Figure 7 gives an indication of the severity of transport problems in rural areas. The most significant result is that nearly two-thirds of households reported that they did not have access to public transport.

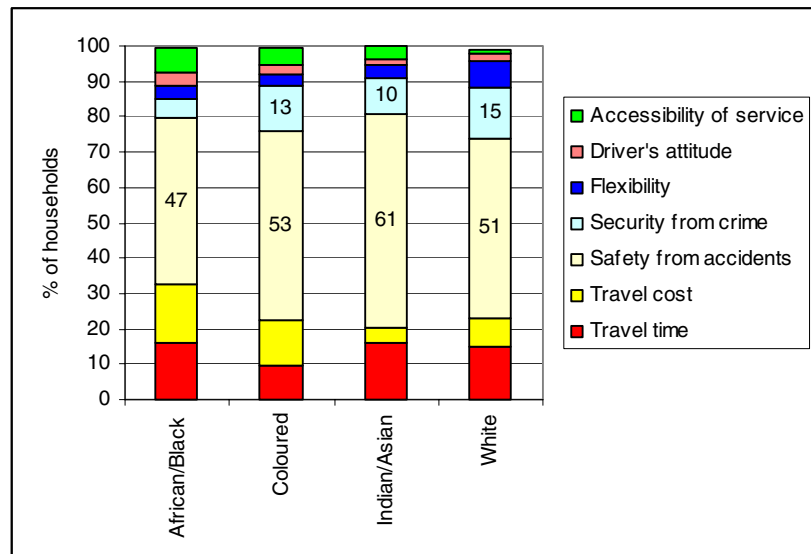
Rural poverty is reflected in the fact that a third of households stated that transport is too expensive. As in the urban areas, safety is also perceived to be a problem.



9. TRAVEL CHOICE FACTORS

All race groups, and people in every province, indicated that the most important factor to consider when travelling is **safety from accidents**. This perception is illustrated in **Figure 8**, which shows the most important travel choice factors. There are only minor differences between population groups in the rating of the importance of the choice factors.

Figure 8: Travel choice factors



Time and cost factors were important for all groups but the overwhelming travel choice factor was **SAFETY**. The concern about this travel factor ranged from 47 per cent amongst Blacks to 61 per cent amongst Asians. If the concerns about security are added, the safety and security choice factors become even more overwhelming.

People were asked to give reasons why they did not use travel modes. Only six per cent of people 15 years and over (1.9 million people) reported that they had used trains in the month preceding the survey. The reasons given for not using trains, if available, were the distance between homes and stations and crime.

Of people of 15 years and older, 83 per cent did not use buses. The reasons which they gave for this were that buses were too infrequent, did not depart/arrive at appropriate times and that travel times were too long.

About 19 million people of 15 years and older (over 59%) used a taxi in the previous month. Those who did not use taxis were deterred by cost, by crime and by the number of taxi accidents.

Almost half (48%) of the minibus-taxi passengers, 42 per cent of train passengers and a third of bus passengers were dissatisfied with the overall quality of the service. Attributes which were the main sources of dissatisfaction with public transport services were the following:

Trains:

- crowding (71% of users dissatisfied);
- security on walk to stations (64% dissatisfied); and
- security on trains (63% dissatisfied).

Buses:

- lack of facilities at bus stops (74% dissatisfied);
- crowding on buses (54%); and
- low frequency off-peak (51%).

Minibus-taxis:

- safety from taxi accidents (67%);
- lack of facilities at ranks (64%); and
- lack of roadworthiness of vehicles (60%).

10. TRAVEL TO WORK

Figure 9: Main mode of travel to work

There are about 10 million people who regularly travel to work. The modal share for work trips is depicted in **Figure 9**. The modes used vary from province to province, but about a third of all commuters travelled to work by car. Another significant group of commuters (almost a quarter) walked to work.

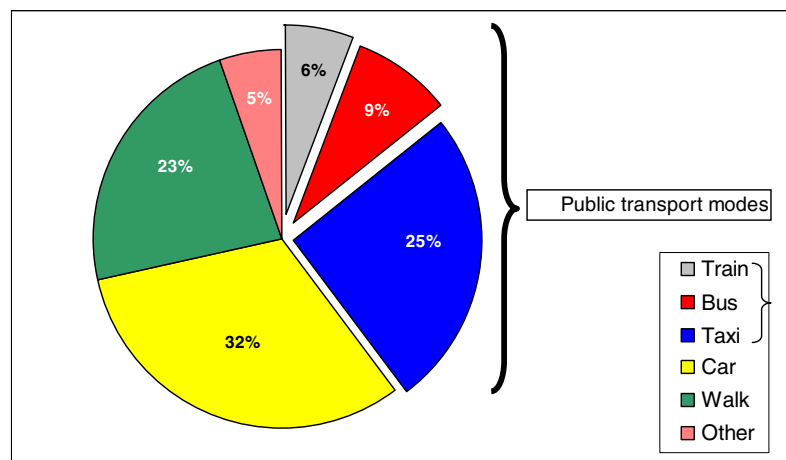


Figure 10: Public transport modes used for work trips

Figure 10 shows the modes used by the commuters who travelled to work by public transport. The vast majority of taxi users travel in minibus-taxis (over 98%) as distinct from sedan-taxis or bakkie-taxis. The figure differentiates between the settlement types, indicating that train services are only significant in metropolitan areas. Bus services are significant in rural areas but minibus-taxi services dominate in all area. The reason that they are less dominant in rural areas is because of the long distances between settlements and the generally poor road conditions. Minibus-taxis are most dominant in non-metropolitan urban areas. The short distances between residential areas and work places and the relatively lower volumes of passengers in these areas, make minibus-taxis the optimum travel mode for reasons of quick loading, fast travel and door-to-door service.

There are approximately 3.9 million *public transport* commuters. The 2.5 million taxi commuters account for over 63 per cent of public transport work trips. Bus services account for another 22 per cent of public transport commuters and the balance are carried to work by train. In addition to the 2.5 million commuters who use minibus-taxis as the main mode of travel, there are another 325 000 commuters who use taxis either as a feeder mode to other public transport services, or as a distribution service from the main mode to their places of work.

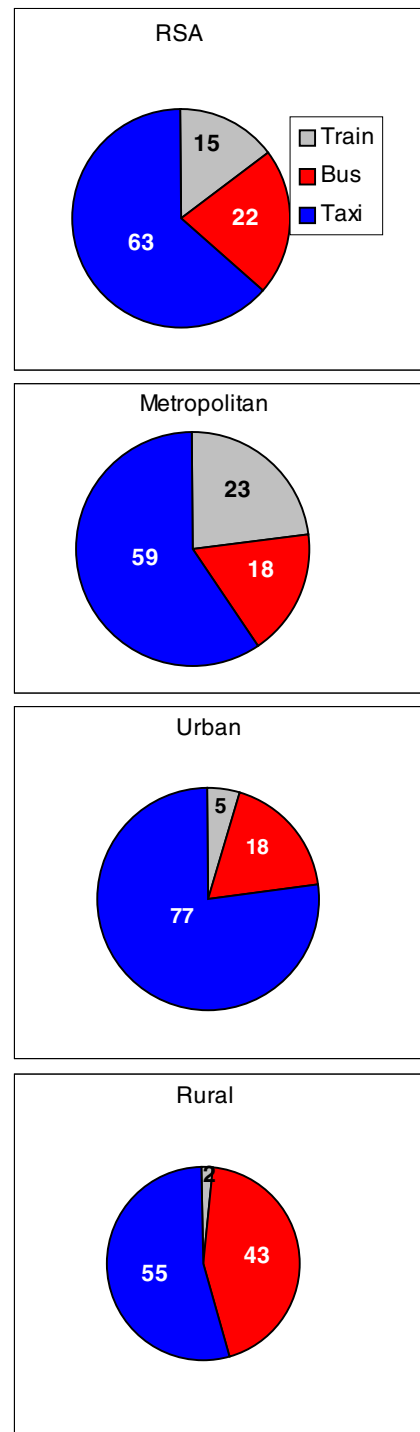
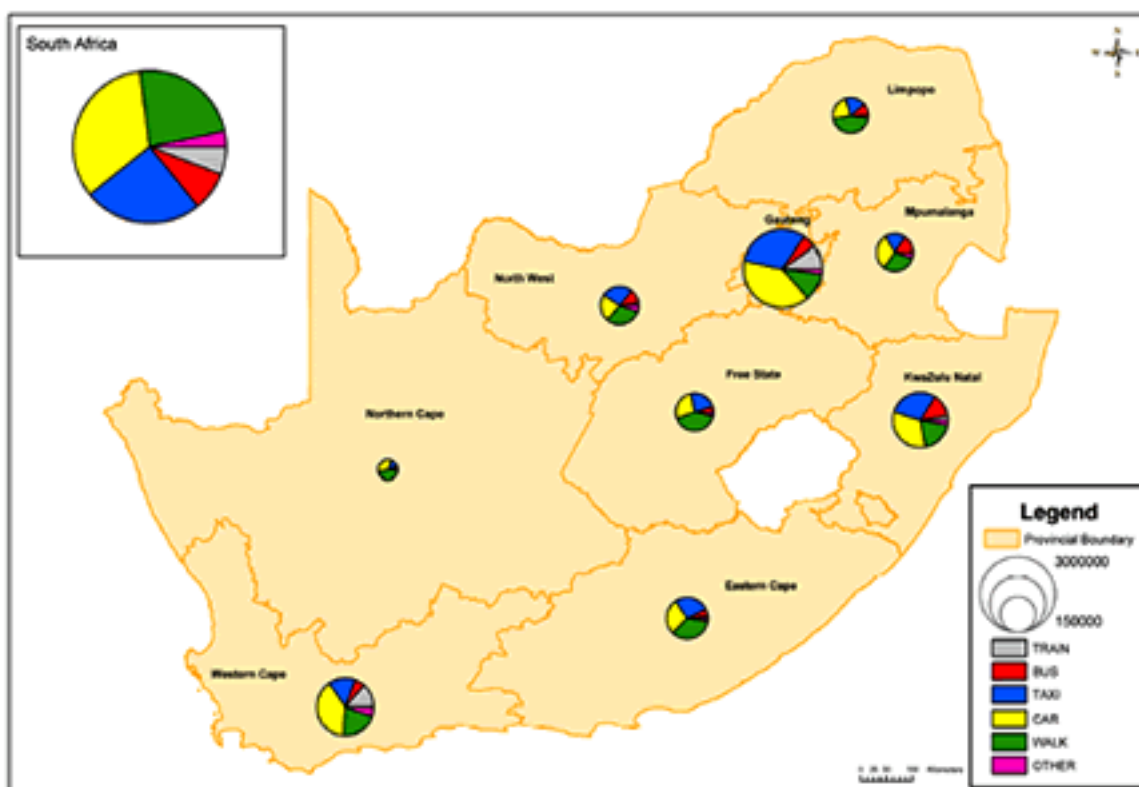


Figure 11 depicts the relative size of the commuting population in each of the provinces as well as the share carried by each mode. There are some clear differences. For example, trains only feature significantly in the Western Cape and in Gauteng, where, in both cases, they account for at least 10 per cent of daily trips to work. In Mpumalanga, bus services rival those of minibus-taxis, with the former carrying 16 per cent of commuters and the latter 18 per cent. Use of minibus-taxi services is highest in Gauteng and KwaZulu-Natal (around 30%).

Figure 11: Modes used for travel to work in each province



The most highly urbanised provinces, Gauteng and the Western Cape, have the highest levels of car use. The more rural provinces have the highest number of people who walk to work. These include Limpopo (45%) and the Northern Cape and Free State (41%). Gauteng has the smallest proportion of people walking to work (12%).

Table 15 shows the modes used for travel to work in the three different settlement types. Train services are largely confined to the metropolitan areas. The table reveals that buses play a significant role in transporting workers in the rural areas (12%). Minibus-taxi and car usage is highest in the metropolitan areas and walking as a mode of travel is lowest. In rural areas, the majority of people walk to work (53%).

Table 15: Modes used to travel to work in three different settlement types

Area type	Percentage of commuters					
	Train	Bus	Taxi	Car	Walk/cycle	Other
Metropolitan areas	11.2	8.1	28.4	41.0	9.1	2.2
Urban areas	1.7	6.2	27.0	35.5	25.6	4.1
Rural areas	0.5	11.6	15.1	15.8	52.6	4.4

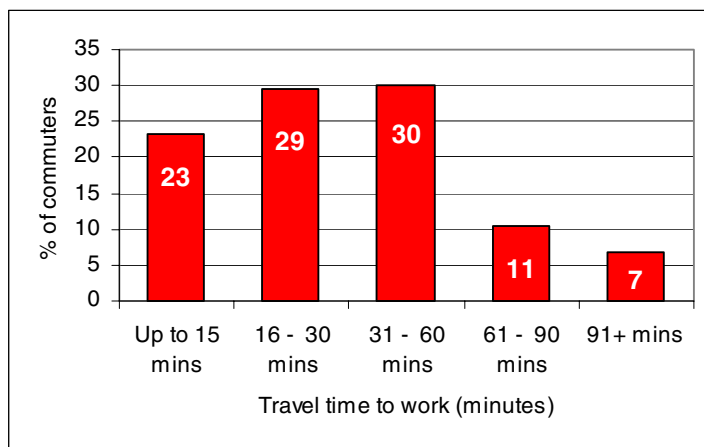
It is instructive to consider what effect income has on the choice of travel modes. It is evident from **Table 16** that most people with a low income walk to work. This figure rises to 58 per cent in the case of those earning R500 or less. On the other hand, two-thirds of people earning R3 000 per month or more make use of cars. Some 200 000 commuters who earn more than R3 000 are using trains and buses, the subsidised modes.

Table 16: Mode use for commuting by income group

Main mode to work - % of commuters						
Income Group	Train	Bus	Taxi	Car	Walk/cycle	Other
Up to R 500	3.0	7.0	20.5	4.4	57.9	7.2
R501 - R1000	6.6	10.5	29.0	6.6	39.5	7.8
R1001 - R2000	10.4	12.4	37.9	13.8	19.4	6.2
R2001 - R3000	8.9	11.1	31.3	28.5	13.7	6.4
> R3000	2.4	5.5	15.7	65.4	8.4	2.6
RSA	6.2	9.2	26.6	27.7	24.6	5.7

Figure 12: Travel times to work

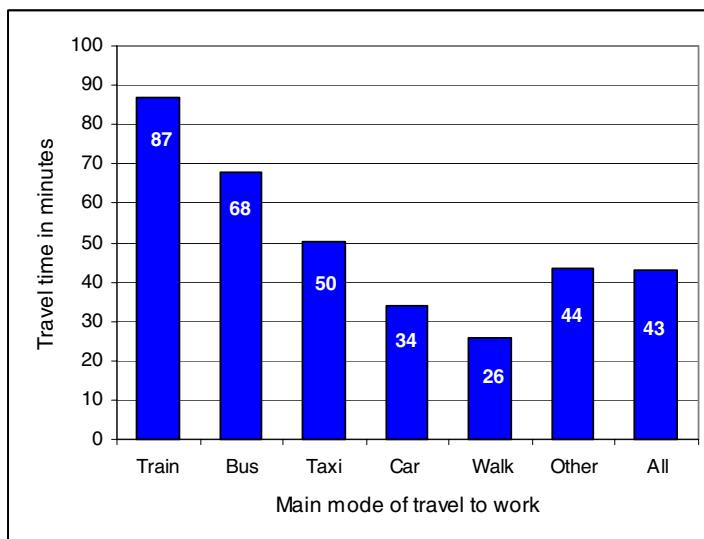
Figure 12 shows the proportion of commuters in the different total travel time categories. Some 82 per cent of commuters get to work in one hour or less. The 18 per cent who travel for an hour or more are mostly from Black households. The average travel time to work for Black commuters is 48 minutes, compared with White commuters who average 30 minutes. The longest travel times are in metropolitan areas, where White commuters average 35 minutes and Black commuters 59 minutes.



The average travel times to work by the different travel modes are depicted in **Figure 13**.

Figure 13: Average commuter travel times by mode

Train service travel times are disadvantaged by long access times and bus travel times by the fact that many of the bus services are found on the long-distance subsidised routes which are a legacy from the apartheid government.



The average reported walking times of workers to public transport modes was 9 minutes, with the modal break-down being as follows:

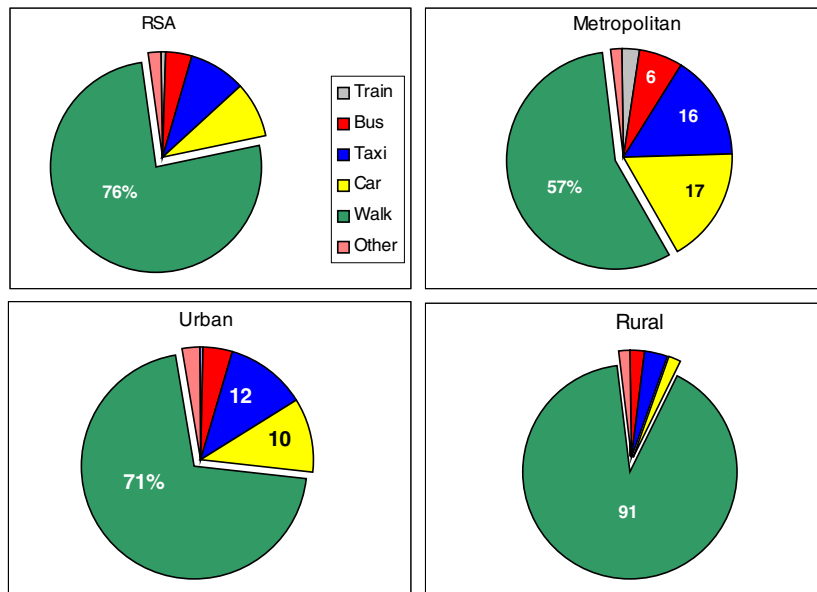
- average walking time to trains was 17 minutes (this applies to train users only);
- bus users averaged 10 minutes to a bus stop; and
- taxi users averaged 8 minutes to a taxi service.

11. TRAVEL TO EDUCATION CENTRES

Trips to education centres comprise a large proportion of the total trips made during the course of peak hours on typical weekdays. The number of education trips is 50 per cent higher than the number of trips made to work (about 15.7 million compared with 9.9 million work trips).

Figure 14: Transport modes used for travel to education centres

It is evident from **Figure 14** that the vast majority of scholars and students walk to their educational destinations (76%).



Unfortunately, almost 3 million of those learners spend more than one hour a day walking to and from the education centres.

The use of motorised travel is low, with taxi and car each accounting for around 9 per cent of all trips to education.

There is a large difference between the modes used in metropolitan, urban and rural areas, although walking and cycling are the main modes of travel in all areas. In metropolitan areas about a quarter of learners use public transport, about 19 percent use cars or are driven by their parents. In rural areas, 91 percent of learners walk to education centres.

Table 17 shows the breakdown of the mode used for education trips by the income of the household. It is quite clear from the table that use of motorised transport for education trips is mostly confined to higher income groups.

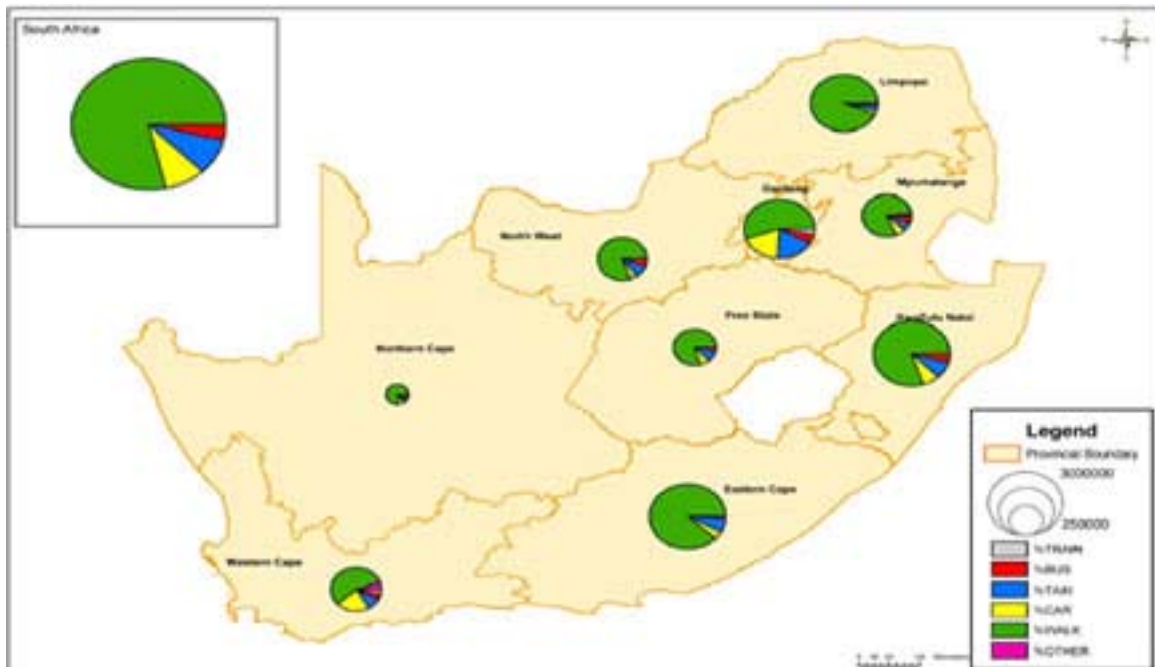
Table 17: Mode to education centre by income of household

Mode to education - all learners, including pre-school and post-matric							
Monthly household income	Percentage of learners						Number of Learners (millions)
	Walk/cycle	Taxi	Car	Bus	Train	Other	
Up to - R 500	92.5	3.1	1.0	1.8	0.3	1.3	3.5
R501 - R1000	89.3	5.6	1.0	2.3	0.4	1.4	4.0
R1001 - R3000	79.1	9.8	3.1	4.4	1.4	2.2	4.5
R3000 – R6000	56.8	19.6	13.3	6.5	1.7	2.1	1.6
> R6000	27.4	18.5	43.3	6.8	1.3	2.7	1.4

Taxi usage for education trips is far higher amongst those households earning more than R3 000 per month and car usage for households earning more than R6 000 per month. At the other end of the scale, over 90 per cent of the lower income households send their learners to school on foot.

Figure 15 depicts both the quantity of trips made to education institutions, and the travel modes used in each of the provinces. It is apparent from the map that the use of travel modes is strongly related to the level of urbanisation. In Gauteng and the Western Cape, the use of taxis and cars for travel to work is far higher than all the other provinces. Walking to education centres is predominant in the more rural provinces such as Limpopo, North West and KwaZulu Natal.

Figure 15: Modes used for education trips in the provinces



The distribution of travel times to education centres is shown in **Figure 16**.

Figure 16: Travel times to education centres

Nearly three quarters of learners travelled 30 minutes or less to education centres. Considering, however, that most walked to their destinations, the fact that 17 per cent travelled for more than 45 minutes should be of concern to education authorities.

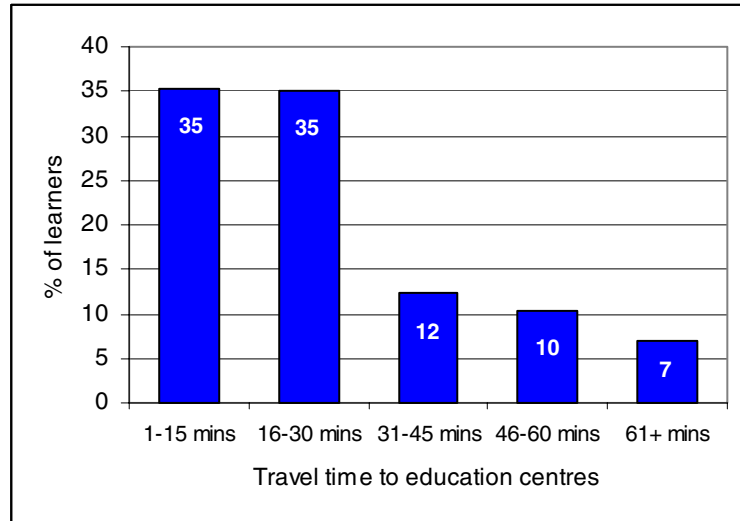
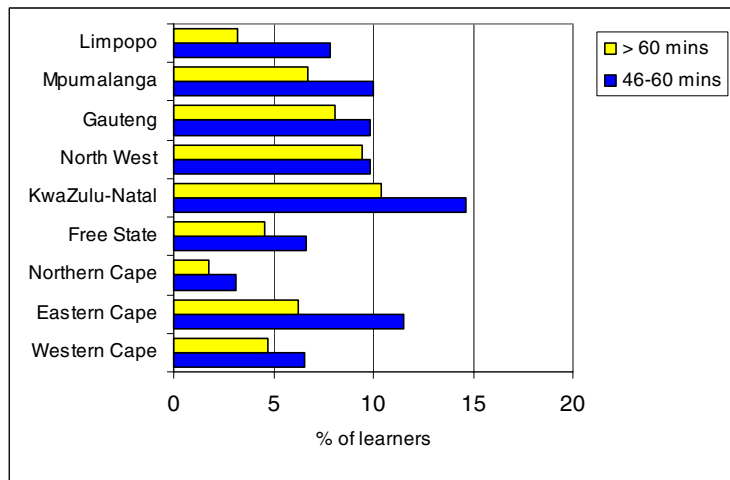


Figure 17: Percentage of learners with long travel times to education centres

Figure 17 shows the provinces where learners took a long time to get to education centres.

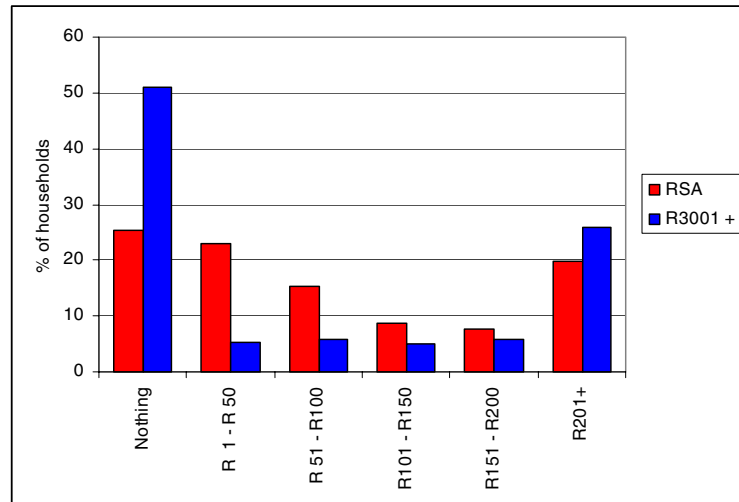
In KwaZulu-Natal and the Eastern Cape, more than 10 per cent of learners travel for longer than 45 minutes.



12. THE COST OF TRANSPORT

Figure 18: Monthly expenditure on public transport

Many households spend nothing on public transport. (Figure 18) This is because they use private means, such as cars or motorcycles to travel to work and other destinations, or because they travel on foot. Some 25 per cent of all households in the RSA spend nothing on public transport. This applies particularly to the more affluent households. Of those that earn R3 001 or more per



month more than half spend nothing on public transport. However, in contrast to the average South African household most of those earning more than R3 000 per month, generally spend more than R200 on public transport. This can be seen in Figure 18.

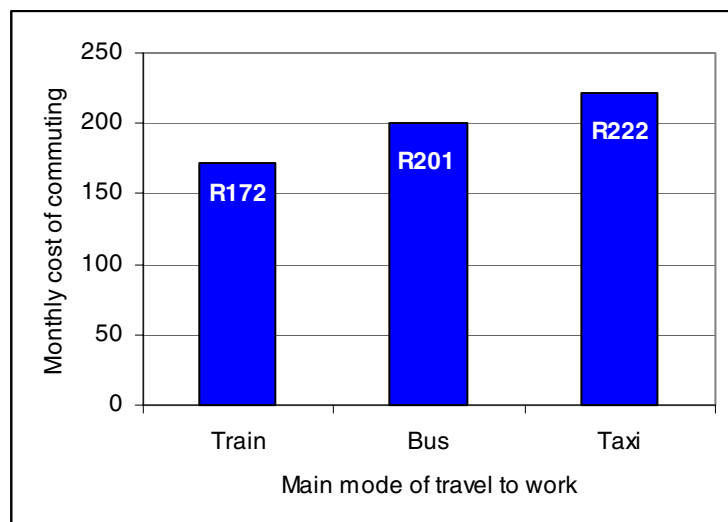
Bearing in mind that relatively few scholars and students use public transport for trips to education centres, the average expenditure on learner travel is as indicated below:

- average costs of travelling to school by taxi are R160;
- the average by bus is R123 per month; and
- the average by train is R121 per month.

Figure 19: Cost of commuting by public transport

The most serious concerns about the cost of transport are related to the cost of travel to work, particularly for low-income earners. Figure 19 shows the average costs of commuting by public transport.

The average for all public transport users is R209 per month. The average for each of the different modes varies as indicated in the figure. Fares paid by commuters are



influenced by the extent of subsidisation of the services. The subsidised modes are trains and buses as is evident in the lower average costs depicted in Figure 19. It should be noted, however, that minibus-taxi trips are generally shorter. Accordingly, the tariff per kilometer for the minibus-taxi mode is higher than for the other two modes.

There are differences in the average cost of public transport commuting from one part of the country to another. Average costs are highest in the metropolitan areas (R225 per month) and lowest in the small urban centres (R183 per month).

13. THE AFFORDABILITY OF TRANSPORT

Table 18 shows the percentage of household income spent on public transport by province.

Table 18: Percentage of household income spent on public transport

Province	Percentage of households				
	0%	1 - 5%	6 - 10%	11 - 20%	> 20%
Western Cape	45.7	21.8	14.5	9.5	8.5
Eastern Cape	16.9	25.6	25.1	9.9	22.5
Northern Cape	57.2	21.9	10.8	2.6	7.5
Free State	28.8	27.6	17.9	8.5	17.1
KwaZulu-Natal	19.7	22.9	23.1	14.5	19.9
North West	28.5	23.9	17.4	11.7	18.5
Gauteng	37.0	16.3	15.0	15.2	16.4
Mpumalanga	19.8	23.1	21.1	12.1	23.8
Limpopo	11.4	31.7	26.4	11.0	19.6
RSA	27.3	23.0	19.7	12.1	17.9

The first fact which stands out relates to those households who spend nothing on public transport. In the Northern Cape, 57 per cent of households spend nothing on public transport, while in the Western Cape the figure is 46 per cent and in Gauteng 37 per cent. The reason why there is low expenditure on public transport in Western Cape and Gauteng is that household income in these provinces is much higher than average. As a result, car availability is higher and, accordingly, use of public transport is lower. In the Northern Cape, where public transport is not well developed, many people walk or use a car, which explains the low expenditure on public transport.

Table 18 also shows which provinces have households spending more than 10 per cent of income on public transport. In the Eastern Cape; 32 per cent of the households spend more than 10 per cent and 23 per cent spend more than 20 per cent of their income on transport. Other provinces which have a large proportion of their households spending in excess of 10 per cent of income on public transport are KwaZulu-Natal (34%), North West Province (30%), Mpumalanga (36%), Gauteng (32%) and Limpopo (31%).

Table 19 shows the percentage of household income spent in relation to monthly household income.

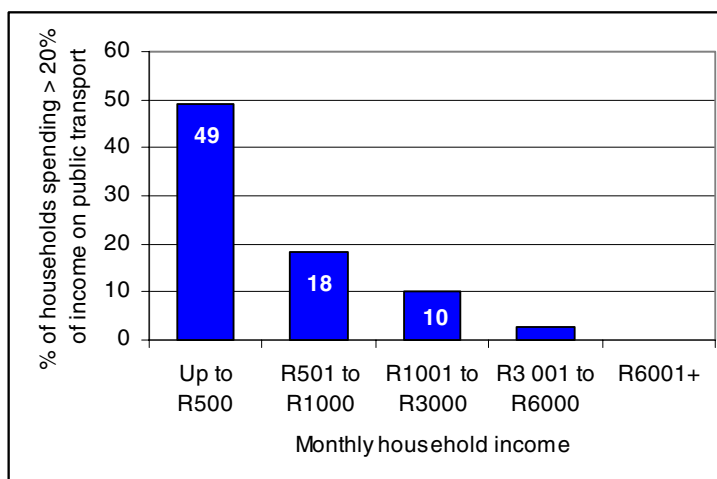
Table 19: Percentage of household income spent on public transport in relation to monthly household income

Monthly household income	Percentage of households				
	0%	1 - 5%	6 - 10%	11 - 20%	> 20%
Up to R500	20.8	0.0	24.5	5.8	49.0
R501 - R1000	14.1	33.5	20.9	13.2	18.3
R1001 - R3000	15.1	28.8	24.0	22.0	10.1
R3001- R6000	32.5	35.4	18.6	10.7	2.8
> R6000	68.8	23.8	5.4	1.9	0.0

Table 19 shows that of households earning R500 or less, almost 50 per cent spend more than 20 per cent of their household income on public transport. At the other end of the scale, almost 70 per cent of households earning in excess of R6 000 per month spend nothing on public transport.

Figure 20: Households spending more than 20 per cent of income on public transport

Figure 20 shows the relationship between monthly household income and the households who spend more than 20 per cent of income on public transport. The graph shows the dramatic effect of the cost of transport on low income groups in respect of the proportion of household income consumed on travel. For the RSA as a whole 18 per cent of households spend 20 per cent or more per month on transport. The range is between 49 per cent for those earning less than R500 per month and none for those earning R6 001 or more.



The benchmark used in the White paper on National Transport Policy (DoT, 1996) to assess whether transport costs are creating hardship for households or individuals, was 10 per cent of disposable income. This may either be the percentage of the household income or the percentage of the personal income of commuters. The percentage of personal income spent by workers on public transport to work is shown in **Table 20**.

Table 20: Percentage of personal income spent on public transport to work

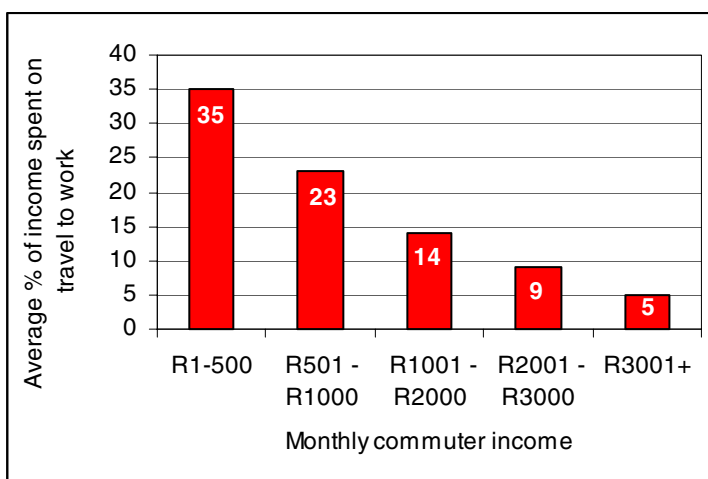
Percentage of personal income spent on public transport to work						
Income group	< 5%	6-10%	11-15%	16-20%	>20%	Mean %
R1 - R 500	1.5	1.0	3.4	12.1	82.1	35
R 501 - R1000	1.9	11.1	18.7	19.4	48.9	23
R1001 - R2000	9.6	27.7	27.0	16.8	19.0	14
R2001 - R3000	29.5	39.7	19.3	8.0	3.6	9
> R3000	65.0	26.0	6.2	2.0	0.8	5

Considering expenditure on travel to work as a percentage of commuter income, there is strong evidence that poor people are paying a large proportion of their income on getting access to their jobs. As stated previously, on average, commuters who earn R500 or less are paying over a third of their income for travel to work. Some 82 per cent are paying more than 20 per cent of their income on transport. This means that the disposable income left over for basic necessities is relatively small. At the other end of the spectrum, those who earn more than R3 000 per month are, on average, only paying 5 per cent of their earnings to get to work. For 65 per cent of this group, transport expenditure consumes less than 5 per cent of their income. In absolute terms, however, the higher income commuters may actually be paying more for their transport, but this expenditure has a much smaller impact on their budgets.

Figure 21: Average percentage of commuter income spent on travel to work

Figure 21 shows the average percentage of income spent on travel to work in each of the five income groupings.

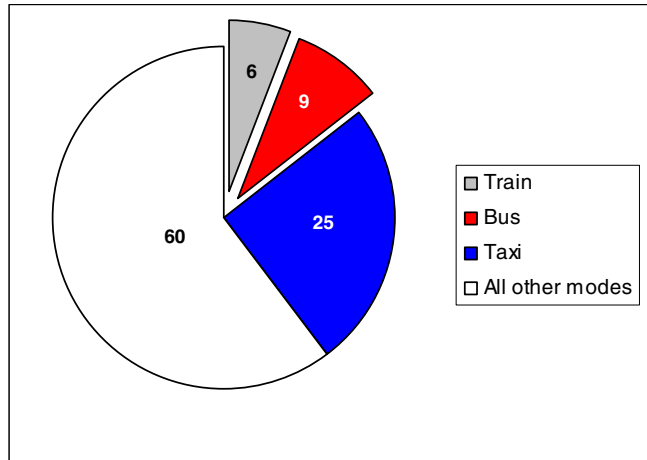
Only four per cent of public transport commuters indicated that they were receiving cash or public transport tickets for their travel to and from work.



14. THE EFFECTIVENESS OF TRAIN AND BUS SERVICES

Figure 22: Passengers transported to work by trains, buses and taxis

Figure 22 highlights the train and bus modes used by commuters to get to work. The modes which are subsidised have been highlighted to indicate the proportion of commuters who benefit from subsidies (1.45 million out of 9.9 million). It is evident from the graph that subsidies are reaching only 15 per cent of all commuters.



The following points are germane in respect of these services:

- the rail services carry only about 589 000 commuters per day;
- bus services carry only about 850 000 commuters; and
- public transport is dominated by minibus-taxi services which carry 2.5 million daily commuters.

In spite of the subsidy of train and bus services, 17 per cent of train users and 27 per cent of bus users spend more than 20 per cent of their personal income on transport to work

Table 21: Percentage of personal income spent on public transport by mode

Percentage of personal income spent on public transport to work						
Mode	< 5%	6-10%	11-15%	16-20%	>20%	Mean %
Train	25.5	30.0	17.0	10.6	16.8	10.4
Bus	22.5	22.4	15.8	11.9	27.4	13.4
Taxi	17.5	22.4	19.9	14.2	26.0	12.2
All	19.8	23.6	18.6	13.1	24.9	12.3

Table 21 shows the percentage of personal income spent on public transport by each of the main public transport modes. It is evident from the table that the majority of train users (55%) are spending less than 11 per cent of their income on public transport to work. At the other end of the spectrum, the majority of bus and taxi users spend more than 10 per cent of their income on travel to work (bus 55% and taxi 60%).

15. BUSINESS TRAVEL

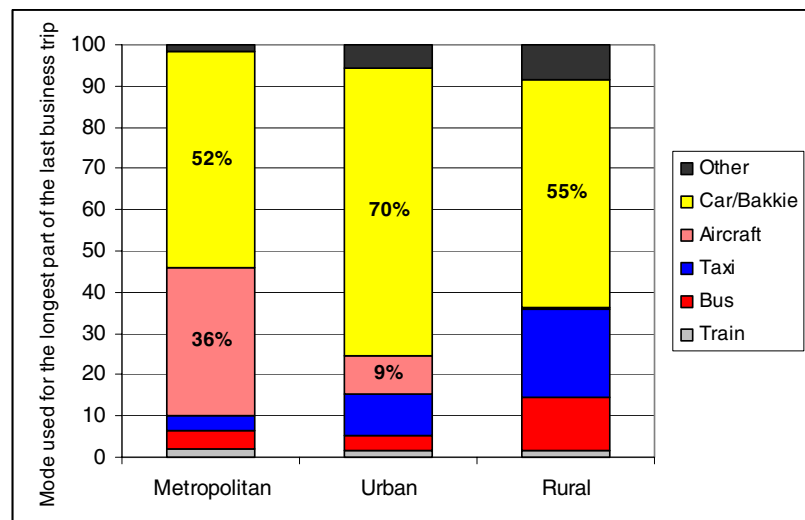
Table 22 shows the travel modes used for the last business trip made by people at the time of the NHTS survey. The NHTS revealed that about 340 000 people made at least one trip, amounting to about 750 000 business trips, during the previous month. If one uses the mode used for the last business trip to indicate the extent of business travel in the RSA by air, this amounts to about 143 000 domestically-sourced business flights per month, revealing the large extent of business travel and its importance to the RSA economy. Generally, however, most business travel is made by car.

Table 22: Travel mode for the last business trip of 200 kilometres or more

Mode	% of last business trips
Train	2
Bus	5
Taxi	9
Aircraft	19
Car / Bakkie	60

Figure 23: Percentage of trips made by each travel mode in each type of settlement in the RSA

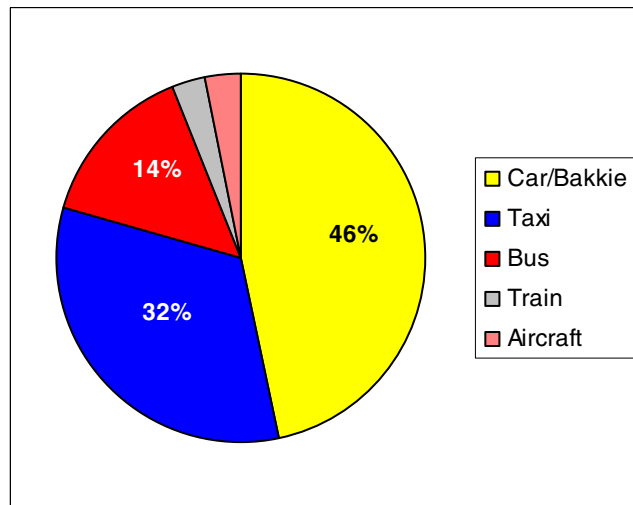
Figure 23 shows the variation in the modes used for business travel depending on the geographic base of the user. It is evident that the metropolitan business travellers have very different habits and preferences to those living in small towns and rural areas. Air travel is obviously much more significant from metropolitan areas.



16. HOLIDAY TRAVEL

Figure 24 shows the travel modes used for holiday trips. About 4 million people (9% of the population) made 7.9 million holiday trips during the previous year. The most frequently used travel mode was the motor car (46%) followed by minibus-taxis (32%) and buses (14%). If one assumes that the last travel mode is representative of all holiday trips then about 237 000 holiday trips are made by air per annum.

Figure 24: Travel modes used for holiday trips



17. TRIPS BY MIGRANT WORKERS

About 2 million workers (18% of the work force) regard another place in South Africa as their “home”. About 500 000 workers who travel to a home in another district regularly, use public transport for the trips back home. Most of the trips are made by taxis (74%). Of these trips, buses carry 18 per cent, trains carry 3 per cent and 1 per cent travel by air.

Figure 25: Frequency of trips by migrant workers

The frequency of trips home by migrants is depicted in **Figure 25**. Most travel at least once per month. The monthly demand for public transport is about 815 000 trips. Over 50 per cent of the trips are made on Fridays.

Even the weekly demand for trips home by migrants represents a very significant

business opportunity for those in the passenger transport industry.

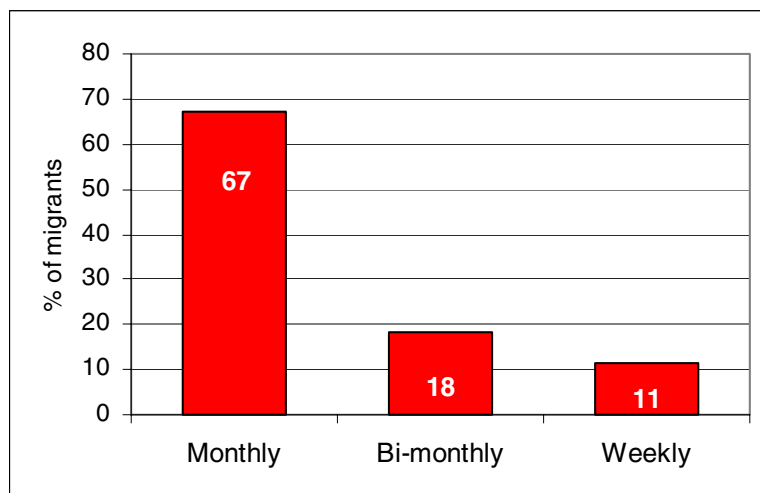
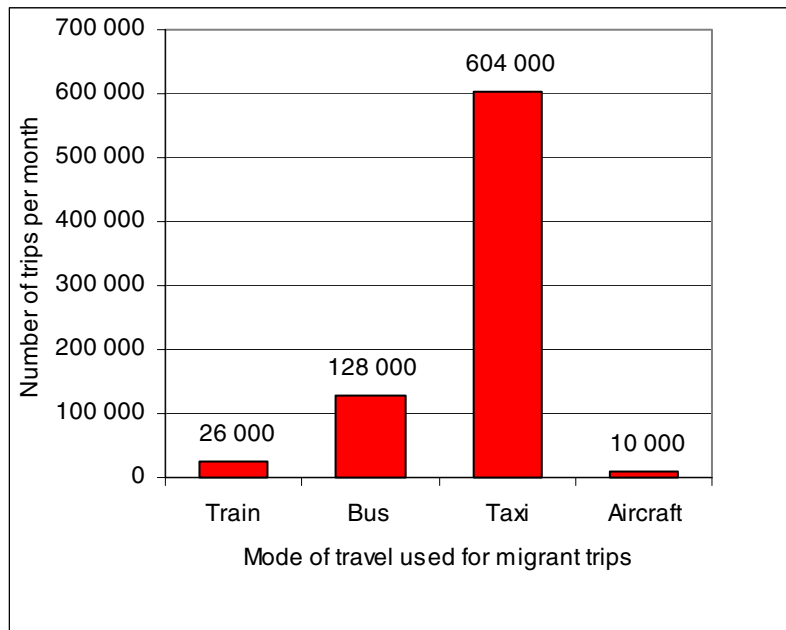


Figure 26: The number of trips made by 'migrant' workers by mode of travel

Figure 26 shows the monthly demand for trips by mode of travel. The significance of minibus-taxis is apparent, but even the ten thousand air migrants is noteworthy in view of the spatial and business changes taking place in South Africa. Traditionally, migrancy was associated with the labour policies of the former government. Increasingly, however, migrant movements are a product of choice for upper-income employees.



18. BENCHMARKING TARGETS FOR STRATEGIC OBJECTIVES

The White Paper on National Transport Policy published in 1996 by the Department of Transport provided some indicators for land passenger transport, which were based on service delivery to customers. These indicators were later translated into key performance indicators by the DoT in its Draft National Land Transport Strategic Framework for the period 2002 to 2007. In brief, the indicators related to the following:

- satisfaction of user needs;
- improved accessibility to transport services;
- affordable accessibility to work and services;
- affordable transport costs; and
- safe and secure transport.

The National Land Transport Strategic Framework set certain targets for these indicators as follows:

- average travel time to work should be less than about 1 hour;
- a ratio of 80:20 between public transport and private car use; and
- affordable public transport with commuters spending less than about 10 per cent of disposable income on transport;
- in urban areas, access to public transport within 1 kilometer (about a 15 minute walk); and
- in rural areas access to a regular public transport service within a 2 kilometer walk (about 30 minutes).

The values of the indicators in **Table 23** provide an indication of the performance of the transport system from a customer perspective in 2003, as measured by the NHTS.

Table 23: Key Performance Indicators

KPI No	KPI	KPI Target	Status for the RSA as a whole	% not within target	Number not within target
1	Travel time to work	Less than 1 hour	Average 43 min	18% of all commuters	1.7 million commuters
2	Travel time for work trips by public transport	Less than 1 hour	Average 59 min	32% of public transport commuters	1.3 million public transport commuters
3	Travel time for educational trips	Not specified (suggest less than 31 min)	Average 31 min	30% longer than 30 minutes; 7% longer than 60 minutes	4.7 million longer than 30 minutes; 1.1 million longer than 60 minutes
4	Percentage of motorised trips to work by public transport	80%	52%		
5	Metropolitan and urban walking times to trains	15 min (about 1 km)	28 min* where train available	87%* of households do not have access within 15 minutes	6.5 million* households do not have access within 15 minutes`
5b	Rural walking times to trains	30 minutes	41 min where train available	98%* of households do not have access within 30 minutes	4.2 million* households do not have access within 30 minutes
6a	Metropolitan and urban walking times to buses	15 minutes (less than about 1 km)	10 min* where bus available	52%* of households do not have access within 15 minutes	4.1 million* households do not have access within 15 minutes
6b	Rural walking times to buses	30 minutes	15 min where bus available	43%* of households do not have access within 30 minutes	1.9 million* households do not have access within 30 minutes
7a	Metropolitan and urban walking times to taxis	15 min (less than about 1 km)	10 min* where taxi available	18%* of households do not have access within 15 minutes	1.4 million* households do not have access within 15 minutes
7b	Rural walking times to taxis	30 minutes	12 min where taxi available	20%* of households do not have access within 30 minutes	1.5 million* households do not have access within 30 minutes
8	Percentage of households spending more than 10% of income on public transport	A maximum of 10% was suggested		30% of households spend more than 10% of income on public transport	3.7 million households

* Based on perceived walking times from homes to services.

In summary, the following points are noteworthy:

- the average travel time to work by all modes is 43 minutes, but if public transport is considered on its own, the average travel time increases to 59 minutes. Some 1.3 million public transport commuters travel for longer than one hour to work or for two hours per day if the trip home is also taken into consideration;
- walking times to trains are beyond the 15 minute target in the case of 87 per cent of metropolitan or urban households and beyond the 30 minute target in the case of 98 per cent of rural households;
- walking times to buses are beyond the 15 minute target in the case of 52 per cent of metropolitan or urban households and beyond the 30 minute target in the case of 43 per cent of urban households;
- walking times to taxis are beyond the 15 minute target in the case of 18 per cent of metropolitan or urban households and beyond the 30 minute target in the case of 20 per cent of rural households;
- the public transport share of all motorised trips is only 52 per cent so the ratio of 52:48 falls well short of the unrealistic 80:20 target. The RSA figure of 52 per cent is high by world standards. It will be a struggle to maintain this public transport market share if car ownership continues to grow rapidly; and
- 30 per cent of households in the RSA spend more than 10 per cent of their income on public transport.