Technical Report

Measuring household expenditure on public transport

In-depth analysis of the National Household Travel Survey 2013 data

transport
Department:
Transport
REPUBLIC OF SOUTH AFRICA

DECADE OF ACTION FOR ROAD SAFETY 2011-2020

Statistics
South Africa

The South Africa I know, the home I understand

Measuring household expenditure on public transport

In-depth analysis of the National Household Travel Survey 2013 data

Technical report

Measuring household expenditure on public transport: In-depth analysis of the National Household Travel Survey 2013 data – Technical report / Statistics South Africa

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Abbreviations and acronyms

WC	Western Cape
EC	Eastern Cape
NC	Northern Cape
FS	Free State
KZN	KwaZulu-Natal
NW	North West
GP	Gauteng
MP	Mpumalanga
LP	Limpopo
RSA	Republic of South Africa
CoGTA	Cooperative Governance and Traditional Affairs
CPI	Consumer Price Index
CES	Conference of European Statistics
DoT	Department of Transport
EA	Enumeration area
FET	Further Education Training
GHS	General Household Survey
IES	Income and Expenditure Survey
IUDF	Integrated Urban Development Framework
KPI	Key Performance Indicators
LCS	Living Conditions Survey
MTSF	Medium Term Strategic Framework
NDP	National Development Plan
NHTS	National Household Travel Survey
NMT	Non-motorised transport
NPC	National Planning Commission
PSU	Primary Sampling Unit
PT	Public transport
SDG	Sustainable Development Goals
Stats SA	Statistics South Africa
TOPSA	Transport Opinion Poll South Africa
UNECE	United Nations Economic Commission for Europe

Glossary of concepts and definitions

Concept	Definition
Affordability	It is calculated by dividing household travel cost incurred for public transport by per capita income.
Bus	A road-based public transport vehicle that can carry more than about 18 passengers. (Including Bus Rapid Transit system)
Car	A passenger motor vehicle used by a private individual for his/her own convenience.
Commuter	According to the concise Oxford Dictionary, a commuter 'travels daily, especially by train and car to or from work in the city'. This definition does not clarify the position of those who walk to work. Furthermore, in South Africa, common usage associates the word with those who travel to work by public transport. For the purpose of NHTS a 'commuter' is defined as any person who regularly travels to and from work whether on foot or by motorised transport.
Dwelling unit	A structure, part of a structure or group of structures that can be occupied by a household(s).
Enumeration area	An EA is the smallest geographical unit into which the country has been divided for census and survey purposes.
Formal sector	Sector of employment made up of all employing businesses that are registered in any way.
Geographic Information System (GIS)	A system of hardware, software and procedures designed to support the capture, management, manipulation, analysis, modelling and display of spatially referenced data.
Household	A person or group of persons who has occupied a common dwelling unit for at least four nights in a week on average during the past four weeks prior to the survey interview. This is described as the '4x4' (four by four) rule. Basically, they live together and share resources as a unit.
Inflation	The persistent change in the general level of prices.
Informal sector	Consists of those businesses that are not registered in any way.
Institutions	Communal places of residence for people with common characteristics such as a hospital, school hostel, prison, defence force or convent. Such sets of living quarters usually have certain common facilities shared by occupants, i.e. baths, lounges, dormitories, etc.
Learner	A person who regularly attends a pre-school, a school, a college, a technikon or any other tertiary education or training institution.
Main mode of travel	The main mode of travel is the highest mode of travel used in the following hierarchy of travel modes: 1. Train 2. Bus 3. Taxi 4. Car driver 5. Car passenger 6. Walking all the way 7. Other

Metropolitan	Covers the six metropolitan municipalities defined by the Municipal Structures Act, namely the entire jurisdictions of Cape Town, Ekurhuleni, eThekwini, Nelson Mandela Bay, Buffalo City, Mangaung, Johannesburg and Tshwane.
Mode of travel	Type/means of transport used for travel purposes. This includes non-motorised transport for reward. Most minibus-taxis operate to or from a rank.
Non-motorised transport	Any mode of travel without a motor to provide the motive force for the movement of the vehicle.
Non-public transport	Any mode of travel except public transport.
Per capita monthly household income	The amount of income accrued by a household per month divided by the household size.
Private transport	All forms of motorised transports which were used by individuals in travel modes other than public transport. This includes car drivers, car passengers and company vehicles.
Public transport	All transport services for which passengers made payment, including trains, buses and taxis.
Quintile	A quintile is one-fifth of 20% of a given number. The poorest per capita quintile (quintile 1) represents households that fall into the lowest fifth or 20% of the data. Quintile 2 represents households that fall into the second fifth (21% ─ 40%). Quintile 3 represents households that fall into the third fifth (41% ─ 60%). Quintile 4 represents households that fall into the fourth fifth (61% ─ 80%). The final and wealthiest quintile, quintile 5, represents households that fall into the highest fifth of the data (81% ─ 100%) of the data.
Respondents	A person (or persons) responding to questions in the selected dwelling unit. The person should be a member (or members) of the household and be in a position to answer questions. This will preferably be any responsible adult. If you find only children in a household (child-headed household), interview the eldest or the one taking responsibility.
Rural	The settlement type is associated with commercial farming areas (rural formal) and land designated as tribal or traditional.
Total monthly household income	It is calculated by adding the monthly earnings per individual in the household as well as the total grant income for the household. Total grant income for the household is obtained by using the gazetted value for each grant as the guideline.
Traditional dwelling	A dwelling made of clay, mud, reeds or other locally available materials. This is a general term, which includes huts, rondavels, etc. Such dwellings can be found as single units or in clusters.
Taxi	A vehicle which operates an unscheduled public transport service for reward, most operate to or from a taxi rank. (Includes: Sedan taxi, metered taxi, minibus-taxi etc.)
Train	A form of rail transport consisting of a series of vehicles that usually runs along a rail track to transport cargo or passengers. (Includes: Gautrain)
Travel cost	It is calculated by adding the total costs incurred for education and work-related travel. Also included is the cost of overnight trips if overnight trips are done weekly/four or more times a month. In addition, travel cost was divided by the number of individuals in the household.
Scholar	A person attending primary or secondary school.

Urban	All areas classified as urban formal or urban informal according to the Census geographic classification. It excludes areas classified as metropolitan by the Municipal Demarcation Board as per 2011 classification.
Walking all the way	Walking from one point to another without any other form of transport.
Worker	In the case of the NHTS, this term applies to any person who works. No distinction is made between occupational categories or classes.

1.   Introduction

South Africa's urban areas continue to be hampered by a legacy of racial segregation, poverty, and exclusion from social and economic opportunities. The spatial legacy is one of sprawl, low densities, functional segregation between home and work, and overlapping racial and class separations (CoGTA, 2014:15). Removing the shadow of apartheid by developing the capabilities of the historically disadvantaged is necessary. *This means that good quality education, basic services such as health, water, sanitation, public transport, safety and social security are all vital to address deprivation* (NPC, 2001:460).

The National Planning Commission (NPC) presented the National Development Plan (NDP), which is aimed at addressing and eradicating poverty and reducing the inequality in the country. The following are some of the specific strategic objectives, which are related to public transport:

- Investments in public transport, which will benefit low-income households by facilitating mobility.
- Establishment of effective, safe and affordable public transport.
- Investments in the transport sector, which in turn will bridge geographical distances affordably, foster reliably and safety so that all South Africans can access previously inaccessible economic opportunities, social spaces and services.
- Investments in public transport infrastructure and systems, including the renewal of the commuter rail fleet, supported by enhanced links with road-based services.
- Establishment of the user-friendly, less environmentally damaging, cheaper and integrated or seamless public transport.
- Devolve transport management to local government.

In 2002, the World Bank published a report titled "*Cities on the Move*", which states that economically, transport is the lifeblood of cities; in most countries, including developing countries, cities are the major sources of the national economic growth. This sentiment is also echoed by the vision statement of the Department of Transport (DoT) which reads "*Transport, the heartbeat of economic growth and social development*". The United Nations Conference on Sustainable Development (UNCSD) released an Outcome Document in 2012 titled *the Future We Want,* which pronounces that transportation and mobility are central to sustainable development. The report emphasises and acknowledges that affordable and sustainable transport is vital to sustainable cities, as well as the need for energy efficiency measures in urban planning, building, and transportation, as part of integrated planning and management.

The 1996 White Paper on the National Transport Policy is one of the key transport policy documents in the country that aims to ensure that the South African transportation system is adequate to meet the basic accessibility needs (to work, health care, schools, shops) in many developing rural and urban areas. The following are some of the strategic objectives that the policy aimed to attain:

- Affordable public transport, with commuters spending less than about 10 per cent of disposable income on transport
- Passenger transport services that address user needs, including those of commuters, pensioners, the aged, scholars, the disabled, tourists, and long distance passengers
- Improve accessibility and mobility, limiting walking distances to less than about one kilometre in urban areas
- Provide an appropriate and affordable standard of accessibility to work, commercial and social services in rural areas
- Promote safe and secure, reliable and sustainable passenger transport

The patterns of urbanisation in South Africa are complex because circular labour migration under apartheid has led to an intricate relationship between rural and urban areas (NPC, 2011:105). The draft Integrated Urban Development Framework (IUDF) points out that by 2030 another 7,8 million people will be living in South African cities and by 2050 a further 6 million, adding enormous pressures to housing, services, transportation and infrastructure.

According to Census 2011, approximately 68,2% of households in the country reside in urban areas. Cities, and the growth of cities, make poverty reduction possible. Poor transport inhibits the growth of cities. Socially, transport is the means of (and the lack of transport is the impediment to) accessibility to the jobs, health, education, and social services that are essential to the welfare of the poor (World Bank, 2002:1). Hence, investments in transport infrastructure and improving public transport are key development areas that are imperative in achieving the NDP 2030 objectives.

Public transport in its many different forms is an important means of transport used by the majority of South Africans both in rural and urban areas. According to the 2013 NHTS, of the 17,4 million learners that attended educational institutions, more than half (about 11 million) walked all the way, and about 2,6 million learners made use of taxis to travel to their educational institutions. As far as workers were concerned, nearly 40% of workers (39,1%) used public transport as their main mode of travel to work; 38,4% of workers used private transport and approximately 21% of workers reported walking all the way. The 2013 NHTS report further shows that the percentage of the population using taxis and buses for transport has increased when compared to the 2003 NHTS, and taxis remain the dominant public transport mode used across all provinces. Trains are primarily used for work and education-related travel in Western Cape and Gauteng (Stats SA, 2014).

Additionally, Diaz Olvera et al. (2008), found that in sub-Saharan Africa the cost of transport faced by city dwellers, particularly the poor, tends to add to their travel and economic difficulties. According to the 2010/11 Income and Expenditure Survey, South African households on average spent approximately R16 319 on transport between the period September 2010 and August 2011. The survey further shows that transport is the second largest expenditure group and is estimated at R214 billion or 17,1% of total household consumption expenditure.

Furthermore, Venter and Behrens (2005) argued that understanding and measuring the transport expenditure patterns of households is critically important for formulating and monitoring the effectiveness of transport policies. The United Nation Open Working Group of the General Assembly on Sustainable Development Goals (SDGs) report even propose that one of the targets for SDG 11 should be that the state by 2030 provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons (United Nations, 2014).

It is evident from the above-discussed policy initiatives, plans and literature that the key thrusts are safe, affordable, accessible and sustainable transport systems. It is against this background that Stats SA prepared this report as it is important for transport policy makers and planners to be guided by accurate information and statistics regarding household expenditure on public transport. Thus, this report seeks to explore and provide a better understanding of measuring household expenditure on public transport, but also interrogates the data and make recommendations on how the data can be improved.

2. Objectives of the report

Given the importance of understanding and measuring household expenditure on public transport, this report aims to:

- Discuss and explore a method to derive and impute total monthly household income for households who did not provide their household income information

- Provide a profile of public transport users

- Assess the level of affordability of public transport

- Provide a visual representation of public transport users across different geographical locations with regard to the level of affordability of public transport

3. Organisation and presentation of the report

This report has eight sections. The first, second and third sections provide an introduction, background as well as the objectives of the report. Section four describes the methodology and data sources used and points out some of its limitations. A detailed discussion of the findings of the report is provided in sections five to eight. These sections are divided as follows:

- Section 5: Method to derive and impute total monthly household income for households who did not provide their household income information

- Section 6: Main mode of travel at a glance

- Section 7: Public transport at a glance including the affordability of public transport

- Section 8: This final section will deal with recommendations.

4. Methodology and data sources

4.1 Introduction

The National Household Travel Survey (NHTS) 2013, the General Household Survey (GHS) 2013, 2010/11 Income and Expenditure Survey and Census 2011 were used in this report to explore and enrich insights on household expenditure on transport. Census 2011 data were used to impute total monthly household income for households with zero household income value and their main source of income is grants, salaries, pension or remittance. All data were analysed using the statistical analysis programs SAS 9.3 and SAS Enterprise Guide 4.3 were used for statistical analysis and ArcMap 10 for spatial data analysis. Note that missing and unknown values were excluded from the analysis and frequency values were rounded off to the nearest thousand, unless otherwise specified.

4.2 National Household Travel Survey

The National Household Travel Survey (NHTS) was conducted in 2003 and 2013, and is aimed at providing insights into the travel modes, times and costs of South African households. The aim of the NHTS is to gain strategic insight into the travel patterns and transport problems in the country, and the collected information will serve as the basis for DoT research, planning and policy formulation. The information will further assist transport authorities to effectively target subsidies. This information will also serve as a data source for the definition and measurement of Key Performance Indicators (KPI) for land passenger transport, as required in terms of the National Land Transport Transition Act (Act No. 22 of 2000).

The survey primarily covers land transport travel. Land transport focuses on public and private transport and includes non-motorised transport such as walking all the way, cycling or making use of animal-drawn vehicles. It encompasses travel related to education, work, business and leisure and migration for individuals. Most of the work and education-related questions are associated with a randomly selected travel day (Monday to Friday). In addition to these themes, household-level information was also collected about the demographic profiles of individuals, socio-economic circumstances of households and general attitudes and perceptions about transport.

4.3   General Household Survey

The GHS is a household survey that has been performed annually by Stats SA since 2002. The survey was introduced to address a need identified by the government of South Africa to determine the level of development in the country and to measure, on a regular basis, the performance of programmes and projects that were implemented to address these needs. The survey is specifically designed to measure issues around education and multiple facets of the living conditions of South African households, as well as the quality of service delivery in a number of key service sectors. The target population of the survey consists of all private households in all nine provinces of South Africa, and residents in workers' hostels.

4.4   Income and Expenditure Survey

The Income and Expenditure Survey (IES) was conducted between September 2010 and August 2011. The primary objective of the IES is to provide relevant statistical information on household consumption expenditure patterns that will inform the updating of the Consumer Price Index (CPI) basket of goods and services. It was collected from 25 328 households across the country over a period of 12 months. The survey used a combination of the diary and recall methods. Households were required to complete their daily acquisitions in diaries provided by Stats SA for a period of two weeks and to answer a variety of questions from the household questionnaire administered by a Stats SA official over a four-week period.

4.5   Limitations of the study

Since the NHTS, GHS and IES are sample surveys and rely on population estimates and a weighting process to extrapolate sample estimates to population estimates, the absolute number of cases does not always correspond with Census data sources. Data from census were collected in 2011 while NHTS and GHS data were collected two years later, in 2013. The IES data were collected between September 2010 and August 2011.

The use of a proxy method poses a particular challenge — it might provide different estimates for travel cost and mode compared to the self-reported method. Note that households who used public transport and did not report their monthly household income and travel cost information were excluded when analysing affordability of public transport.

Due to data constraints, this report did not consider any travel distance and travel cost per distance.

5. Method to impute total monthly household income for households who did not report their total monthly household income

5.1 Introduction

Income is one of the most frequently used variables in social analysis and an important socio-economic characteristic in transport research. For most people, household income is the most important determinant of economic well-being. It provides a measure of the resources available to the household for consumption and saving (UNECE and CES, 2011:3).

Moore et al (1999) found that income reporting in surveys is generally a two-staged process involving first, the reporting of income sources, and then the reporting of amounts received from those sources. Response errors can occur at either stage. An entire source of income can be mis-reported, leading to either the respondent's failure to report true income or his or her "false positive" reporting of income not actually received. Or, the source of income may be reported correctly, but the amount received from that source can be mis-reported.

Both NHTS and GHS followed the same two-staged process of reporting income — where the respondents indicate their main source of income and then the amount received from those sources. Note that the total monthly household income is derived by adding the monthly earnings per individual in the household as well as the total grant income for the household. Total grant income for the household is obtained by using the gazetted value for each grant as the guideline.

This section will discuss the main sources of household income, monthly household earnings and method to derive total monthly household income for households who did not provide their monthly household income information and the effect of excluding these cases in the analyses.

5.2 Main source of household income

Figure 1: Percentage distribution of main source of household income
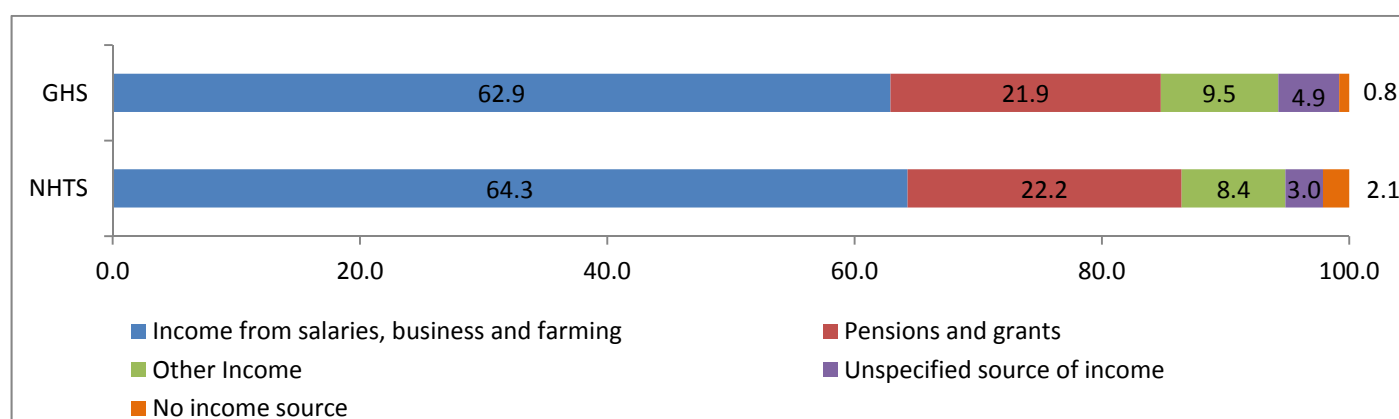
Other income includes rental income, interest income, remittances etc.
Source: NHTS 2013 and GHS 2013

The main sources of household income for NHTS and GHS are presented in Figure 1. Both surveys show income from salaries, business and farming as the main source of income, followed by pensions and grants and other source. Nearly five per cent (4,9%) of the households from GHS did not mention their main source of income while NHTS recorded three per cent (3,0%).

Focusing on those who did not have a source of income, GHS had less than one percentage (0,8%) of the households who did not have a source of income and NHTS had 2,1%.

5.3   Total monthly household income information

Figure 2: Percentage distribution of household income information

	GHS	NHTS
■ Household income reported	96,7	93,5
■ Household income not reported	2,5	4,4
■ No household income	0,8	2,1
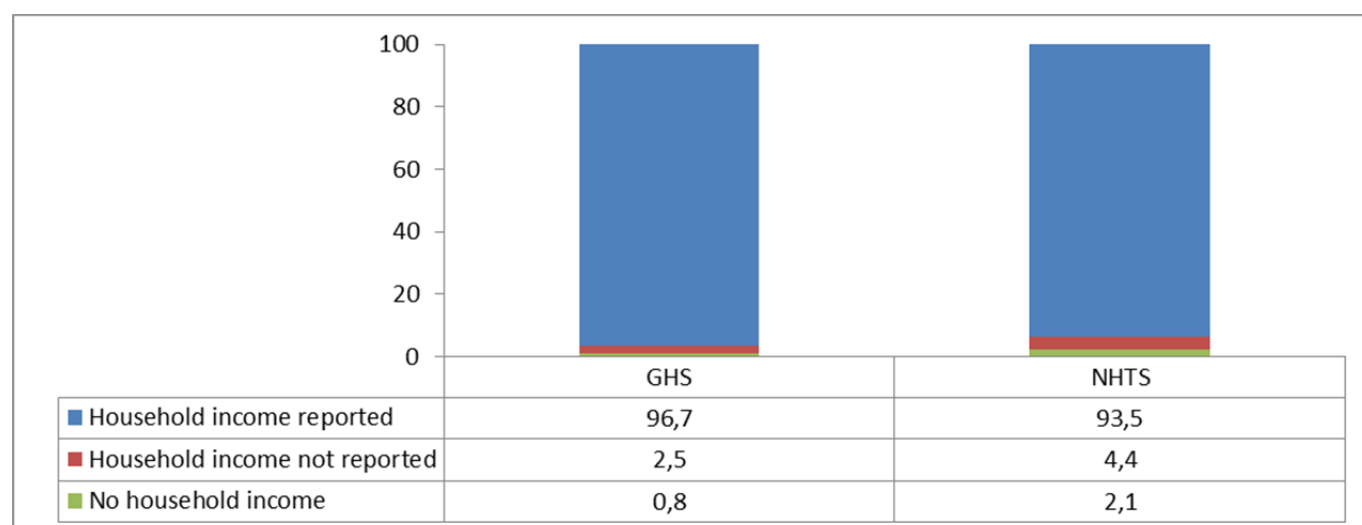
Source: GHS 2013 and NHTS 2013

According to Figure 2, GHS recorded both the lowest percentage of households that did not report their monthly household income (2,5%) and those who did not have a monthly household income (0,8%) compared to NHTS at 4,4% and 2,1% respectively.

Kim et al (2007) found that in general, survey data on income are missing for up to one-third of respondents/households, depending on factors such as the data collection method, the wording of the income question, and the population surveyed. Although NHTS recorded a lower percentage of households who did not report their monthly household income than what Kim et at (2007) found, it is still a concern that it is higher than GHS.

There are many aspects that could contribute to surveys/studies to have households who did not report their income information. Some of these aspects are:

- **Privacy and confidentiality issues**: For many people, income information is considered very private and often not to be shared even among members of a household.

- **Use of proxy respondent:** Problems with recall or with assessing all sources of income over a given time period. This could lead to reporting incomplete or outdated information, particularly when a respondent is answering questions about another member of the household.

- **Respondent fatigue**: Mainly caused by the length and complexity of the questionnaire, the household income question is often asked near the end of the interview.

- **Mandatory question**: Survey officers are not encouraged to make respondents answer any question they are not comfortable with.

- **The use of contract workers**: The GHS data is collected using permanent survey officers, whilst NHTS used contract workers. The latter may have been less experienced and willing to take risks in terms of probing for income information.

5.4 Effects of excluding households who did not report their household income information

Kim et al (2007) found that income data in many surveys are often missing for substantial proportions of respondents/households and these records are often dropped from analyses. Researchers turn to analysing data of missing income information in one of three ways:

- Excluding observations with missing income information, either by deleting the observations prior to analysis or by dropping them when statistical procedures include income;

- Using "missing information" as one of the income categories; or

- Using various techniques to impute income based on other individual- or geographic-level information on the participants.

This section will therefore focus on households/cases that mentioned their main sources of income as either income from salaries/business, grants, pensions or remittance including child maintenance and did not report the amount received from these sources. Furthermore, explore the implications of excluding these households/cases and also evaluate the imputation method of calculating these households/cases.

The total household income for households who did not report their income information was derived by adding the monthly earnings per individual in the household as well as the total grant income for the household and also income information from Census 2011. The steps used for derivation and imputation are as follows:

- Computed key census income indicators/estimates (average and total household income) per EA;

- Then linked Census enumeration areas (EAs) with the NHTS primary sampling units (PSUs);

- Key Census income indicators/estimates per EA were associated with the location of households in the NHTS;

- From Census, we divided the average household income per EA by 12 months to reflect monthly average household income;

- Since NHTS was conducted in 2013 and Census in 2011, to obtain valid comparisons the census data were adjusted for inflation by using the CPI headline table (see Annexure 1);

- Then, monthly household income was calculated by taking monthly average household income per EA from Census and multiplied by the inflation rate.

Note that only households/cases that indicated their main sources of income and did not report the amount received from these sources were allocated a derived monthly household income.

Figure 3: Percentage distribution of household income information

	GHS	NHTS	NHTS*
■ Household income reported	96.7	93.5	96.0
■ Household income not reported	2.5	4.4	1.9
■ No household income	0.8	2.1	2.1
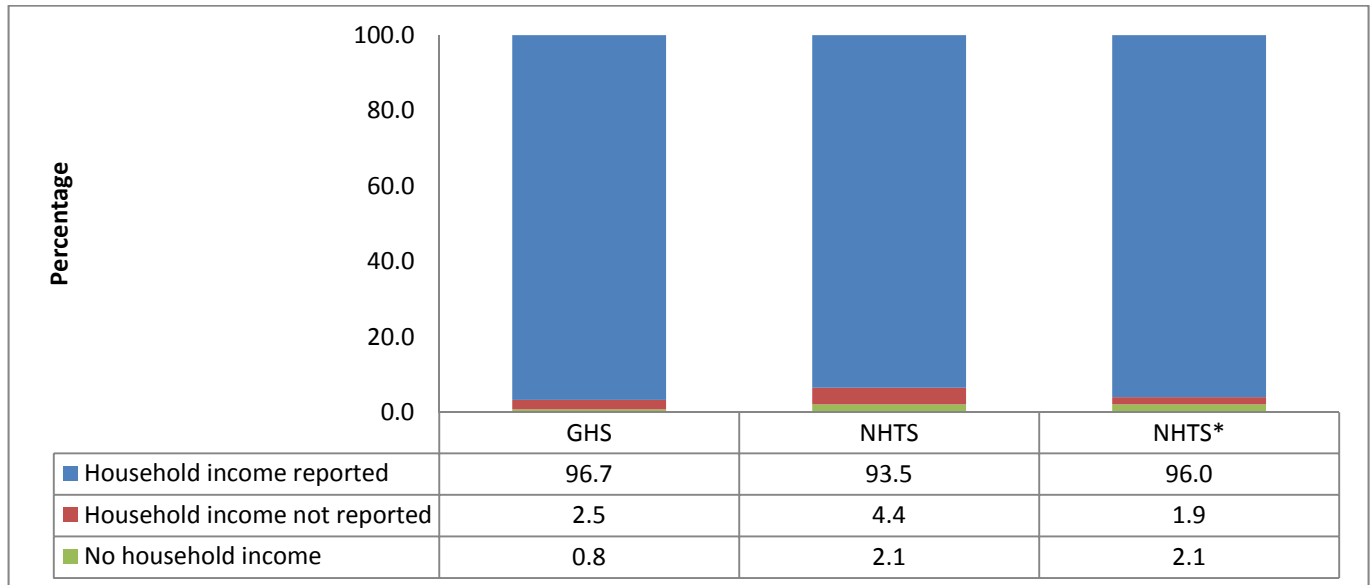
Source: GHS 2013 and NHTS 2013
*Monthly household income is calculated by adding all the monthly earnings per individual and impute missing values using income information from Census.

Figure 3 demonstrates that there is a percentage decrease of households that did not report their monthly household income when using the new derived monthly household income variable (NHTS*) — moving from 4,4% to 1,9%. In addition, NHTS* recorded more households who reported their monthly household income — moving from 93,5% to 96,0%.

It is interesting to note that proportionally, NHTS* had less households that did not report their household income (1,9%) compared to GHS (2,5%).

Figure 4: Total monthly household income and average monthly household income
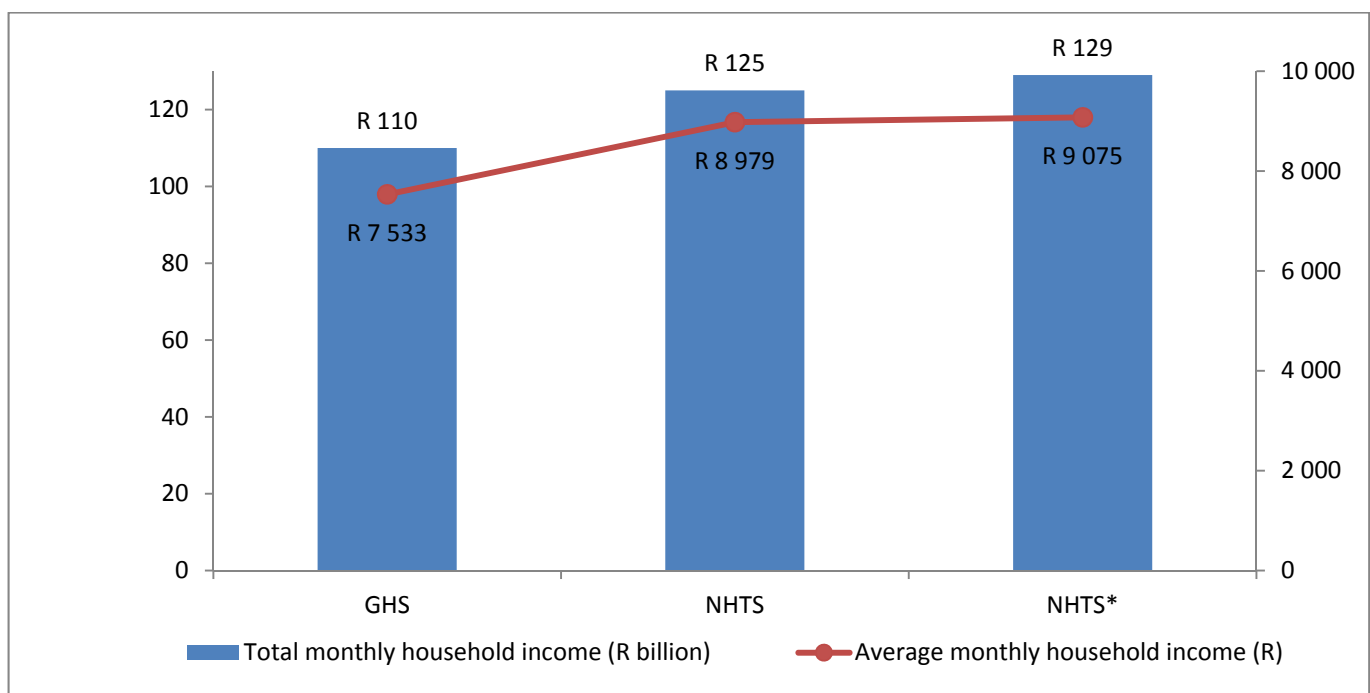
Source: GHS 2013 and NHTS 2013
Totals excluded households that reported zero income.
*Monthly household income is calculated by adding all the monthly earnings per individual and impute missing values using income information from Census.

Figure 4 illustrates the total and average monthly household income for NHTS and GHS. For both total and average monthly household income, GHS recorded the lowest estimates when compared to NHTS. This is mainly because GHS has set a cut-off point for monthly household income of over R30 000 while NHTS did not set a cut-off point as mentioned in the previous section.

It is evident from the analysis that the derived monthly household income variable provides differently but better household income estimates (NHTS*) compared to household income variable which excludes cases with missing income information (NHTS). For example, total monthly household income has increased from R125 billion to R129 billion. Similarly, the average monthly household income has moved from R8 979 to R9 075.

Figure 5: Distribution of average per capita monthly household income by quintiles
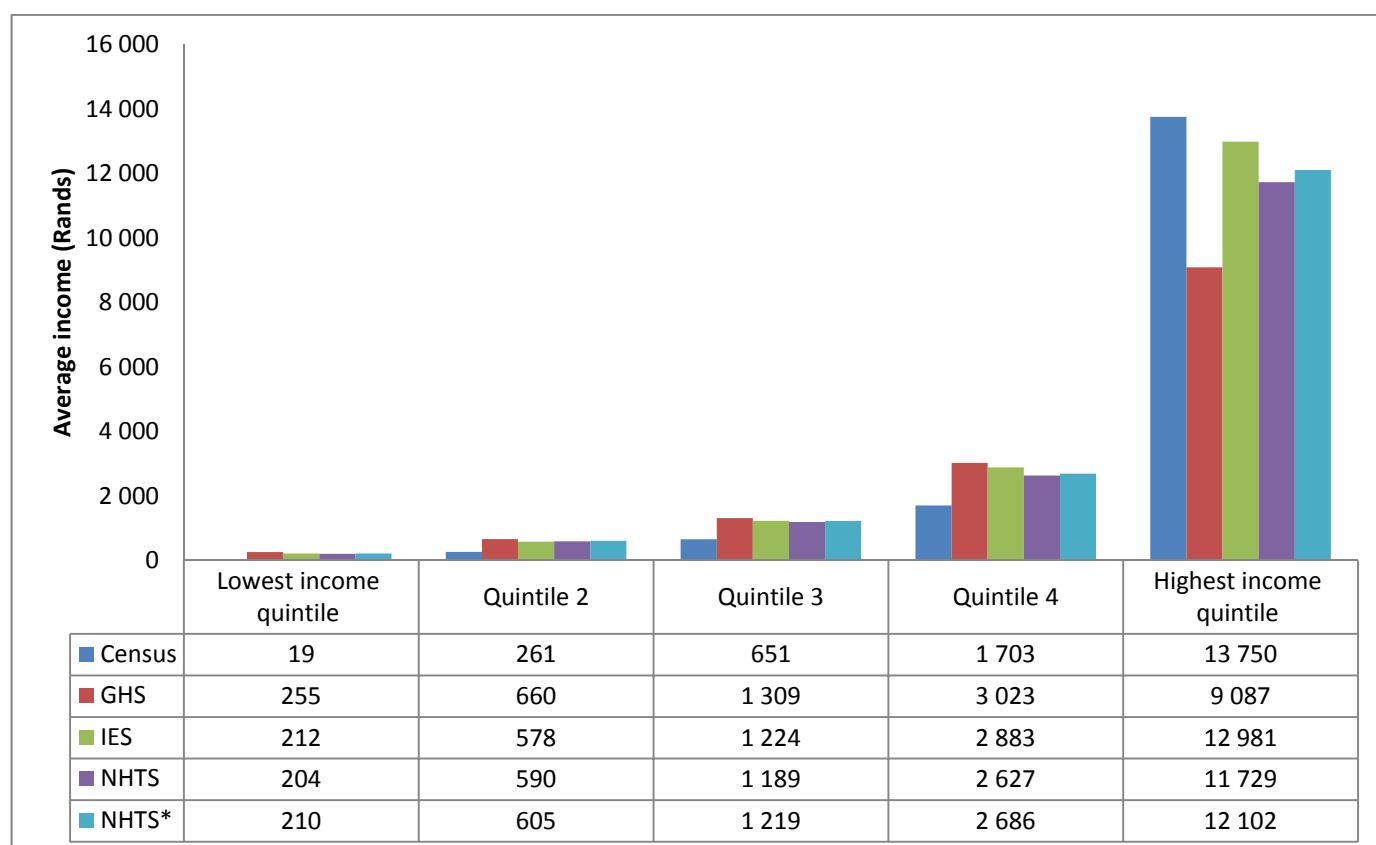
	Lowest income quintile	Quintile 2	Quintile 3	Quintile 4	Highest income quintile
■ Census	19	261	651	1 703	13 750
■ GHS	255	660	1 309	3 023	9 087
■ IES	212	578	1 224	2 883	12 981
■ NHTS	204	590	1 189	2 627	11 729
■ NHTS*	210	605	1 219	2 686	12 102

Source: Census 2011, GHS 2013, IES 2010/2011 and NHTS 2013
*Monthly household income is calculated by adding all the monthly earnings per individual and impute missing values using income information from Census.

Figure 5 confirmed in earlier results that the derived monthly household income provides better estimates (NHTS*) compared to the household income variable which excludes cases with missing income information (NHTS). Focusing on NHTS*, there is a notable increase when calculating the average household income by income quintile using the new derived monthly household income variable. For example, average monthly household income for the lowest income quintile has increased from R204 to R210. The same pattern was also true for all household income quintiles.

As shown in Figure 5 and Annexure B, the average monthly household income is greater than the median across all income quintiles for NHTS*, indicating a tendency towards positive or upwards skew. This means that there are larger, positive outliers which will tend to pull the average upwards. In other words, the average is pulled up by the household income of the few extremely wealthy individuals in the right (positive) tail of the distribution.

Table 1: Monetary range values for per capita monthly household income quintile

Per capita monthly household income (Rand)	Lowest income quintile	Quintile 2	Quintile 3	Quintile 4	Highest income quintile
Census	0 – 133	134 – 433	434 – 1 128	1 131 – 3 017	> 3 017
GHS	0 – 434	435 – 895	896 – 1 834	1 835 – 4 741	> 4 741
IES	0 – 379	379 – 824	824 – 1 750	1 750 – 4 758	> 4 758
NHTS	0 – 395	396 – 828	829 – 1 600	1 601 – 4 017	> 4 017
NHTS*	0 – 400	401 – 846	847 – 1 671	1 672 – 4 133	> 4 133

Source: Census 2011, GHS 2013, IES 2010/2011 and NHTS 2013
*Monthly household income is calculated by adding all the monthly earnings per individual and impute missing values using income information from Census.

In relation to Figure 5, Table 1 illustrates the monetary range values for household income quintiles. Household income quintile monetary range value for GHS is from about R434 towards the lower end of the distribution and about R4 741 at the upper end of the distribution. The lower end of the distribution for NHTS is less than R395 and the upper end of the distribution is about R4 017.

The table further shows that monetary ranges widen when using the new derived monthly household income variable — the lower end of the distribution moved from less than R395 to less than R400 and the upper end of the distribution moved from R4 017 to R4 113.

Table 2: Distribution of households by quintiles

Household income quintile (original)	Statistics ('000)	Household income quintile*					Total
		Lowest income quintile	Quintile 2	Quintile 3	Quintile 4	Highest income quintile	
Lowest income quintile	Number	2 789					**2 789**
	Per cent	97,0					**20,0**
Quintile 2	Number	87	2 691				**2 778**
	Per cent	3,0	96,5				**20,0**
Quintile 3	Number		97	2 686			**2 783**
	Per cent		3,5	96,3			**20,0**
Quintile 4	Number			104	2 719		**2 823**
	Per cent			3,7	98,5		**20,3**
Highest income quintile	Number				41	2 702	**2 744**
	Per cent				1,5	100,0	**19,7**
Total	**Number**	**2 876**	**2 788**	**2 790**	**2 760**	**2 702**	**13 917**
	Per cent	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**

Source: NHTS 2013
* Monthly household income is calculated by adding all the monthly earnings per individual and impute missing values using income information from Census.

Table 2 presents a cross-tabulation between original household income quintile variables which excludes cases with missing income information and derived household income quintile, which includes cases with missing income information.

The percentage on the diagonal represents households that have not been reclassified (retained in their original income quintile group) when using the new monthly household income variable.

The results show that after using the new household income, some of the households were reclassified from their original income quintile group. For example, about 97,0% of households from the lowest income quintile were retained in their original income quintile groups compared to about 100,0% households from the highest income quintile groups.

This means that most of households from the lowest income quintile groups that were reclassified were moved rather than households from the highest income quintile groups. This is mainly because the newly derived household income variable widens the quintile range values as discussed earlier.

Figure 6: Percentage distribution of households' main source of income by quintiles

	Lowest income quintile	Quintile 2	Quintile 3	Quintile 4	Highest income quintile
■ Income from salaries, business and farming	30.1	52.6	73.6	90.1	91.7
■ Pensions and grants	53.0	36.0	20.8	6.1	6.3
■ Other income	16.4	11.4	5.6	3.8	2.0

Source: NHTS 2013
Other income includes: rental income, interest income, remittances etc.

Figure 6 shows the main sources of household income by quintile which is derived by using the new monthly household income variable. The result shows that most of households from the lowest income quintile depend on pensions and grants as their main source of income (53,0%), followed by income from salaries, business and farming (30,1%) and other income (16,4%).

By contrast, as expected, households from the highest income quintile groups are more likely to depend on income from salaries, business and farming as their main source of income, followed by pensions and grants and other income sources.

Map 1: Hot spot analysis for total monthly household income per PSU, 2013
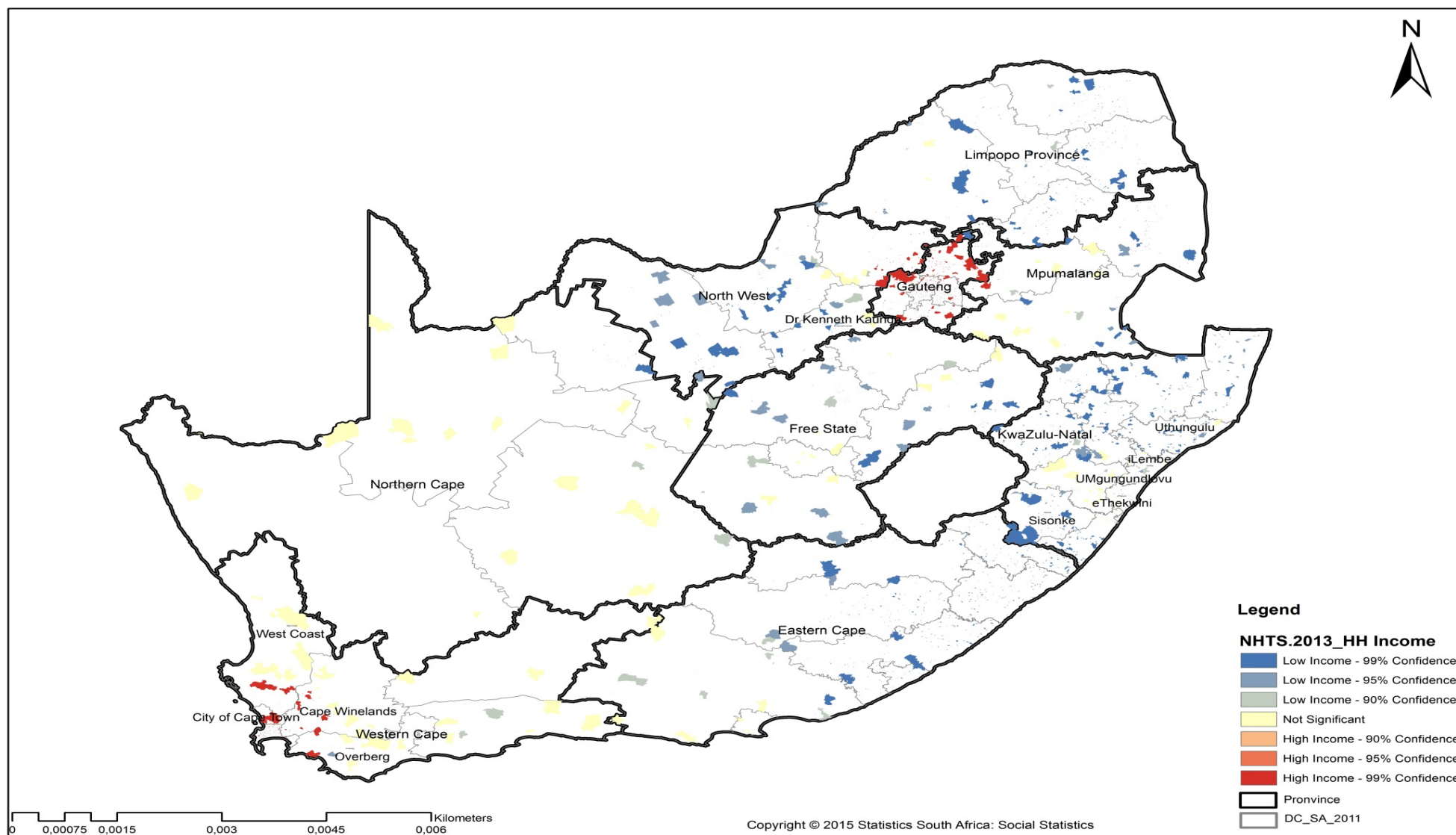
Source: NHTS 2013

Map 2: Cluster and outlier analysis for total monthly household income per PSU, 2013
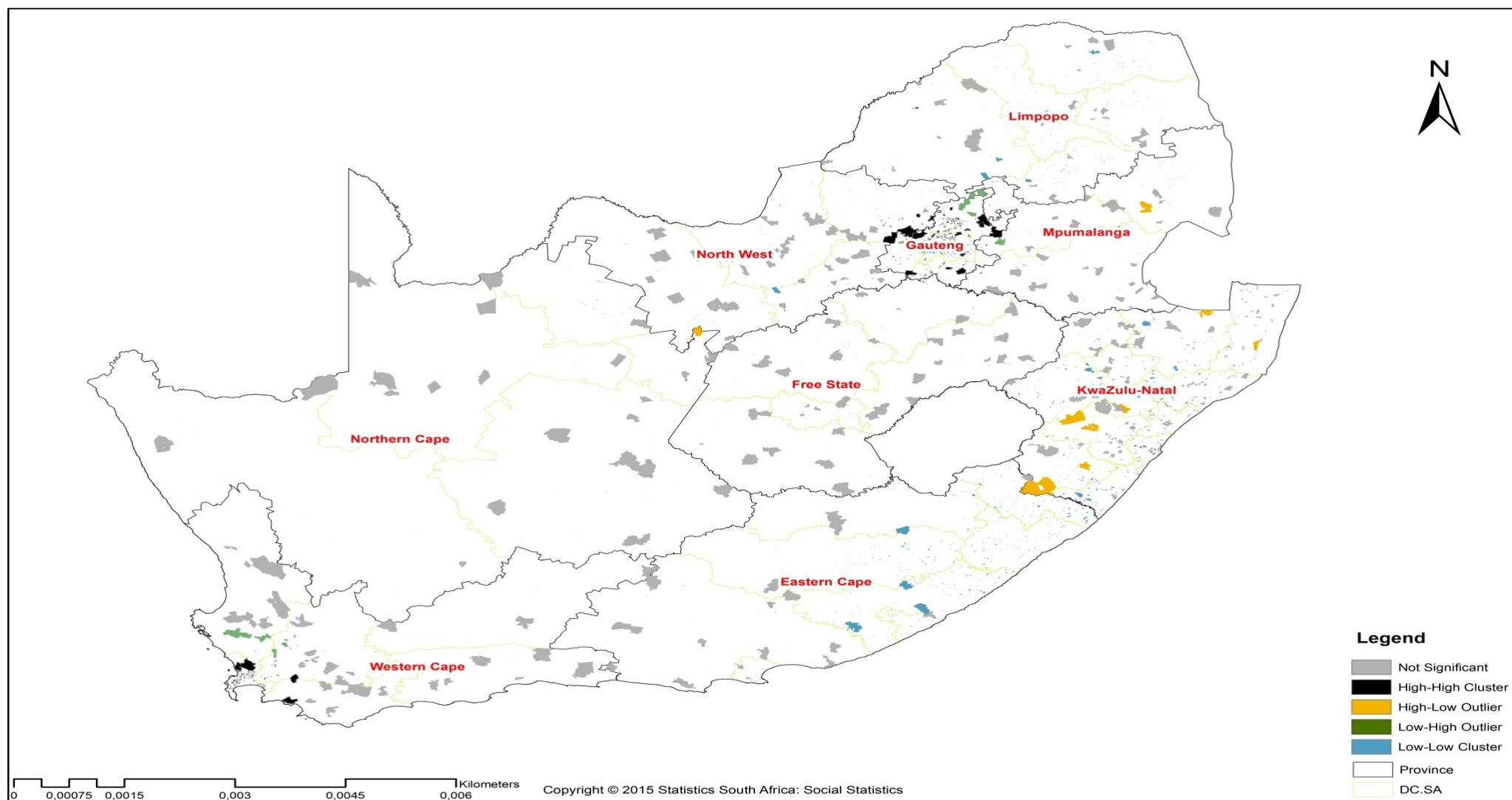
Source: NHTS 2013

Map 1 shows the clustering of households that had either high (red) or low (blue) total monthly household income. Total monthly household incomes were substantially higher in Gauteng, Western Cape, part of Mpumalanga and North West than in most other provinces represented in red colour.

The blue areas indicate the PSUs with low total monthly household income. Lower total monthly household incomes were observed in Eastern Cape, KwaZulu-Natal, Free State, Limpopo and the southern part of North West.

The spatial clustering and outlier of total monthly household income is displayed in Map 2. In Western Cape, Gauteng and North West (part of Madibeng municipality), areas with high total monthly household income were clustered next to each other (highlighted by the colour black). Eastern Cape and some parts of Limpopo areas with low total monthly household income were clustered next to each other, indicated by the colour blue.

There were some households in Gauteng, Western Cape and part of Victoria Khanye in Mpumalanga that had a low total monthly household income but were surrounded by households with high total monthly household income. They are represented by the colour green. Some areas in KwaZulu-Natal had a high total monthly household income but were surrounded by households with low total monthly household income (highlighted by the colour yellow).

5.5   Profile of households who did not report their monthly household income information

Figure 7: Number of households ('000) who did not report their monthly income information by geographic location
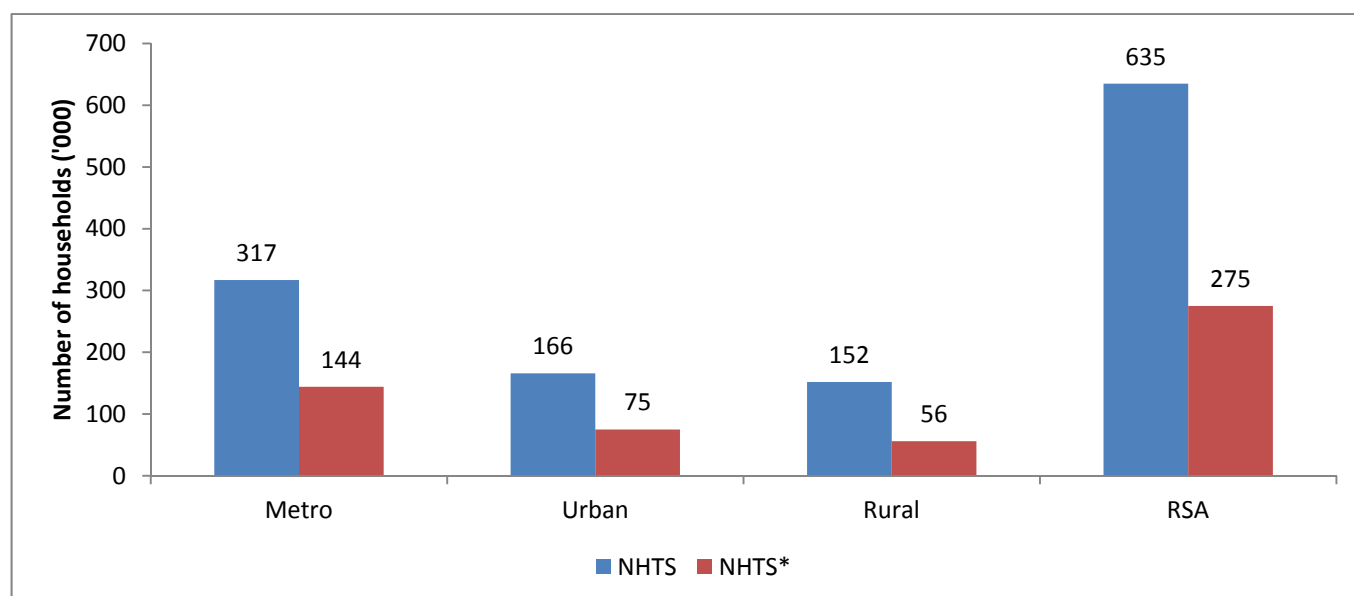
Source: NHTS 2013
*Monthly household income is calculated by adding all the monthly earnings per individual and impute missing values using income information from Census.

Figure 7 presents households that mentioned their main sources of income, but did not report the amount received from those sources by geographic location. In total for NHTS, approximately 635 000 households have indicated their main sources of income and did not report the amount received from those sources.

There is a notable decline in the number of households who indicated their main sources of income but did not report the amount received from those sources when using the new derived household income variable (NHTS*) — the number of households decreased from 635 000 to 275 000.

In terms of geographical location, most of households that mentioned their main sources of income, but did not report the amount received from those sources and could not be imputed using census data, reside in metropolitan areas (144 000), followed by urban areas (75 000) and rural areas (56 000).

Figure 8: Percentage of households who did not report their monthly household income information by province, geographic location and race
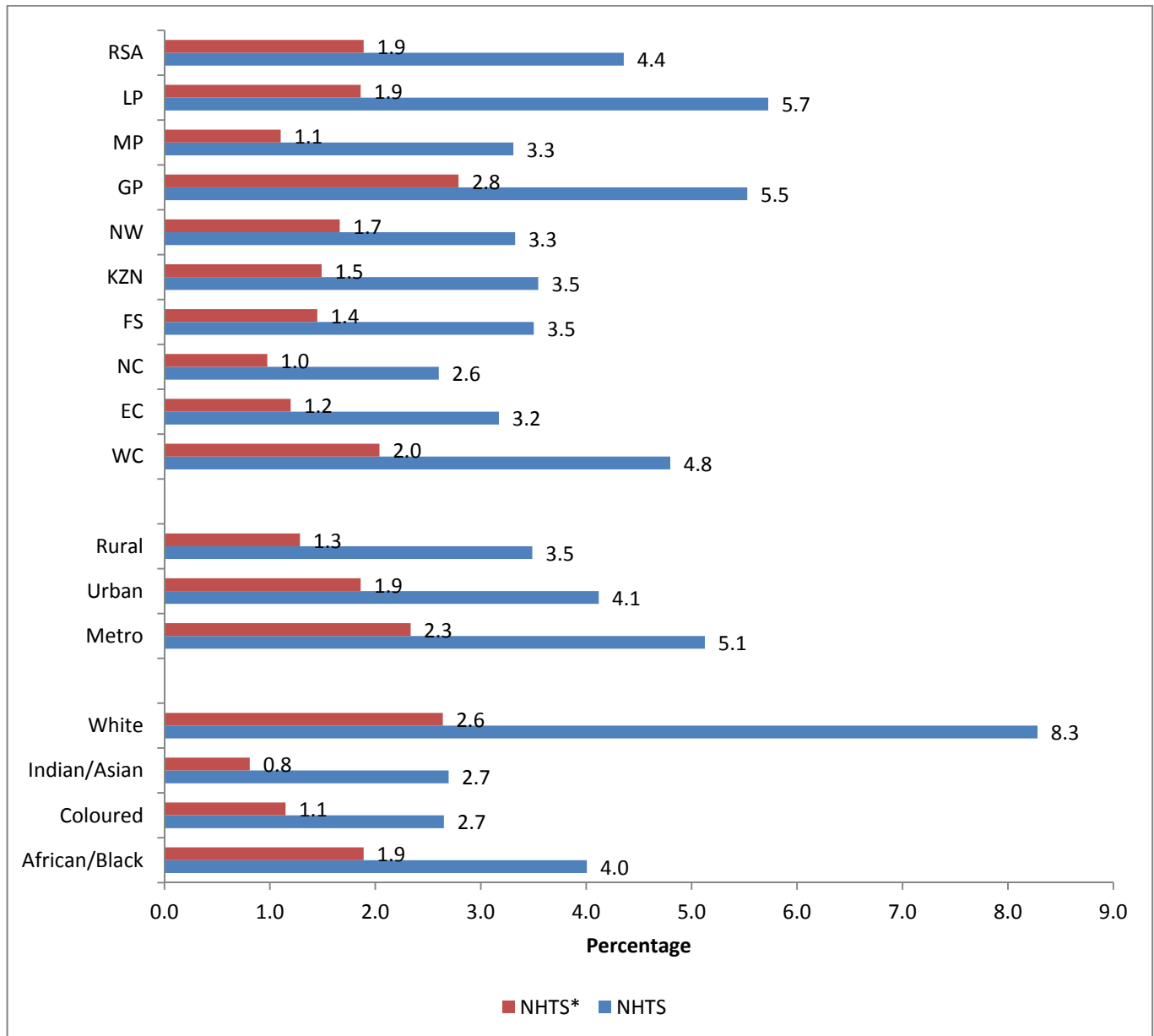
Source: NHTS 2013
*Monthly household income is calculated by adding all the monthly earnings per individual and impute missing values using income information from Census.

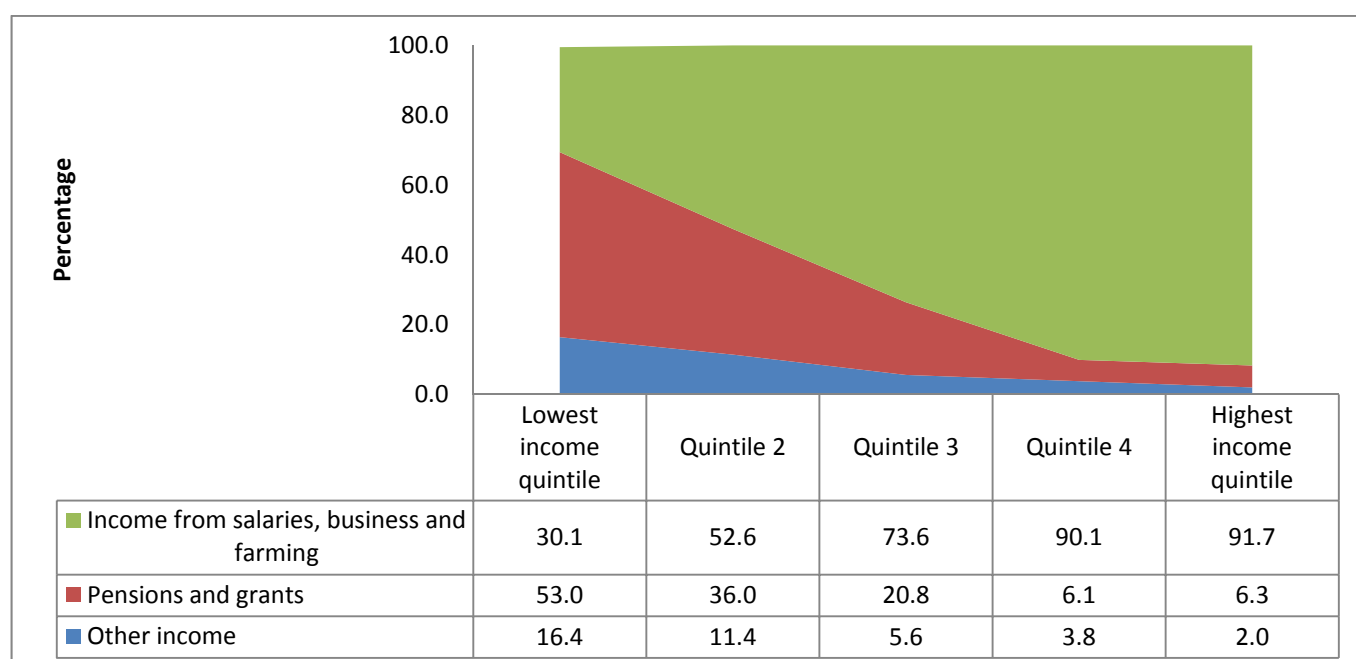According to Figure 8, there is a notable percentage decrease across all provinces, geographic locations and race groups of households who have indicated their main sources of income, but did not report the amount received from those sources (NHTS*).

5.6   Summary

In this section the focus was on: main source of household income, analysis on monthly household earnings and total monthly household income. Furthermore, focus on the effects of excluding households who did not report their income information, and profile of these households.

Main source of household income and monthly household earnings

For both NHTS and GHS, most households indicated income from salaries/business as the main source of income, followed by pension and grants and other sources. Nearly five per cent (4,9%) of the households from GHS did not mention their main source of income while NHTS recorded 3,0%. Focusing on those who did not have a source of income, less than one percent (0,8%) of the households from GHS did not have a source of income as opposed to 2,1% for NHTS.

In terms of monthly household earnings, the largest proportion of monthly household earnings was derived from salaries, wages or commission, followed by grants.

Total monthly household income information

The analysis demonstrates that GHS had the lowest percentage of households that do not have a monthly household income (0,8%), whilst 2,1% of NHTS households said they had no income. When using the new derived household income variable there is a substantial decrease of households that have no household income values (NHTS*) — from 4,4% to 1,9%.

Effects of excluding households who did not report their monthly household income information

Given additional challenges inherent when measuring household incomes, such as high refusal rates and under or over-reporting of income, efforts are needed to improve the quality as well as response rates for income measures in surveys. Examining the effects of excluding cases with missing income information on the household income estimate enhances our understanding of deriving and imputing a household income variable. This was also necessary in the case of the NHTS.

The derivation method used to impute total monthly household income is to add monthly earnings per individual and include income information from census appears to be contributing substantially to household income estimates for NHTS* compared to total monthly household income variable which excludes cases with no income information (NHTS).

Profile of households with no monthly household income information

After imputation there is a notable decline in the number of households who have indicated their main sources of income, but did not report the amount received from those sources. This decreased from 635 000 to 275 000. Furthermore, a decline was recorded across all geographic locations.

The results in this section have shown that the derived monthly household income variable provides better household income estimates for NHTS when compared to the original monthly household income which excludes cases with no income information. The tables and figures provided in the subsequent sections will therefore be done using the new derived monthly household income variable which incorporates income information from census to replace missing values. However, tables and figures using the original monthly household income variable, which excludes cases with missing income information, are provided for comparison (see Annexure section).

6.   Main mode of travel at a glance

6.1   Introduction

According to the 2013/14 State of Transport Opinion Poll South Africa (TOPSA), most South Africans believe that education is the highest priority in the country, followed closely by transport and health. The NDP states that "income, through employment or social security, is critical to defining living standards, but human beings need more than income. They need adequate nutrition, *they need transport to get to work*, and they desire safe communities and clean neighborhoods." It is not surprising to note that transport is one of the core elements of a decent standard of living that the NDP has identified. In fact, there is congruence between NDP priority areas of the country and the people's views on the priorities of government as highlighted by 2013/14 TOPSA.

This section sets the context to the rest of the report by discussing the main modes of travel that households, learners and workers used to reach their respective destinations.

6.2   Main modes of travel used by households

Table 3: Main mode of transport used by income quintile

Household income quintile	Statistics ('000)	Main mode					Walking all the way	Other	Total
		Public transport			Private transport				
		Train	Bus	Taxi	Car driver	Car passenger			
Lowest income quintile	Number	161	673	1 770	40	92	101	14	**2 851**
	Per cent	5,6	23,6	62,1	1,4	3,2	3,5	0,5	**100,0**
Quintile 2	Number	198	637	1 711	51	142	63	13	**2 816**
	Per cent	7,0	22,6	60,8	1,8	5,0	2,2	0,5	**100,0**
Quintile 3	Number	261	538	1 658	110	206	56	13	**2 843**
	Per cent	9,2	18,9	58,3	3,9	7,2	2,0	0,5	**100,0**
Quintile 4	Number	316	493	1 386	281	331	30	9	**2 845**
	Per cent	11,1	17,3	48,7	9,9	11,6	1,1	0,3	**100,0**
Highest income quintile	Number	136	243	708	947	782	13	8	**2 838**
	Per cent	4,8	8,6	24,9	33,4	27,6	0,5	0,3	**100,0**
Total	**Number**	**1 073**	**2 585**	**7 234**	**1 428**	**1 554**	**264**	**58**	**14 195**
	Per cent	**7,6**	**18,2**	**51,0**	**10,1**	**10,9**	**1,9**	**0,4**	**100,0**

Source: NHTS 2013
Other includes: Scooter, animal transport, etc.

Table 3 shows the main mode of transport used by households and their income quintiles. Of the 14,2 million households, about 7,2 million households cited taxis as the main mode of travel, followed by households using buses (2,6 million) and passengers of cars (1,6 million).

Different patterns were observed across all income quintiles. Taxis were the main mode of travel, followed by buses and trains across all income quintiles with the exception of the highest income quintile. Households from the highest income quintile mostly drove cars as their main mode of travel, followed by passengers in cars and taxis.

Figure 9: Percentage of main mode of travel used by household
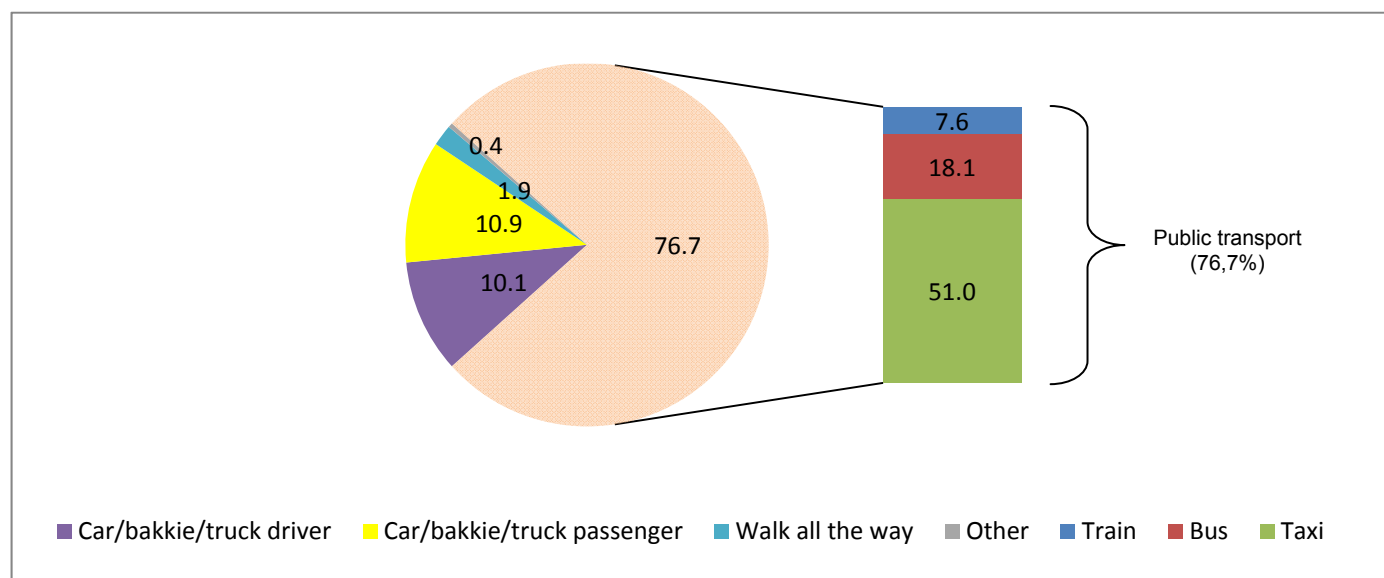
Other includes: Scooter, animal transport, etc.
Source: NHTS 2013

According to Figure 9, nationally, more than three quarters of households indicated that their main mode of travel was public transport (76,7%). Those who used public transport as their main mode mostly used taxis (51,0%), followed by buses (18,1%), and trains (7,6%).

Figure 10: Main mode of travel used by income quintiles

	Lowest income quintile	Quintile 2	Quintile 3	Quintile 4	Highest income quintile
Public transport	91.3	90.4	86.4	77.2	38.3
Private tranport	4.6	6.9	11.1	21.5	60.9
Walking all the way	3.6	2.2	2.0	1.1	0.5
Other	0.5	0.5	0.5	0.3	0.3
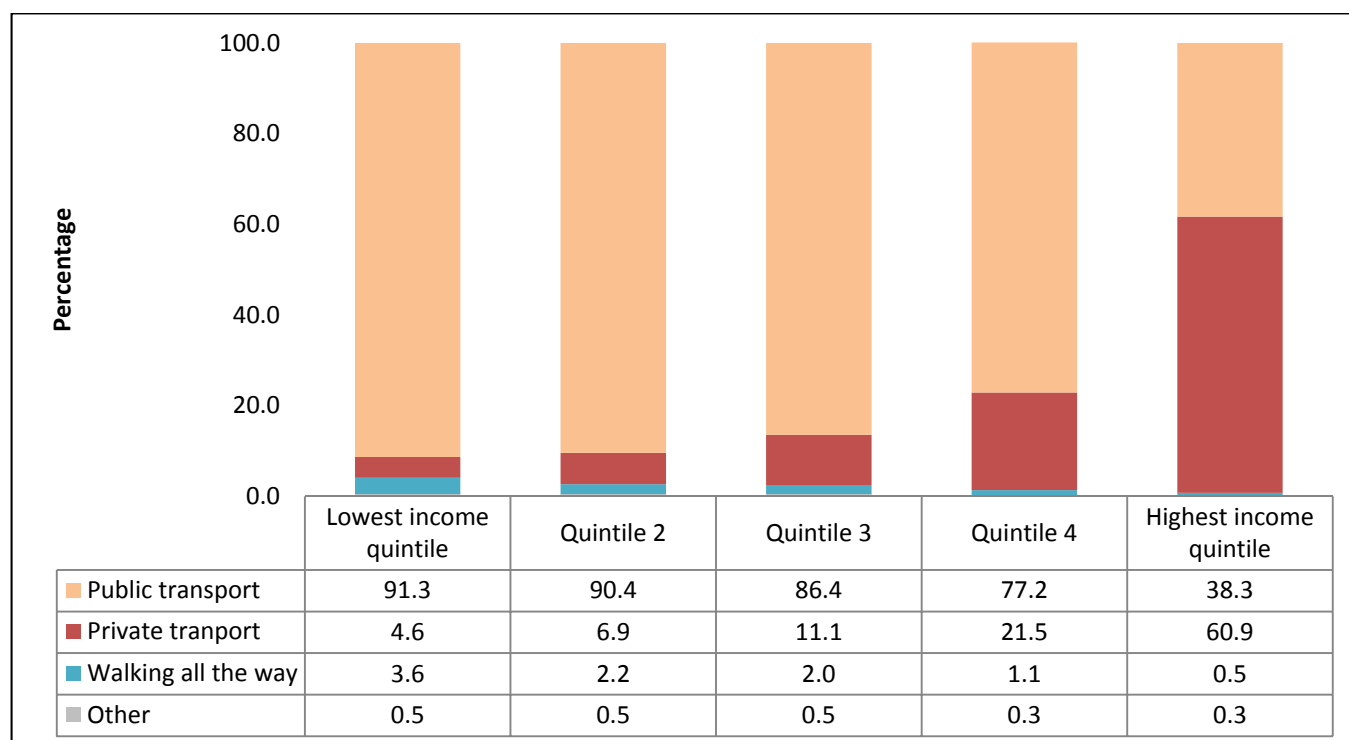
Other includes: Scooter, animal transport, etc.
Source: NHTS, 2013

Figure 10 shows that across all income quintiles, most households use public transport with the exception of households from the highest income quintile. These households were more likely to depend on private transport — this is mainly as driver or passenger in a car as already indicated in Table 3.

6.3   Main mode of travel used by learners

Table 4: Main modes used to travel to educational institutions by income quintile

Household income quintile	Statistics ('000)	Main mode							Total
		Public transport			Private transport		Walking all the way	Other	
		Train	Bus	Taxi	Car driver	Car passenger			
Lowest income quintile	Number	32	217	493	14	190	4 585	18	**5 549**
	Per cent	0,6	3,9	8,9	0,3	3,4	82,6	0,3	100,0
Quintile 2	Number	41	250	548	11	238	3 510	32	**4 631**
	Per cent	0,9	5,4	11,8	0,2	5,1	75,8	0,7	100,0
Quintile 3	Number	47	200	608	26	291	1 743	27	**2 943**
	Per cent	1,6	6,8	20,7	0,9	9,9	59,2	0,9	100,0
Quintile 4	Number	54	157	585	53	540	898	31	**2 320**
	Per cent	2,3	6,8	25,2	2,3	23,3	38,7	1,3	100,0
Highest income quintile	Number	25	84	329	177	983	248	36	**1 883**
	Per cent	1,3	4,5	17,5	9,4	52,2	13,2	1,9	100,0
Total	**Number**	**199**	**909**	**2 564**	**282**	**2 242**	**10 956**	**144**	**17 326**
	Per cent	**1,1**	**5,2**	**14,8**	**1,6**	**12,9**	**63,2**	**0,8**	**100,0**

Other includes: Scooter, animal transport, etc.
Source: NHTS, 2013

Table 4 summarises the mode of travel used by learners to their educational institutions by household income quintile. Nationally, about 11 million learners in South Africa walked all the way to their educational institutions, followed by those who used taxis (2,6 million).

The same pattern emerged in all income quintiles except for the highest income quintile, where passenger in a car/truck constituted the largest proportion, taxis constituted the second largest proportion, whilst walking all the way was the third most commonly used mode of travel.

Figure 11: Percentage of main mode of travel used by learners
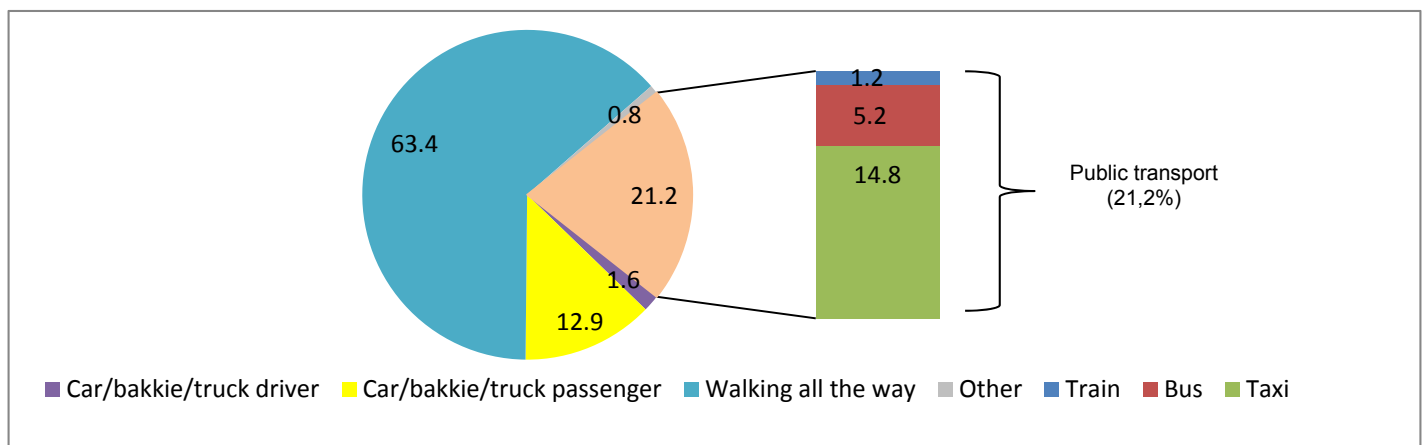
Other includes: Scooter, animal transport, etc.
Source: NHTS, 2013

According to Figure 11 more than six out of ten learners walked all the way (63,4%) to their educational institutions, followed by those who used public transport (21,2%). Other transport modes include taxis (14,8%), followed by buses (5,2%) and trains (1,2%).

Figure 12: Main mode of travel for learners by income quintiles

	Lowest income quintile	Quintile 2	Quintile 3	Quintile 4	Highest income quintile
Public transport	13.4	18.1	29.1	34.3	23.3
Private tranport	3.7	5.4	10.8	25.6	61.6
Walking all the way	82.6	75.8	59.2	38.7	13.2
Other	0.3	0.7	0.9	1.3	1.9
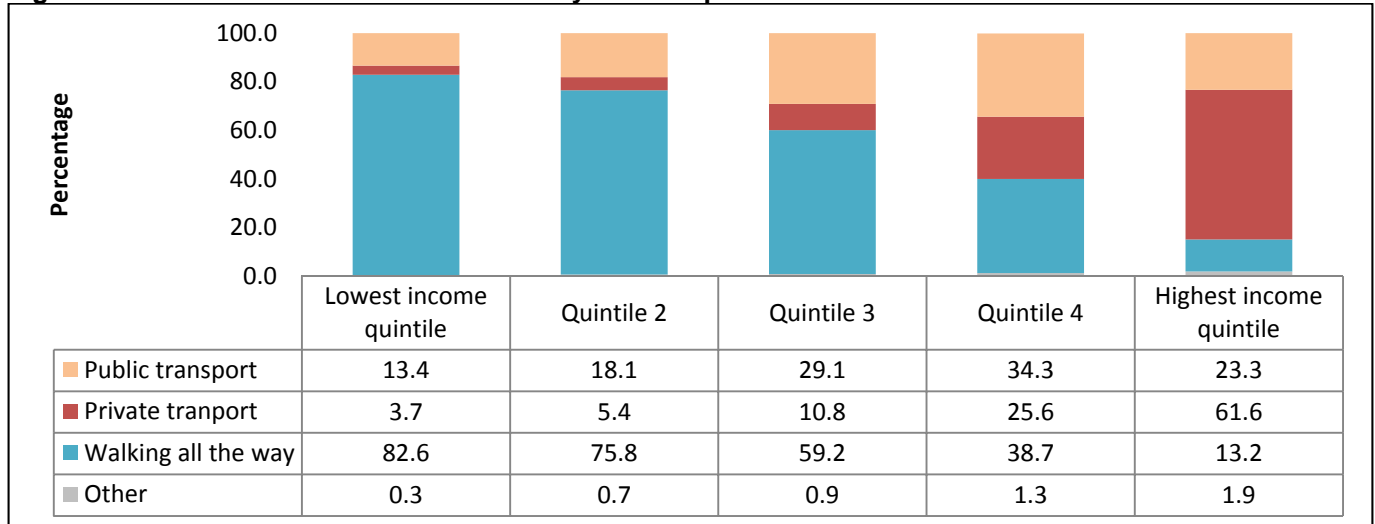
Other includes: Scooter, animal transport, etc.
Source: NHTS, 2013

Most learners were more likely to walk all the way to their educational institutions, except learners living in households from the highest income quintile. Besides walking all the way and using private transport, public transport was the second most used mode of travel of learners across all income quintiles.

6.4   Main mode of travel used by workers

Table 5: Main mode used to travel to work by income quintile

Household income quintile	Statistics ('000)	Main mode							Total
		Public transport			Private transport		Walking all the way	Other	
		Train	Bus	Taxi	Car driver	Car passenger			
Lowest income quintile	Number	25	56	194	63	42	383	20	**785**
	Per cent	3,2	7,1	24,7	8,0	5,4	48,8	2,5	100,0
Quintile 2	Number	108	213	621	202	154	749	42	**2 089**
	Per cent	5,2	10,2	29,7	9,7	7,4	35,9	2,0	100,0
Quintile 3	Number	191	309	1 029	405	232	841	48	**3 054**
	Per cent	6,3	10,1	33,7	13,3	7,6	27,5	1,6	100,0
Quintile 4	Number	269	328	1 290	932	306	684	42	**3 851**
	Per cent	7,0	8,5	33,5	24,2	7,9	17,8	1,1	100,0
Highest income quintile	Number	107	155	536	2 675	325	267	27	**4 092**
	Per cent	2,6	3,8	13,1	65,4	7,9	6,5	0,7	100,0
RSA	**Number**	**700**	**1 061**	**3 670**	**4 278**	**1 060**	**2 925**	**179**	**13 873**
	Per cent	**5,0**	**7,6**	**26,5**	**30,8**	**7,6**	**21,1**	**1,3**	**100,0**

Other includes: Scooter, animal transport, etc.
Source: NHTS, 2013

Approximately 4,3 million workers in South Africa drove a car to their workplace, followed by those who travelled by taxi (3,7 million) and a further 2,9 million who walked all the way to their workplace in Table 5.

Workers in households from the lowest income quintile were more likely to walk all the way (48,9%) to their workplace, followed by those who used taxis (25,2%) and buses (6,9%). On the other hand, workers in households from the highest income quintile cited driving a car as their main mode of travel, followed by taxis (13,4%) and being a passenger in a car (8,0%).

Figure 13: Percentage of main mode of travel used by workers
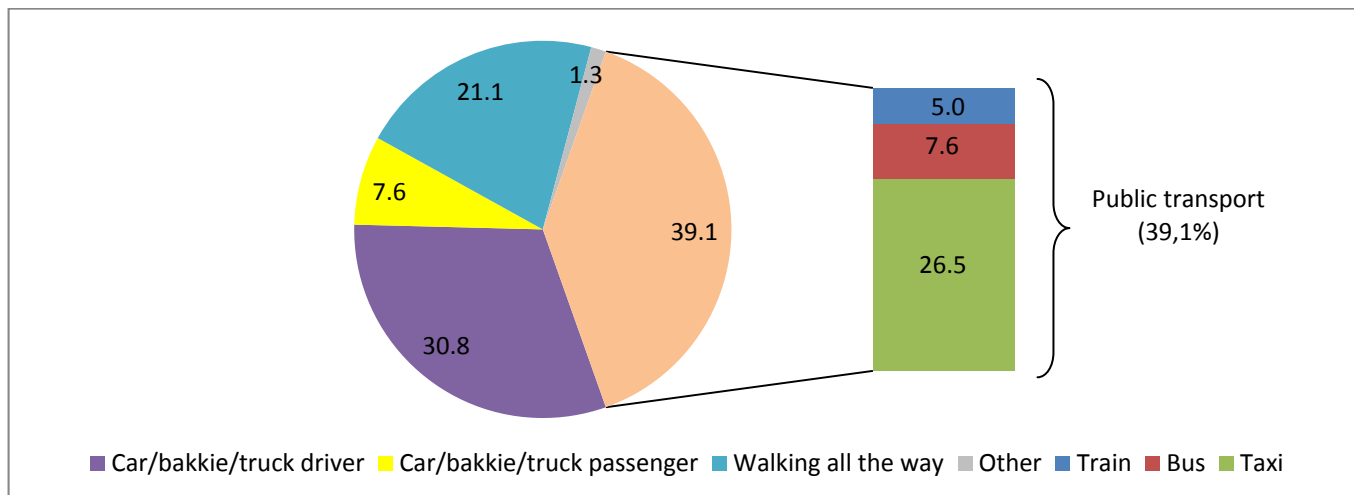
Other includes: Scooter, animal transport, etc.
Source: NHTS, 2013

Figure 13 shows that about 4 in 10 workers used public transport to reach their workplace (39,1%); taxis contributed the highest percentage (26,5%), followed by buses (7,6%) and trains (5,0%). Besides public transport, most workers drove a car/bakkie/truck to their workplace (30,8%), followed by those who walked all the way to their place of work (21,1%) and those who were passengers in a car/bakkie/truck (7,6%).

Figure 14: Main mode of travel for workers by income quintiles

	Lowest income quintile	Quintile 2	Quintile 3	Quintile 4	Highest income quintile
Public transport	35.0	45.1	50.1	49.0	19.5
Private tranport	13.4	17.0	20.9	32.1	73.3
Walking all the way	48.8	35.9	27.5	17.8	6.5
Other	2.5	2.0	1.6	1.1	0.7
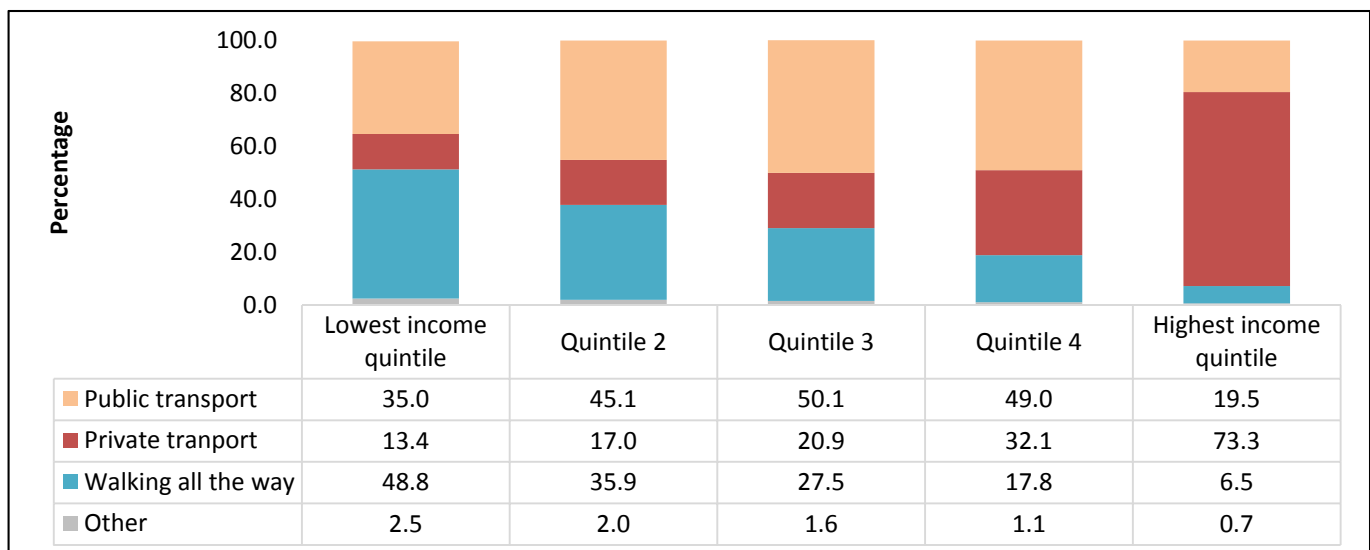
Other includes: Scooter, animal transport, etc.
Source: NHTS, 2013

Figure 14 displays an interesting pattern between the modes of travel used by workers and the income quintile they belong to. Walking all the way was the most commonly used mode of travel for workers in households from the lowest income quintiles, followed by public and private transport.

Furthermore, more than 40 per cent of workers in households falling in the middle income quintiles (quintile 2 to quintile 4) used public transport. This is higher than those in the lowest and highest income quintiles. Note that workers in households from the highest income quintile, roughly 20%, used public transport while the rest used either private transport, walked all the way or used another mode of transport.

6.5   Summary

In this section the focus was on main modes of travel used by households, learners and workers, income and monthly household earnings, a comparison of monthly household income, the effects of excluding cases with no income information, and the profile of households with no income information.

Main modes of travel used by households

Of the 14,2 million households, about 7,2 million households cited taxis as their main mode of travel, followed by households who used buses (2,6 million) and car passenger (1,6 million). Different patterns were observed across all income quintiles. Taxis were mentioned as the main mode of travel, followed by buses and trains across all income quintiles except for households from the highest income quintile. Households from the highest income quintile primarily drove cars/truks as their main mode of travel, followed by passengers in car/truck and taxis.

Nationally, more than seven in ten households indicated that their main mode of travel was public transport (76,7%). For those who used public transport as their main mode, most mentioned taxis (51,0%), followed by buses (18,1%), and trains (7,6%).

Main mode of travel used by learners

Nationally, about 11 million learners in South Africa walked all the way to their educational institutions, followed by those who used taxis (2,6 million). The same pattern emerged in all income quintiles except for the highest income quintile, where passengers in a car/truck contributed the largest proportion, taxis constituted the second largest proportion of learners using transport, and walking all the way was the third most commonly used mode of travel.

More than six out of ten learners walked all the way (63,4%) to educational institutions, followed by those who used public transport (21,2%) where taxis contributed the highest percentage (14,8%), followed by buses (5,2%) and trains (1,2%).

Main mode of travel used by workers

Approximately 4,3 million workers in South Africa drove a car to their workplace, followed by those who travelled by taxi (3,7 million) and a further 2,9 million who walked all the way to their workplace. Workers in households from the lowest income quintile were more likely to walk all the way (48,9%) to their workplace, followed by those who used taxis (25,2%) and buses (6,9%). On the other hand, workers in households from the highest income quintile cited driving a car as their main mode of travel, followed by taxis (13,4%) and passengers in a car (8,0%).

About 4 in 10 workers used public transport to reach their workplace (39,1%); taxis contributed the highest percentage (26,5%), followed by buses (7,6%) and trains (5,0%). Beside public transport, most workers drove a car/bakkie/truck to their workplace, followed by those who walked all the way to their place of work (21,1%) and those who were passengers in a car/bakkie/truck (7,6%).

Walking all the way was the most commonly used mode of travel for workers in households from the lowest income quintiles, followed by public and private transport. Furthermore, more than 40 per cent of workers in households falling in the middle income quintiles (quintile 2 to quintile 4) used public transport. This is higher than those in the lowest and highest income quintiles. Note that only 20% of workers from households in the highest income quintile used public transport while the rest used either private transport, walked all the way or used another mode of transport.

7. Public transport at a glance

7.1 Introduction

South Africans have become more mobile and more dependent on transport over time. According to the NHTS 2013, the use patterns of public transport have changed significantly between 2003 and 2013, with general increases in the percentage of households who used taxis (from 59,0% to 69,0%), buses (16,6% to 20,2%) and trains (5,7% to 9,9%).

It is not surprising to note that in the NDP, MTSF and more recently the SDGs, access to safe, affordable, accessible and sustainable transport is high on the agenda. For example, MTSF (2014–2019), states that "improvements in public transport will also contribute to narrowing the spatial divisions by making it quicker, safer and more affordable for people to access work opportunities."

The tables and figures in this section primarily deal with public transport modes. However, it also profiles public transport users in terms of their household income, geographical location, travel cost and the affordability of public transport.

7.2 Profile of households who used public transport

Table 6: Households who used public transport by geographic location

Mode of travel	Statistics ('000)	Geographic location			
		Metro	Urban	Rural	RSA
Train	Number	910	116	77	**1 103**
	Per cent	20,8	4,1	2,0	**9,9**
Bus	Number	879	384	1 353	**2 616**
	Per cent	20,1	13,6	34,7	**23,6**
Taxi	Number	2 581	2 329	2 467	**7 377**
	Per cent	59,0	82,3	63,3	**66,5**
Total	Number	**4 371**	**2 829**	**3 896**	11 095
	Per cent	**100,0**	**100,0**	**100,0**	100,0

Source: NHTS 2013

Approximately 11,1 million households in South Africa used public transport as their mode of travel. The majority of those households reside in metropolitan areas (4,4 million), followed by those households in rural areas (3,9 million) and 2,8 million from urban areas.

Across all geographic locations, taxis constituted the largest proportion as their mode of travel, followed by buses and trains.

Figure 15: Percentage of households who used public transport by income quintiles
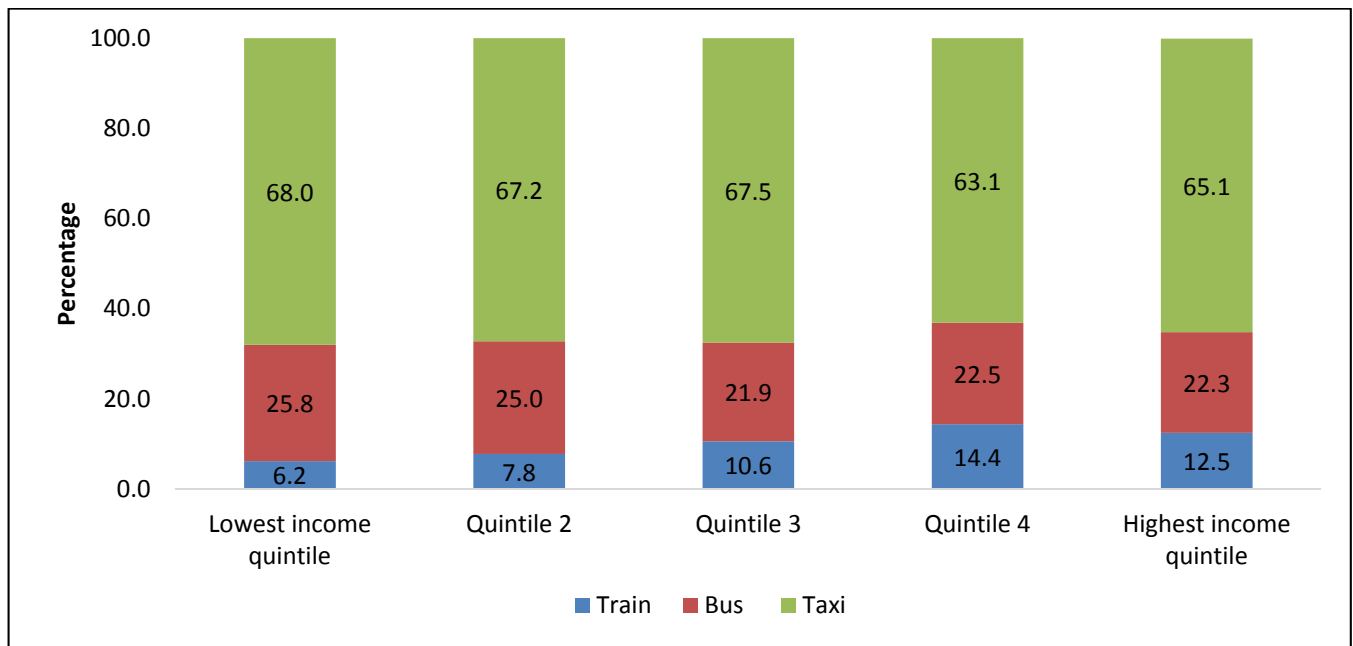
Source: NHTS 2013

Figure 15 highlights that across all income quintiles, taxis were the most commonly used mode of travel. This is in line with what Fobosi (2013) found, that the minibus taxi industry provides a vital service to millions of South Africans, and is thus considered a servant of the urban poor. It does not only serve the poor in terms of transporting them, but also creates employment for the majority of the urban poor who remain marginalised from accessing employment opportunities. Buses were the second most used mode of travel, followed by trains.

On the other hand, households from the upper quintiles of the income distribution (quintile 3 to highest income quintile) were more likely to use trains as their mode of travel compared to households from the lowest income quintile and quintile 2.

Table 7: Percentage of households who used public transport to access public facilities and services

Mode	Service/facility (per cent calculated within services/facilities)										
	Food or grocery shops	Other shops	Traditional healer	Church	Medical service	Post office	Welfare office	Police station	Municipal office	Tribal authority	Financial services/ banks
Public transport	53,0	21,2	5,2	15,0	35,2	31,2	36,3	37,9	38,0	9,5	52,2
Private transport	28,3	20,0	2,1	20,1	24,6	20,2	12,4	20,3	19,6	2,5	26,5
Non-motorised transport	18,1	54,5	9,7	47,6	31,7	22,5	13,2	23,3	16,7	16,5	14,0
Do not need to get there	0,7	4,3	83,0	17,4	8,4	26,2	38,1	18,5	25,6	71,6	7,2

Source: NHTS 2013
Public transport includes: Taxis, buses and trains.
Private transport includes: Car/bakkie, truck/lorry, motorcycle/scooter etc.
Non-motorised transport includes: Animal-drawn vehicles and bicycles.

Table 7 summarises the modes of transport used to go to selected public services and facilities. Public transport is the dominant transport mode to access most of the public facilities and services. More than half of households used public transport to visit food or grocery shops (53,0%) and financial services/banks (52,2%). More than a third also used public transport to go to municipal offices (38,0%), police stations (37,9%), welfare offices (36,3%) and medical services (35,2%).

Figure 16: Average per capita monthly household income of households who used public transport by income quintiles
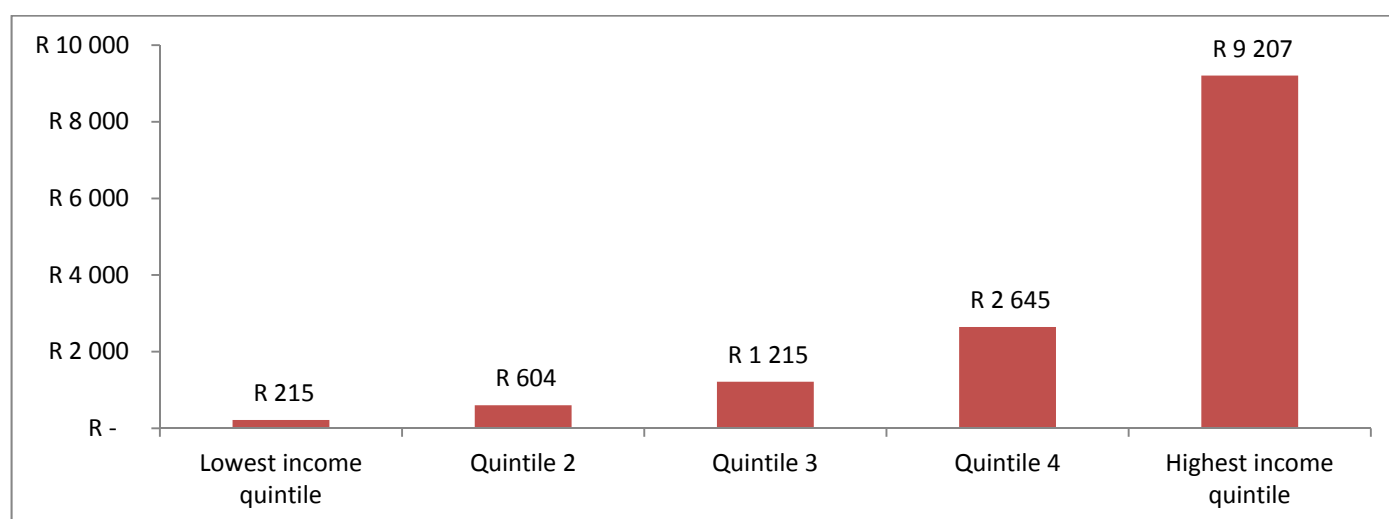
Source: NHTS 2013

Figure 16 confirms that the average per capita monthly household income increased with increase in the household income quintiles. The highest average per capita monthly household income value was reported for households from the highest income quintile (R9 207) and, as excepted, the lowest value was reported for households from the lowest income quintile (R215).

Figure 17: Average per capita monthly household income of households who used public transport by type of public transport modes
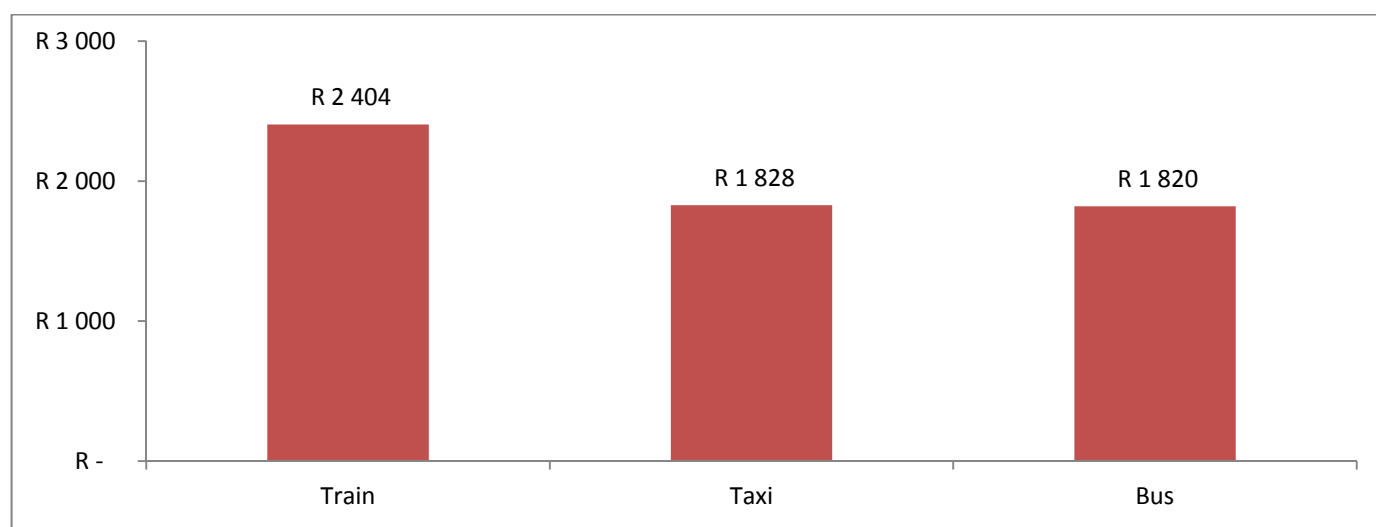
Source: NHTS 2013

As displayed in Figure 17, train users reported the highest average per capita monthly household income (R2 404), which is higher than the average per capita monthly household income values reported by taxi and bus users, which is R1 828 and R1 820 respectively.

Map 3: Hot spot analysis for total monthly household income of households who used public transport per PSU, 2013
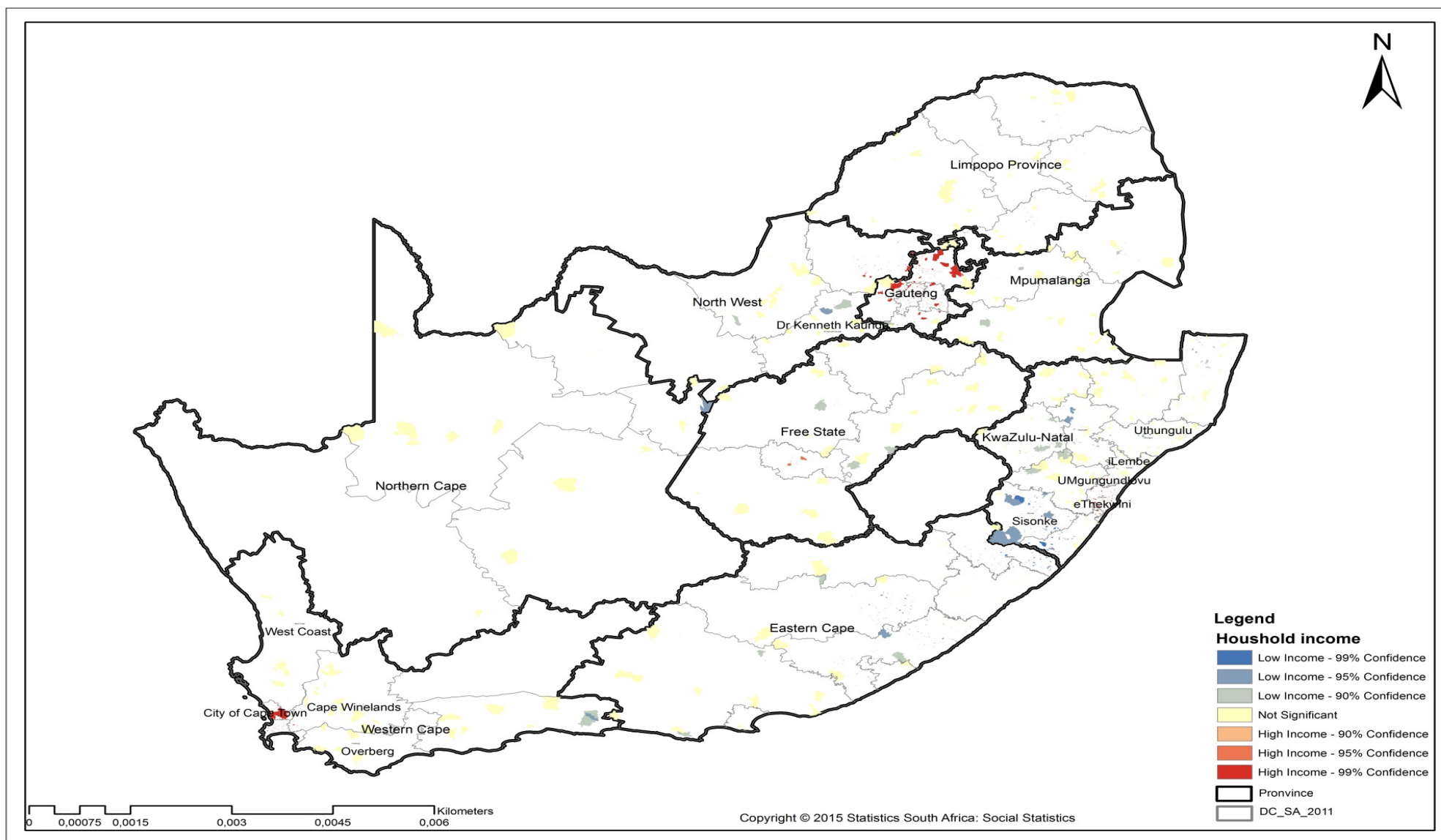
Source: NHTS 2013

Map 4: Cluster and outlier analysis for total monthly household income of households who used public transport per PSU, 2013

Source: NHTS 2013

Map 3 shows the clustering of households who used public transport that had either high (red) or low (blue) total monthly household income. Total monthly household incomes were substantially higher in some areas in Gauteng and Western Cape than in most other provinces represented in red.

The blue areas indicate the PSUs with low total monthly household income. Lower total monthly household incomes were observed in some areas of North West (Dr Kenneth Kaunda), some parts of KwaZulu-Natal and some areas of Amatole district in Eastern Cape.

The spatial clustering and outliers of total monthly household income of households who used public transport is displayed in Map 4. Gauteng had some areas that had a high total monthly household income and were clustered next to each other (highlighted by the colour black).

Eastern Cape, North West, small parts in some of the districts in Free State, KwaZulu-Natal and Western Cape had areas with a low total monthly household income and were clustered next to each other, indicated by the colour blue.

There were some households in Gauteng, Western Cape, Mpumalanga and parts of North West that had a low total monthly household income and were also surrounded by households with high total monthly household income; these are represented by the colour green.

7.2.1   Cost of commuting using public transport by households

The next tables and figures in this subsection deal with the cost of public transport. Note that the travel cost is calculated by adding the total costs incurred for education and work-related travel on the travel day. Also included is the cost of overnight trips if overnight trips are done weekly/four or more times a **month**. In addition, travel cost was divided by the number of individuals in the household.

Table 8: Distribution of households who used public transport and reported or not reported their total monthly public transport travel cost

PT travel cost status	Statistics ('000)	Household income quintile					
		Lowest income quintile	Quintile 2	Quintile 3	Quintile 4	Highest income quintile	RSA
Total monthly household PT travel cost not reported	Number	1 940	1 444	1 123	711	402	**5 620**
	Per cent	34,5	25,7	20,0	12,6	7,2	**100,0**
Total monthly household PT travel cost reported	Number	664	1 103	1 334	1 484	685	**5 271**
	Per cent	12,6	20,9	25,3	28,2	13,0	**100,0**
Total	**Number**	2 604	2 547	2 458	2 195	1 087	**10 891**
	Per cent	23,9	23,4	22,6	20,2	10,0	**100,0**

Source: NHTS 2013
Note: PT = public transport

Of the 10,9 million households who used public transport, about 5,6 million households did not report their travel cost information and 5,3 million provided travel cost information. The results further show that most households who did not report their travel cost information were from the bottom quintile of the income distribution.

Note that households who did not report their travel cost information will not be included in the subsequent analysis.

Figure 18: Average per capita monthly household travel cost of households who used public transport by income quintile
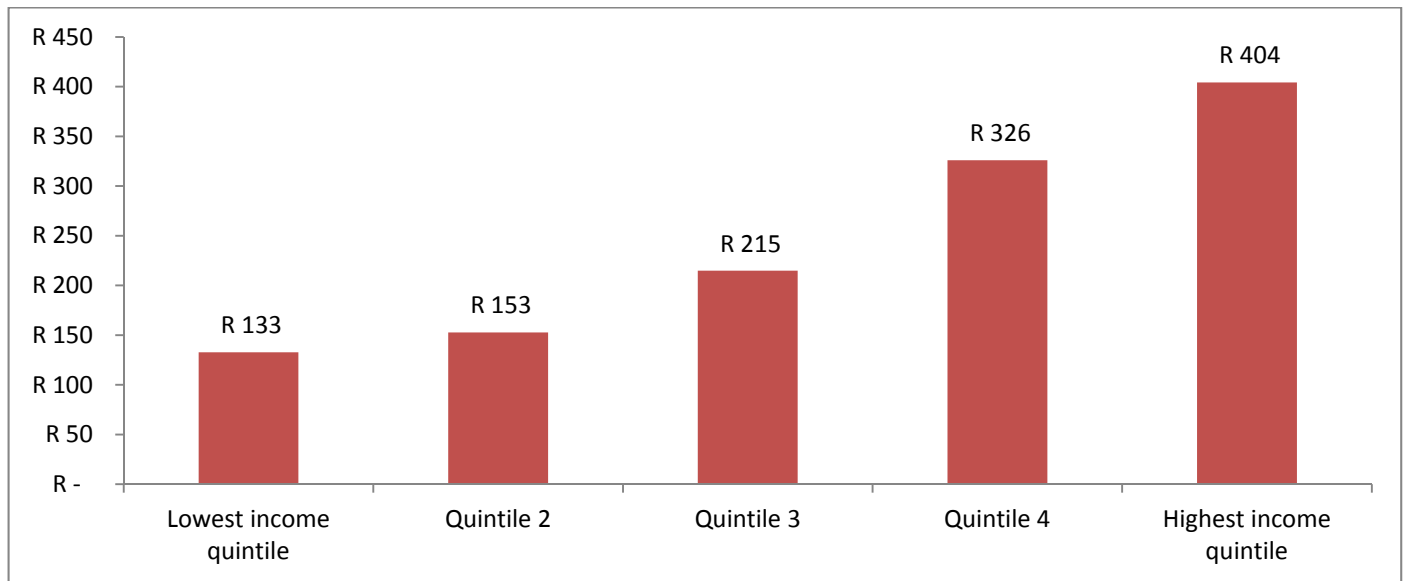
Source: NHTS 2013

Figure 18 shows that the average per capita monthly household travel cost is higher for households from the highest income quintile (R404) compared to households from the lowest income quintile (R133).

Figure 19: Average per capita monthly household travel cost of households who used public transport by type of public transport modes
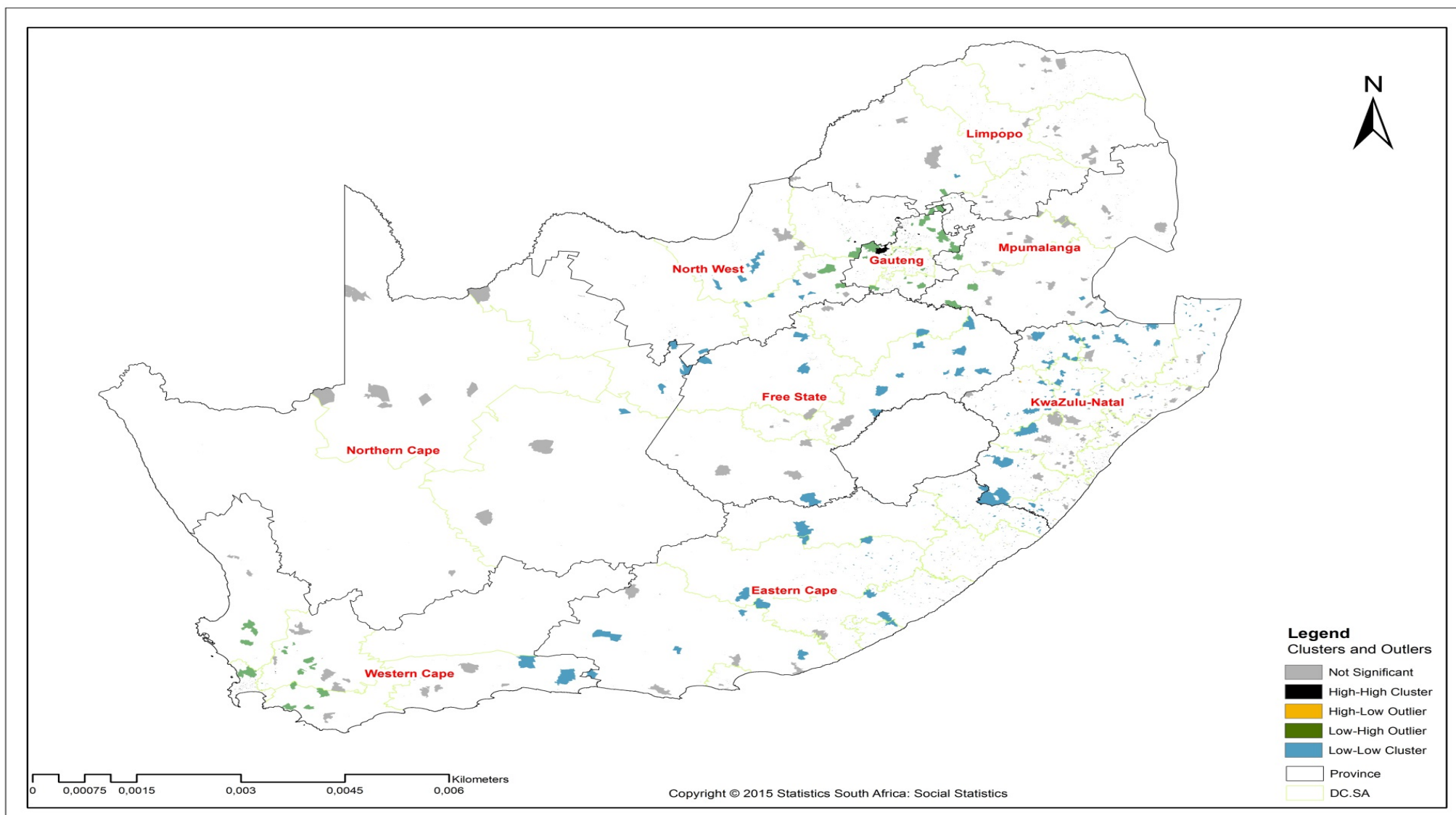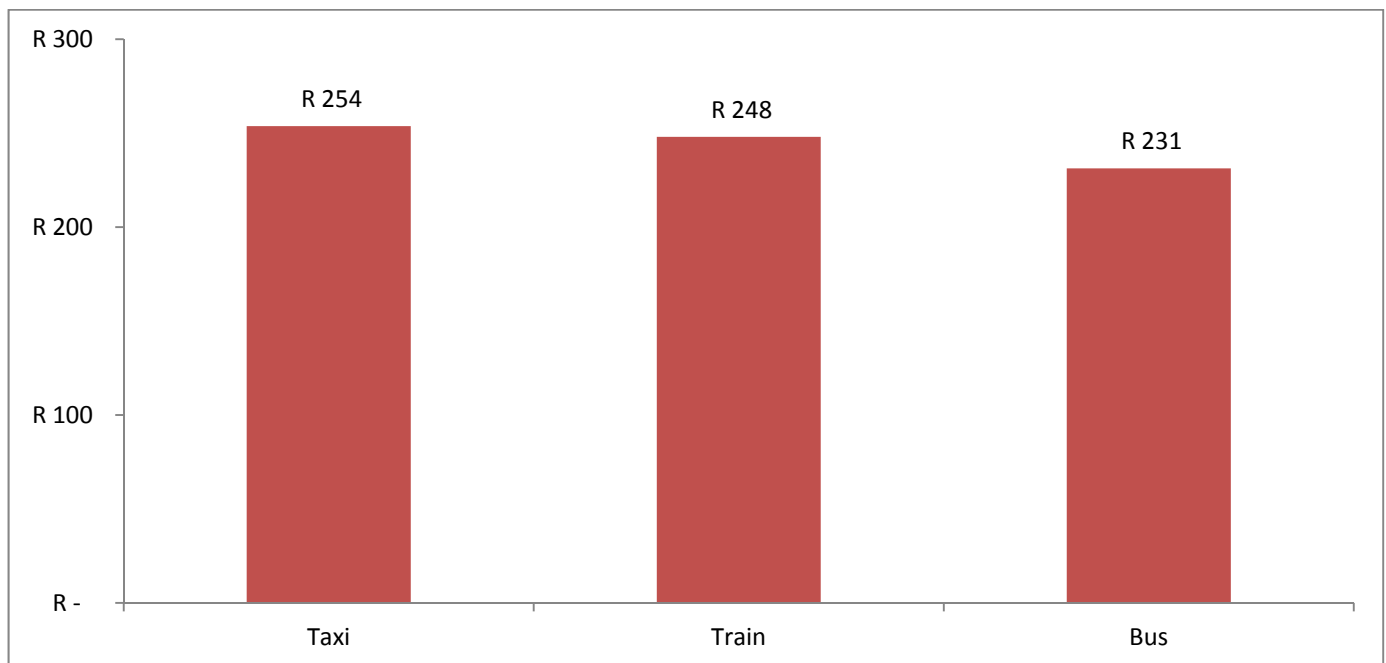

Source: NHTS 2013

According to Figure 19, taxis appeared to be the most expensive mode of travel with an average per capita monthly cost of R254, followed by trains (R248) and buses (R231).

7.2.2   Affordability of public transport for households

The NDP points out that policies, plans and instruments are needed to reduce travel distances and costs, especially for poor households. The MTSF (2014–2019) echoed similar sentiments that improvements in public transport will also contribute to narrowing the spatial divisions by making it quicker, safer and more affordable for people to travel to work. In her speech during the release of the 2013 NHTS, the Minister of Transport, Ms Dipuo Peters, said that, "*Cost of public transport and the distances involved prevent the poor from taking full advantage of opportunities offered by cities and such exclusion contributes to high unemployment rates*".

The results from the 2010/2011 Income and Expenditure Survey show that the average South African household spent approximately R95 183 during the survey, with the main components of that expenditure coming from housing, transport, food and miscellaneous goods and services. Transport is the second largest expenditure group and is estimated at R214 billion or 17,1% of total household consumption expenditure. The survey further shows that, on average, households spent approximately R16 319 on transport.

According to the 1996 White Paper on Transport Policy, the benchmark of 10% of disposable income is set to measure affordability of public transport. This may either be the percentage of household income or the percentage of the personal income of commuters. As defined by Carruthers et al (2005), the concept of affordability refers to the extent to which the financial cost of journeys put an individual or household in the position of having to make sacrifices to travel or the extent to which they can afford to travel when they want to.

This section will focus on the affordability of public transport for households — the share of monthly household income per capita spent on public transport. The affordability measure is calculated by dividing household per capita travel cost incurred for public transport by per capita income. This measure will be compared to a benchmark cited in the 1996 White Paper on Transport Policy — assess if households or individuals were spending more than 10% of their disposable income on public transport.

As explained earlier, households who used public transport and did not provide their monthly household income and travel cost information were excluded when analysing the affordability of public transport. The next tables and figures primarily deal with the affordability of public transport for households.

- **Households**: 5,3 million households were considered out of 10,9 million households that used public transport.

Table 9: Distribution of monthly household income per capita spent on public transport

Province	Statistics (numbers in thousands)	Monthly household income per capita spent on PT			Total
		Less than 10%	Between 10% and 20%	More than 20%	
Western Cape	Number	328	133	117	**579**
	Per cent	56,7	23,0	20,3	**100,0**
Eastern Cape	Number	176	142	127	**445**
	Per cent	39,6	31,9	28,5	**100,0**
Northern Cape	Number	31	12	9	**52**
	Per cent	59,2	22,6	18,1	**100,0**
Free State	Number	110	68	77	**255**
	Per cent	43,2	26,8	30,1	**100,0**
KwaZulu-Natal	Number	400	287	322	**1 010**
	Per cent	39,6	28,4	31,9	**100,0**
North West	Number	149	111	93	**354**
	Per cent	42,3	31,4	26,3	**100,0**
Gauteng	Number	671	513	568	**1 752**
	Per cent	38,3	29,3	32,4	**100,0**
Mpumalanga	Number	171	131	96	**399**
	Per cent	42,9	32,9	24,1	**100,0**
Limpopo	Number	188	96	130	**414**
	Per cent	45,5	23,1	31,4	**100,0**
RSA	**Number**	**2 225**	**1 494**	**1 540**	**5 259**
	Per cent	**42,3**	**28,4**	**29,3**	**100,0**
Monthly per capita household income					
Up to R500	Number	136	209	574	**919**
	Per cent	14,8	22,8	62,5	**100,0**
R501-R1 000	Number	357	373	433	**1 164**
	Per cent	30,7	32,1	37,2	**100,0**
R1 001-R3 000	Number	870	689	472	**2 030**
	Per cent	42,8	33,9	23,2	**100,0**
R3 001-R6 000	Number	534	193	54	**781**
	Per cent	68,4	24,7	6,9	**100,0**
>R6 000	Number	328	29	8	**365**
	Per cent	90,0	8,0	2,1	**100,0**

Source: NHTS 2013
Note: PT = public transport

Of the 5,3 million households who used public transport and provided their household income and travel cost information, about 2,2 million households spent less than 10 per cent of their monthly household income per capita on public transport. Interestingly, an equal number was observed for both households who spent more than 20% and between 10% and 20% (1,5 million) respectively.

Regarding monthly household earnings, more than 60 per cent of households earning R500 or less spend more than 20% of their monthly household income per capita on public transport, whereas about 90% of households earning more than R6 000 indicated that they spend less than 10 per cent of their monthly household income per capita on public transport.

Figure 20: Percentage of monthly household income per capita spent on public transport by quintile
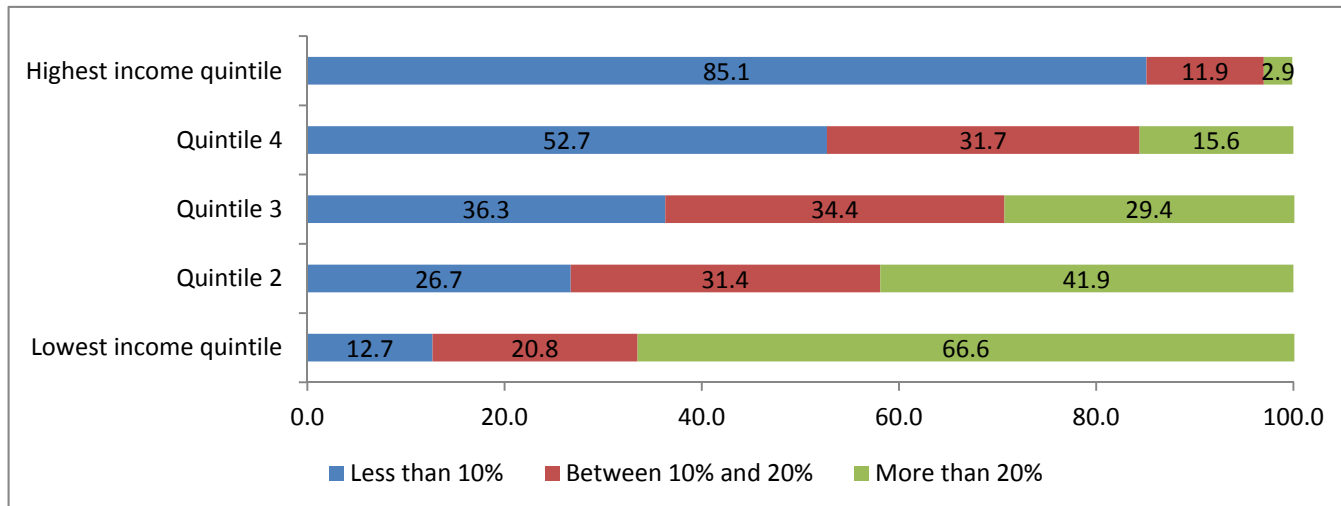
Source: NHTS 2013

Figure 20 shows that households from the lowest income quintile spent a higher proportion of their income on public transport compared to households from the highest income quintile. More than two-thirds of households falling into the lowest income quintile spent more than 20% of their monthly household income per capita on public transport (66,6%), whereas less than 3% of households from the highest income quintile spent more than 20 per cent of their monthly household income per capita (2,9%).

Figure 21: Percentage of monthly household income per capita spent on public transport by geographic location
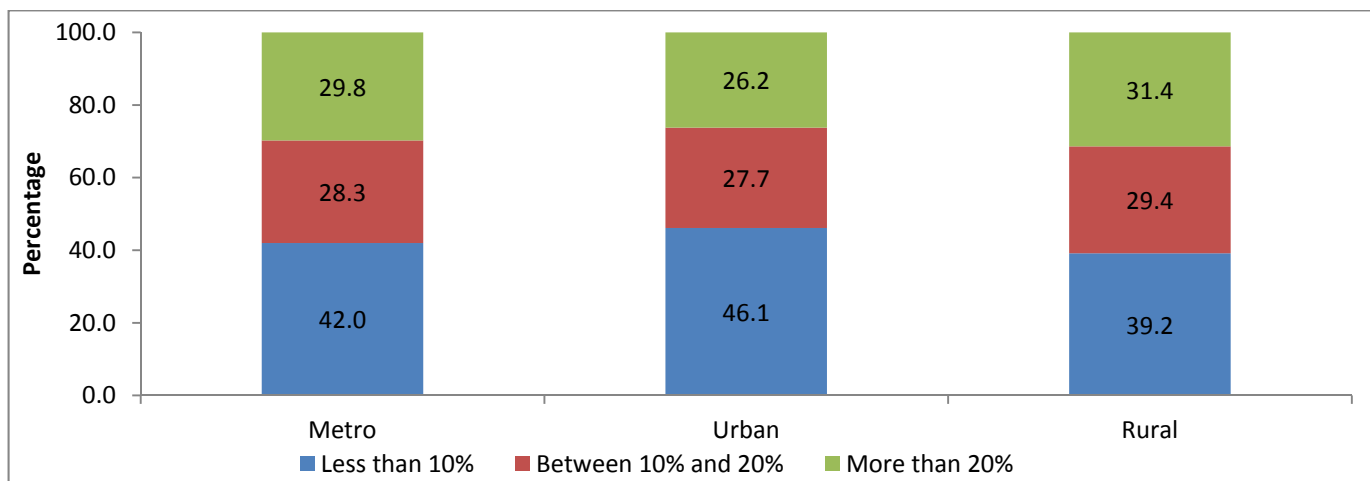
Source: NHTS 2013

As displayed in Figure 21, households in urban areas (46,1%) were more likely to spend less than 10% of their monthly household income per capita on public transport compared to other areas. The highest percentage of households who spent more than 20% of their monthly household income per capita on public transport were in rural areas (31,4%), followed by metro areas (29,8%) and urban areas (26,2%).

It is interesting to note that Venter (2011) found that the average cost of public transport trips varies significantly across urban and rural areas in South Africa, sometimes by as much as a factor of 10. Geographic patterns of population and land use distribution, public transport supply and infrastructure (especially road) quality seem to influence public transport costs systematically. Worst off appear to be the commuters living in displaced urban settlements or in isolated deep rural locations.

Figure 22: Percentage of monthly household income per capita spent on public transport
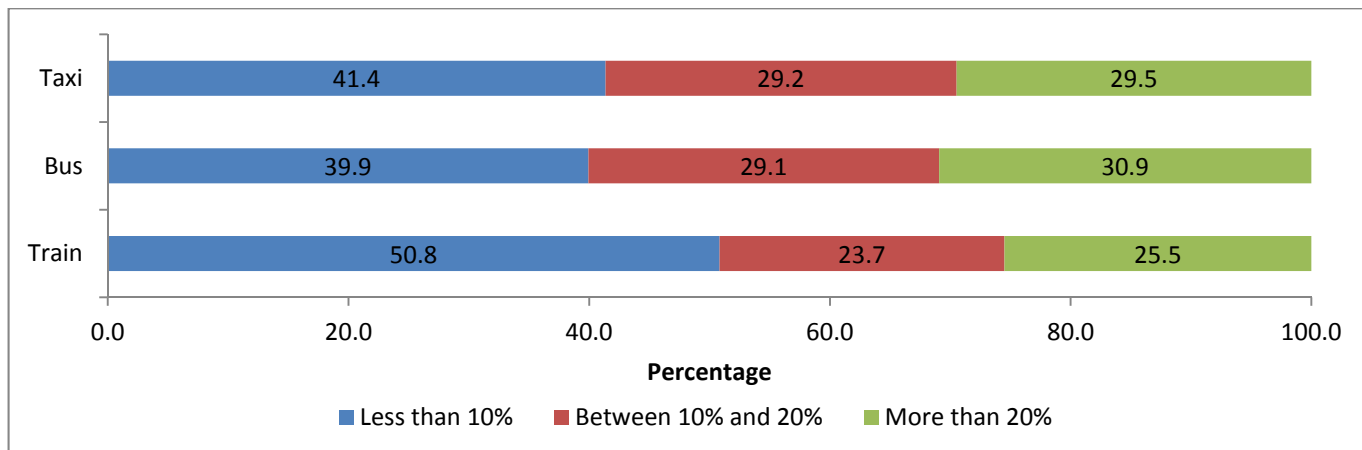
Source: NHTS 2013

Figure 22 reveals that 50,8% of train users spent less than 10% of their monthly household income per capita, followed by taxi users (41,4%) and bus users (39,9%). At the other end of the scale, 30,9% of bus users spent more than 20% of their monthly household income per capita on public transport, followed by taxis (29,5%) and train users (25,5%).

Figure 23: Households spending more than 10 per cent of monthly household income per capita on public transport
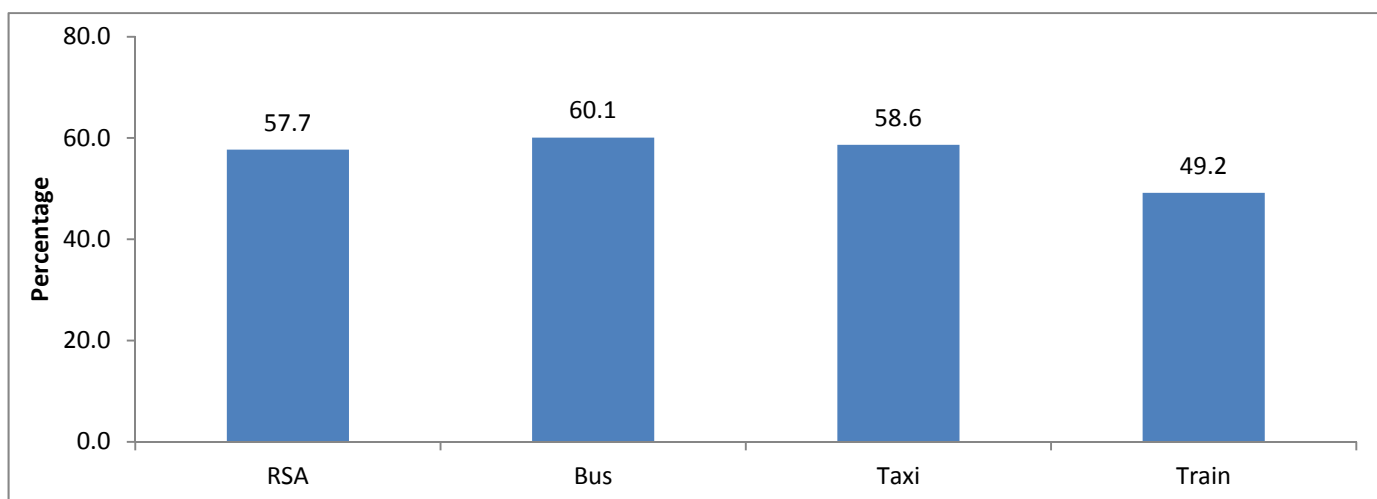
Source: NHTS 2013

Nationally, more than half of households spent more than 10% of their monthly household income per capita on public transport (57,7%). In spite of government subsidies to public transport, a larger percentage of bus (60,1%) and taxi (58,6%) users spent more than 10% of their monthly household income per capita on public transport, followed by train users (49,2%).

Map 5: Number of households ('000) who used public transport and percentage of monthly household income per capita spent on public transport
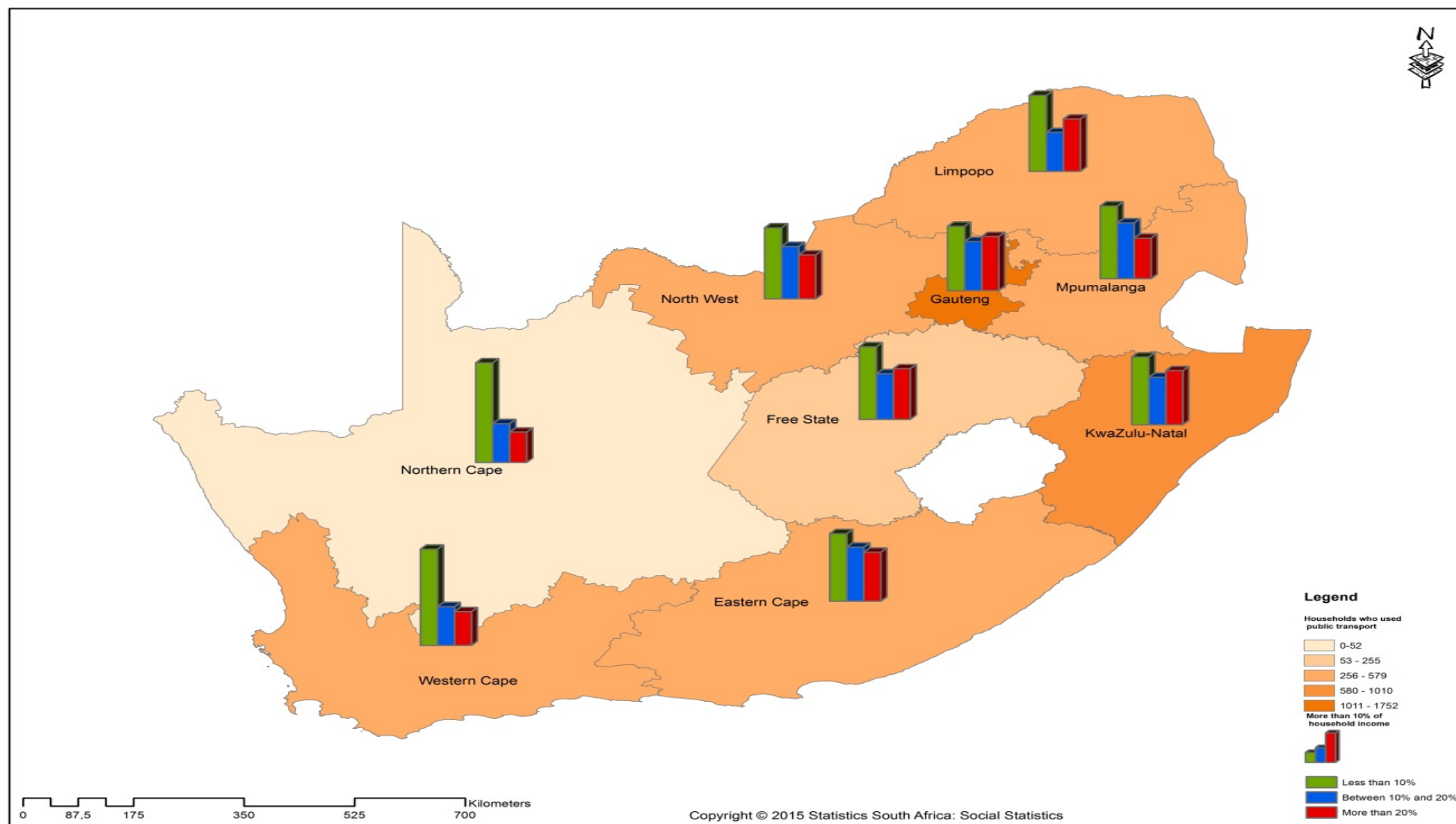
Source: NHTS 2013

Map 6: Percentage of households spending more than 10 per cent of   monthly household income per capita on public transport
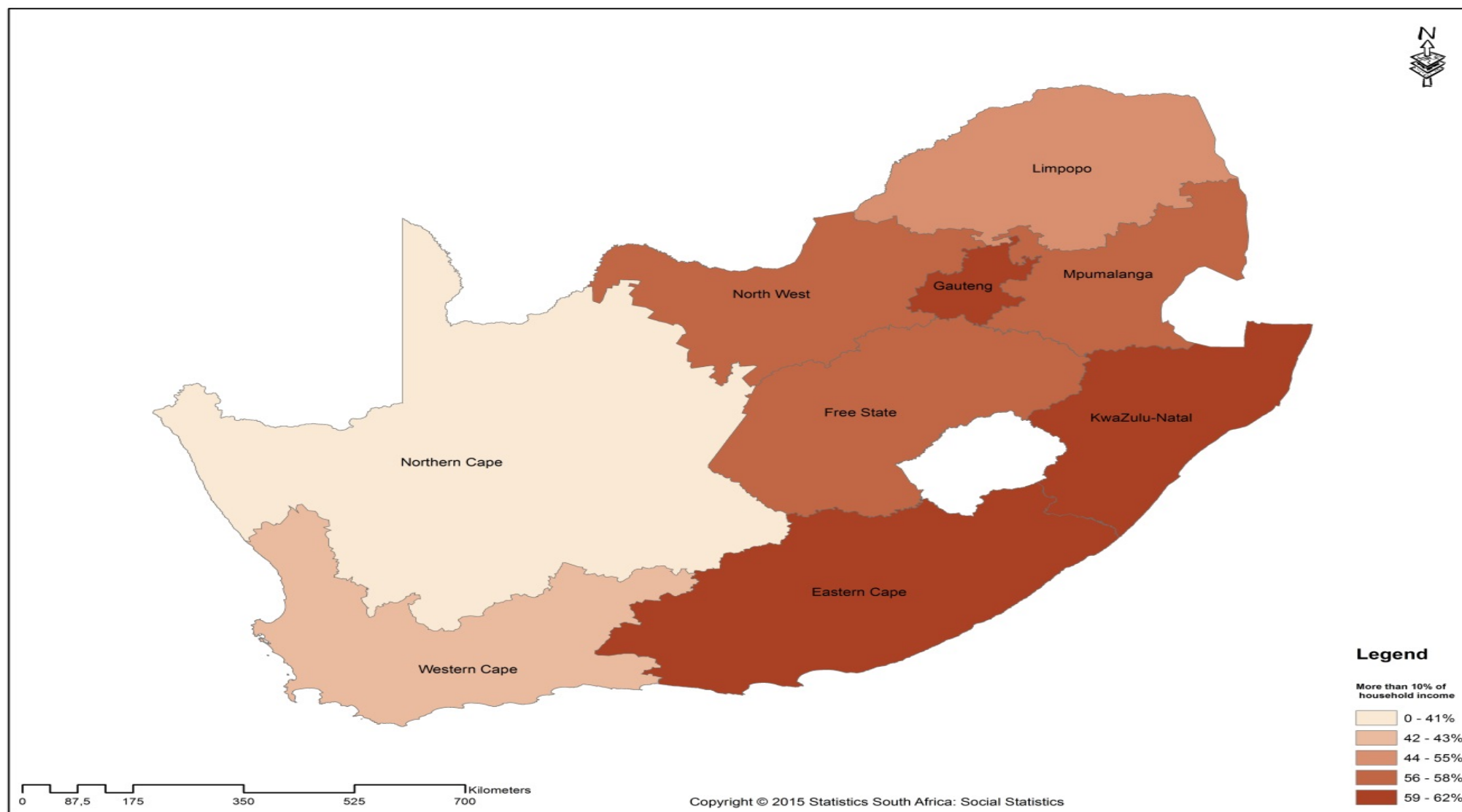
Source: NHTS 2013

Map 5 shows that across all provinces, Gauteng and KwaZulu-Natal had the highest public transport users. Northern Cape had the least number of public transport users.

Provincially, most households who used public transport spent less than 10% of their monthly household income per capita on public transport, represented in green. On the other hand, those who spent more than 20% of their monthly household income per capita on public transport were more likely to reside in Gauteng, KwaZulu-Natal and Limpopo, represented in red.

Map 6 confirms that Gauteng, KwaZulu-Natal and Eastern Cape are the top-ranked provinces in terms of households who spent more than 10% of their monthly household income per capita on public transport. Conversely, Northern Cape and Western Cape had the lowest percentage of households who spent more than 10% of their monthly household income per capita on public transport.

Annexure H to H8 provides a visual representation of the distribution of households who spent more than 10% of their monthly household income per capita on public transport, by district municipalities across all nine provinces.

7.3   Profile of learners who used public transport

Learners travel from their usual place of residence to attend educational institutions. Some educational institutions are situated in provinces other than the province of residence. Transport makes it possible for educational institutions to be accessible to attendees; therefore it is important that it is affordable, easily accessible and safe for everyone (Stats SA, 2014:16).

This section describes education-related travel and more specifically, provides a profile of learners who used public transport, cost of public transport to educational institution and discuss the affordability of public transport for learners.

Table 10: Total number of learners who used public transport by geographic location

Mode of travel	Statistics ('000)	Geographic location			
		Metro	**Urban**	**Rural**	**RSA**
Train	Number	173	13	18	**205**
	Per cent	10,3	1,4	1,7	**5,5**
Bus	Number	348	208	356	**912**
	Per cent	20,6	21,8	33,6	**24,6**
Taxi	Number	1 166	736	686	**2 588**
	Per cent	69,1	76,8	64,7	**69,8**
Total	**Number**	**1 687**	**958**	**1 060**	**3 705**
	Per cent	**100,0**	**100,0**	**100,0**	**100,0**

Source: NHTS 2013

The results show that about 3,7 million learners used public transport as their main mode of travel. The majority of those learners reside in metropolitan areas (1,7 million), followed by those who live in rural areas (1,1 million) and 958 000 in urban areas.

Across all geographic locations, taxis were the most commonly used mode of transport, followed by buses and trains. Learners in metropolitan areas were more likely to use trains as their mode of travel compared to learners in other geographic locations. Those who reside in rural areas were more likely to use buses as their mode of travel compared to learners in other geographic locations.

Figure 24: Percentage of learners who used public transport by income quintiles
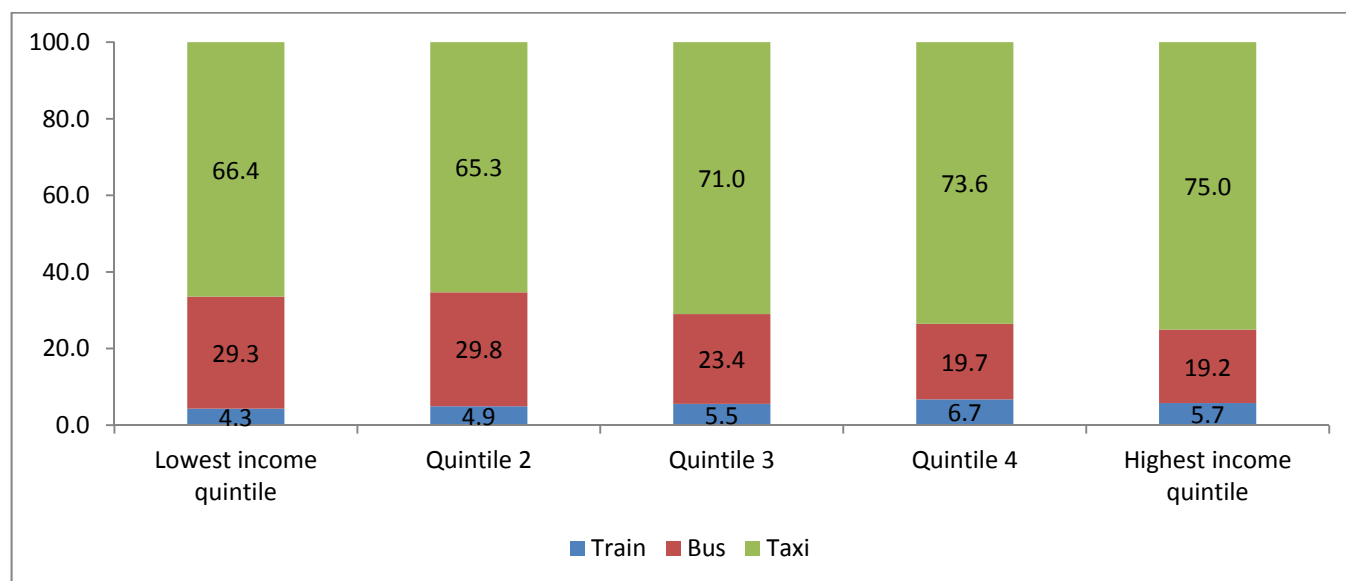
Source: NHTS 2013

It is evident from Figure 24 that across all income quintiles, taxis were the most used mode of travel, followed by buses and trains. Learners in households from quintile 4 and the highest income quintile were more likely to use trains as their mode of travel compared to households from the lowest income quintile.

Table 11: Public transport modes used to travel to educational institutions by type of educational institution

| Mode of travel | Statistics ('000) | Type of educational institution | | | | | |
		Preschool	School	Higher education institution	Further Education and Training College	Other institution	Total
Train	Number	2	72	45	37	10	167
	Per cent	3,1	15,8	12,8	9,5	5,1	3,1
Bus	Number	17	649	63	57	18	804
	Per cent	7,8	27,6	22,1	19,7	17,1	24,8
Taxi	Number	200	1 630	176	195	76	2 277
	Per cent	91,3	69,3	61,8	67,5	72,4	70,1
Total	**Number**	**219**	**2 351**	**285**	**289**	**105**	**3 248**
	Per cent	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**

Source: NHTS 2013
Unspecified types of institutions were excluded from the total for the calculation of percentages.

Table 11 shows public transport modes used by learners to travel to their respective educational institutions. Of the 2,3 million learners who used taxis to their educational institutions, most were scholars (1,6 million), followed by pre-scholars (200 000). For scholars and pre-scholars, buses were the second most used mode of transport, followed by trains.

Trains were the least common mode of travel used by learners. In spite of this, some of the learners who attended schools and higher education institutions used trains.

Figure 25: Average per capita monthly household income for learners who used public transport by income quintile
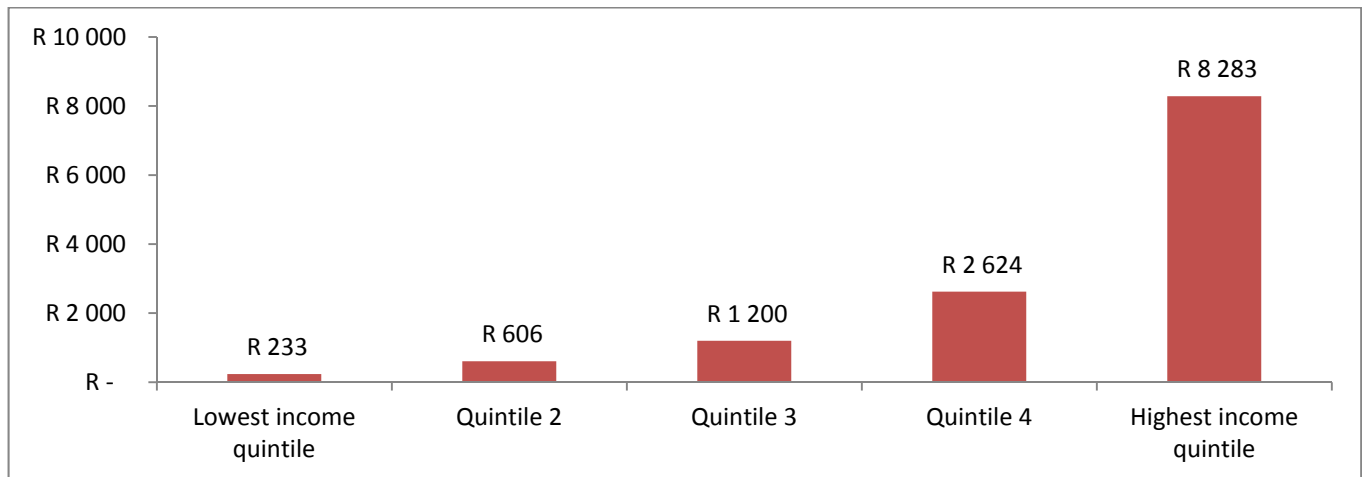
Source: NHTS 2013

It is notable from Figure 25 that there are significant differences in average per capita monthly household income across all income quintiles. As expected, average per capita monthly household income is higher for learners in households from the highest income quintile (R8 283) compared to learners in households from the lowest income quintile (R233).

Figure 26: Average per capita monthly household income for learners who used public transport by type of public transport modes
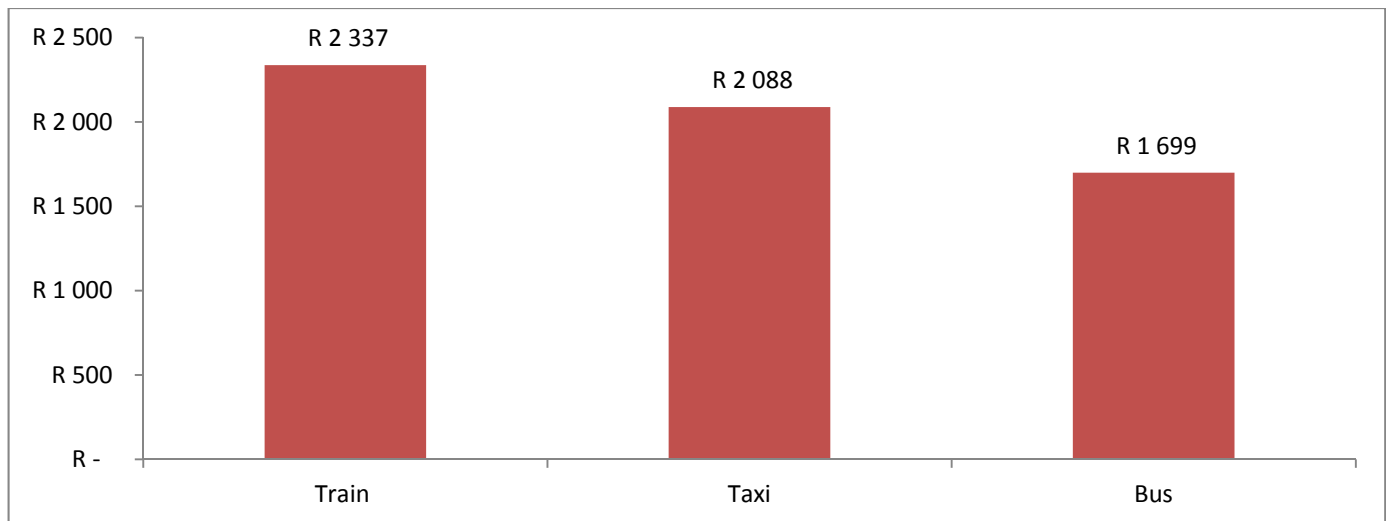
Source: NHTS 2013

Figure 26 shows the average per capita monthly household income for learners who used public transport by type of public transport mode. Learners who used trains as their main mode reported the highest average per capita monthly household income which is R2 337, and which is higher than the average per capita monthly household income values reported by taxi and bus users (R2 088 and R1 699 respectively).

7.3.1 Cost of commuting using public transport for learners

The following tables and figures deal with the cost of public transport for learners. Note that the travel cost is monthly public transport travel cost incurred for education-related trips on the travel day.

Table 12: Learners who used public transport and reported or did not report their monthly travel cost

| PT travel cost status | Statistics ('000) | Household income quintile | | | | | RSA |
		Lowest income quintile	Quintile 2	Quintile 3	Quintile 4	Highest income quintile	
Monthly PT travel cost not reported	Number	227	222	166	122	59	**795**
	Per cent	28,5	27,9	20,9	15,3	7,5	**100,0**
Monthly PT travel cost reported	Number	515	617	690	675	379	**2876**
	Per cent	17,9	21,5	24,0	23,5	13,2	**100,0**
Total	**Number**	**742**	**839**	**856**	**796**	**439**	**3672**
	Per cent	**20,2**	**22,9**	**23,3**	**21,7**	**12,0**	**100,0**

Source: NHTS 2013

Of the 3,7 million learners who mentioned that they used public transport, 2,9 million of them provided their monthly travel cost information and 795 000 did not provide their monthly travel cost information.

Most learners who used public transport and did not report their monthly travel cost information were from the lowest income quintile (28,5%), followed by those from quintile 2 (27,9%) and quintile 3 (20,9%). Note that the following analysis excludes learners who did not provide their travel cost information.

Figure 27: Average monthly travel cost for learners who used public transport by quintile
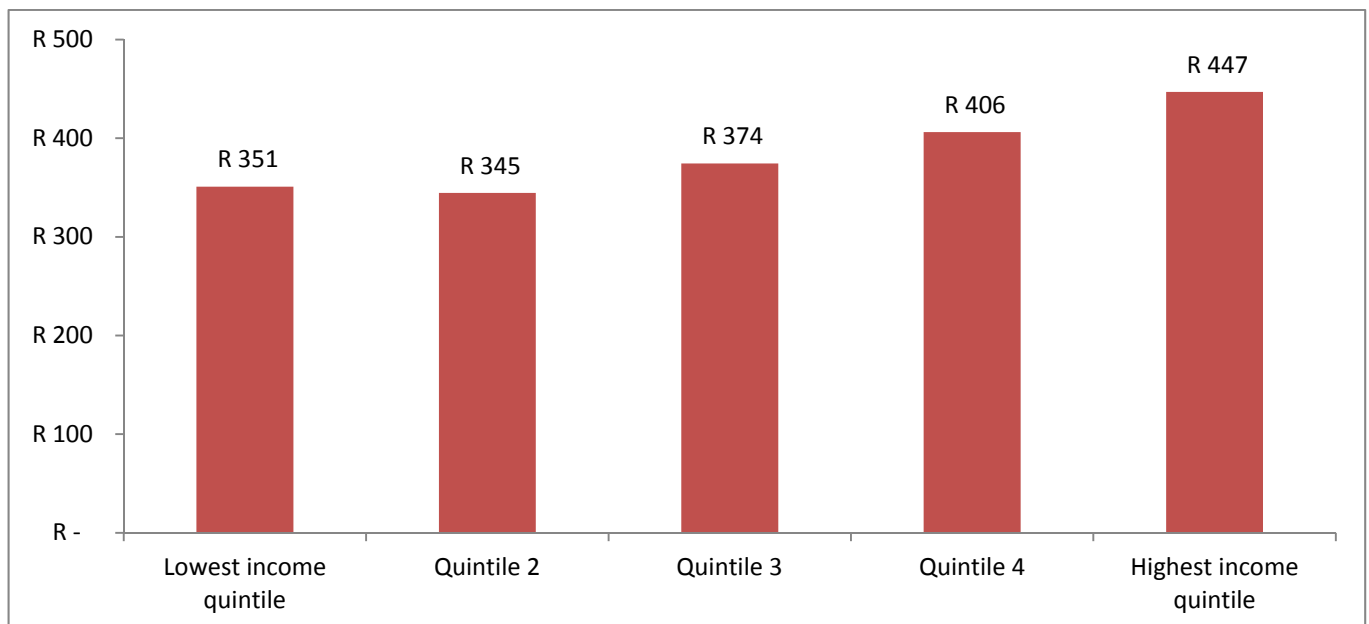
Source: NHTS 2013

Figure 27 suggests that there is a strong inverse relationship between household income quintiles and travel costs. Learners in households from the highest income quintile (R447) are more likely to spend more on their travel cost compared to learners in households from the lowest income quintile (R351).

Figure 28: Average monthly travel cost for learners who used public transport by public transport modes
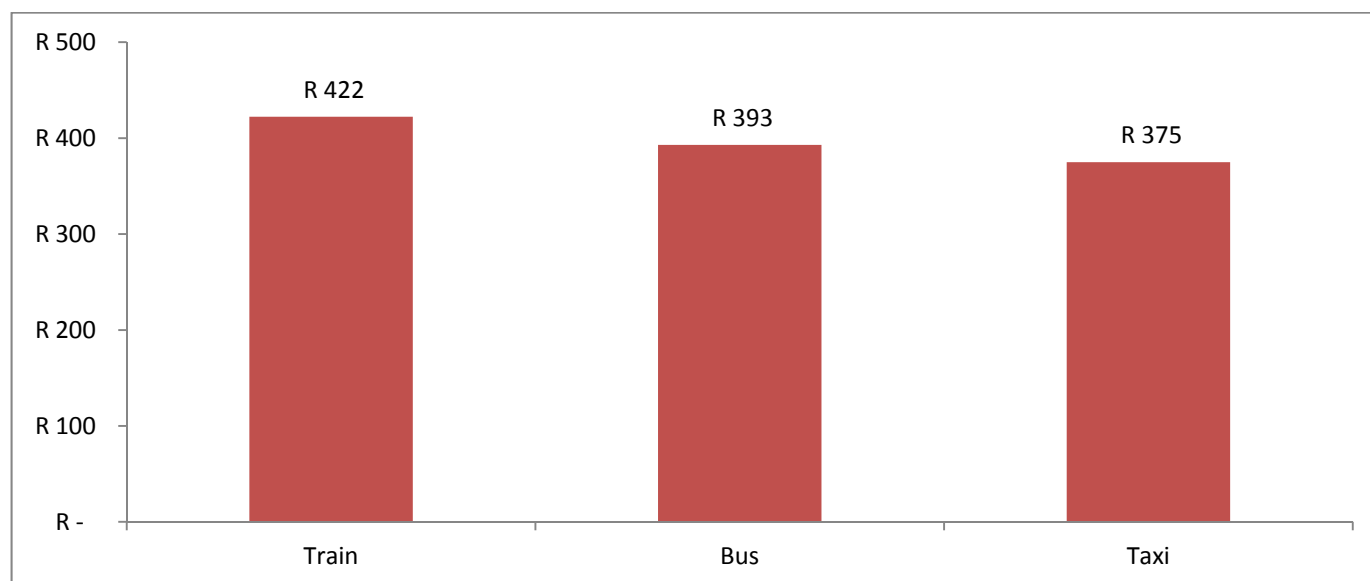
Source: NHTS 2013

Trains appeared to be the most expensive mode of travel with an average monthly travel cost of R422, followed by travelling by bus (R393) and taxi (R375).

7.3.2 Affordability of public transport for learners

This section will focus on the affordability of public transport for learners expressed as the share of their monthly household income per capita on public transport. The affordability measure is calculated by dividing monthly travel cost incurred for education-related trips by monthly household income per capita. This measure will be compared to a benchmark cited in the 1996 White Paper on Transport Policy — assess if households or individuals were spending more than 10% of their disposable income on public transport.

Note that learners who used public transport and did not provide their monthly household income and travel cost information were excluded when analysing the affordability of public transport — 2,9 million learners were considered out of 3,7 million learners that used public transport. The next tables and figures primarily deal with the affordability of public transport for learners.

Table 13: Distribution of monthly household income per capita spent on public transport to educational institutions

| Province | Statistics (numbers in thousands) | Monthly household income per capita spent on PT | | | Total |
		Less than 10%	Between 10% and 20%	More than 20%	
Western Cape	Number	61	65	129	**255**
	Per cent	23,9	25,6	50,5	**100,0**
Eastern Cape	Number	53	59	176	**287**
	Per cent	18,4	20,4	61,3	**100,0**
Northern Cape	Number	3	3	12	**19**
	Per cent	17,1	16,1	66,8	**100,0**
Free State	Number	34	29	83	**147**
	Per cent	23,5	19,9	56,6	**100,0**
KwaZulu-Natal	Number	120	132	400	**653**
	Per cent	18,4	20,3	61,3	**100,0**
North West	Number	38	50	112	**200**
	Per cent	18,8	25,0	56,2	**100,0**
Gauteng	Number	220	203	470	**892**
	Per cent	24,6	22,7	52,6	**100,0**
Mpumalanga	Number	59	52	98	**209**
	Per cent	28,0	24,9	47,1	**100,0**
Limpopo	Number	37	32	136	**205**
	Per cent	18,0	15,7	66,3	**100,0**
RSA	**Number**	**625**	**625**	**1 617**	**2 867**
	Per cent	**21,8**	**21,8**	**56,4**	**100,0**
Monthly per capita household income					
Up to R1 000	Number	21	95	1 200	**1 316**
	Per cent	1,6	7,2	91,2	**100,0**
R1 001-R3 000	Number	163	412	389	**964**
	Per cent	16,9	42,7	40,4	**100,0**
R3 001-R6 000	Number	254	106	24	**384**
	Per cent	66,0	27,7	6,3	**100,0**
>R6 000	Number	187	12	4	**203**
	Per cent	92,0	6,1	1,9	**100,0**

Source: NHTS 2013, Note: PT = public transport

Table 13 depicts that about 2,9 million learners who used public transport provided their monthly household income and travel cost information. An equal number was observed for learners who belong to households who spent less than 10 per cent and between 10% and 20% of their monthly household income per capita on public transport (625 000 respectively). On the other hand, approximately 1,6 million learners were from households that spent more than 20% of their monthly household income per capita on public transport.

More than 90 per cent of learners come from households earning R1 000 or less and spent more than 20% of their monthly household income per capita on public transport (91,2%). In contrast, more than 90 per cent of learners were from households earning more than R6 000 and spend less than 10 per cent of their monthly household income per capita on public transport (92,0%). The 2013 GHS found that one quarter of learners in the age group 7–16 years cited a lack of money as the main reason for not attending educational institutions.

Figure 29: Percentage of monthly household income spent per capita on public transport to educational institutions by quintile
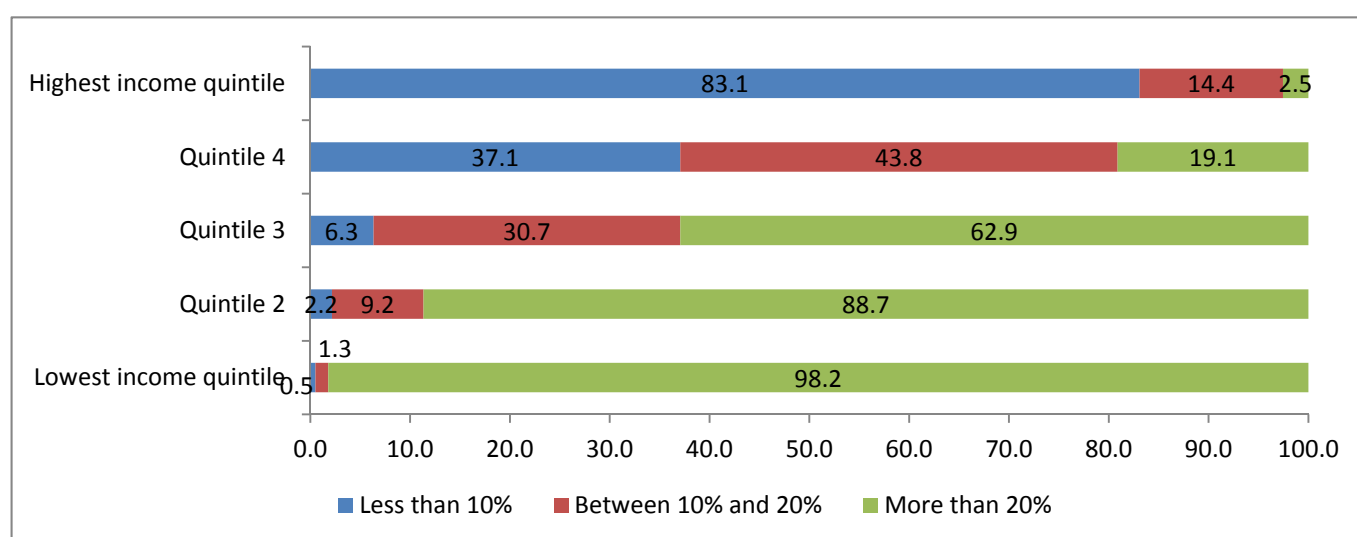
Source: NHTS 2013

Most learners in households from the lowest income quintile spent more than 20% of their monthly household income per capita on public transport (98,2%), followed by quintile 2 (88,7%) and quintile 3 (62,9%) as shown in Figure 29. Similarly, Diaz Olvera et al (2008) found that travel surveys indicate that poor households spend a greater share of their income on transport than other households.

Less than 3% of learners in households from the highest income quintile spent more than 20% of their monthly household income per capita on public transport (2,5%). More than 8 out of 10 of these learners spent less than 10% of their monthly household income per capita on public transport (83,1%).

Figure 30: Percentage of monthly household income spent per capita on public transport to educational institutions by type of education institution
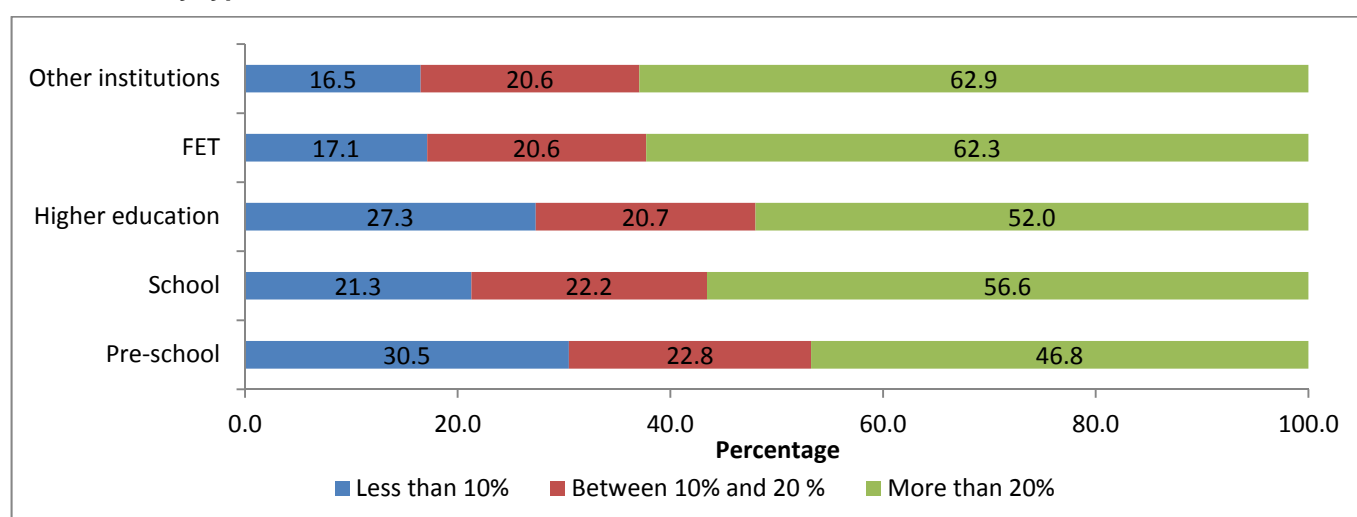
Source: NHTS 2013

Figure 30 illustrates that irrespective of type of education institution attended, most learners come from households that spend more than 20% of their monthly household income per capita on public transport. Most of these learners attended other institutions (62,9%), followed by FET (62,3%) and higher education (52,0%).

On the other hand, pre-scholars, learners who attended higher education and scholars were more likely to come from households that spent less than 10% of their monthly household income per capita on public transport.

Figure 31: Percentage of monthly household income per capita spent on public transport to educational institutions by geographic location
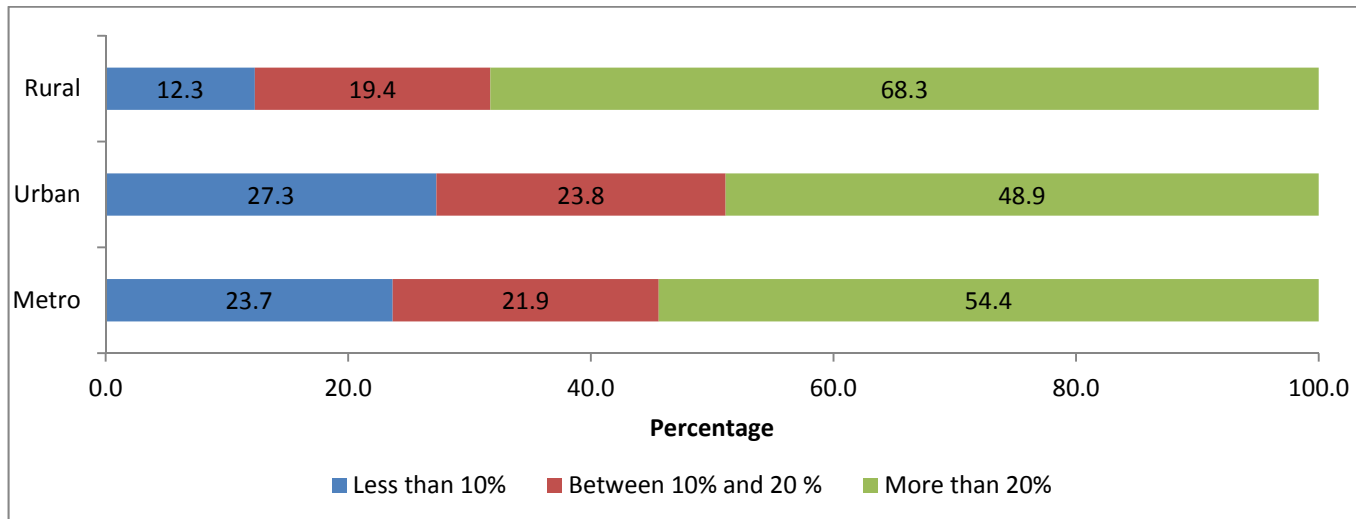
Source: NHTS 2013

According to Carruthers et al (2005), there is a widely-held belief that potential low income passengers are forced to curtail the number of trips that they make, use modes of transport that do not incur a direct cost, such as walking or cycling, or to live in locations that minimise their transport costs.

As shown in Figure 31, learners who reside in rural areas tend to come from households who spent more than 20% of their monthly household income per capita on public transport (68,3%), followed by those living in metro areas (54,4%) and urban areas (48,9%).

Figure 32: Percentage of monthly household income per capita spent on public transport to educational institutions
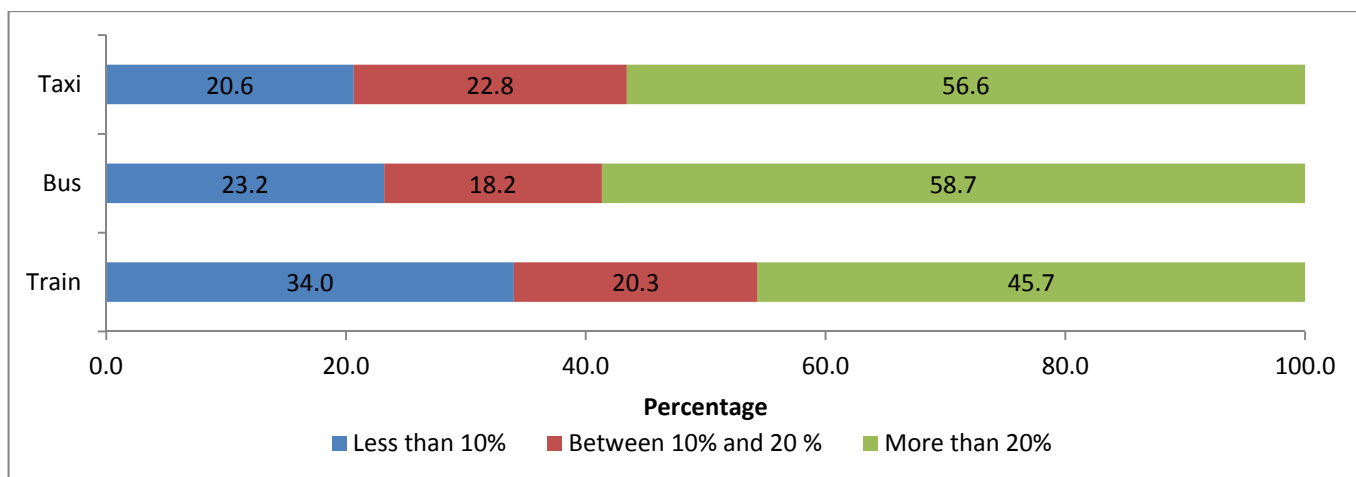
Source: NHTS 2013

Figure 32 clearly reveals that bus users were most likely to spend more than 20% of their monthly household income per capita (58,7%), followed by taxi (56,6%) and trains users (45,7%). Results further show that train users were most likely to spend less than 10% of their monthly household income per capita (34,0%), followed by bus users (23,2%) and taxi users (20,6%).

Figure 33: Percentage of learners spending more than 10 per cent of their monthly household income per capita on public transport
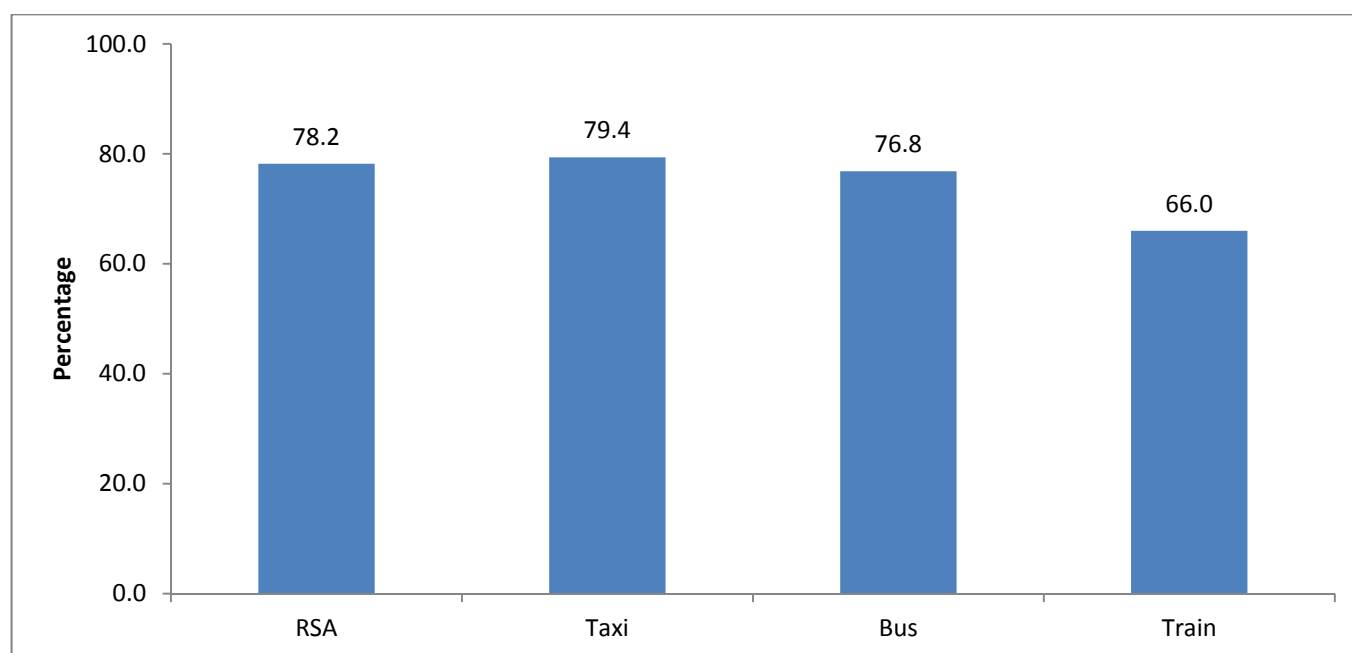
Source: NHTS 2013

The 2013 NHTS found that learners who use trains needed more time than users of any other public transport modes to reach their educational institutions — total time travelled to the educational institution by public transport were: Trains (76 minutes), buses (60 minutes) and taxis (45 minutes).

Figure 33 shows that the quickest public transport mode, which is taxis, had the highest proportion of users who spent more than 10% of their monthly household income per capita on public transport (79,4%), followed by bus users (76,8%) and train users (66,0%).

7.4 Profile of workers who used public transport

The vision of the Department of Transport in their Public Transport Strategy (2007) is to phase in a lasting legacy of Integrated Rapid Transport Service Networks in metropolitan cities, smaller cities and rural districts that will ensure sustainable, equitable and uncongested mobility in liveable cities and districts. According to this strategy, metropolitan cities aim to achieve a significant shift of work trips from cars to public transport networks by 2020 (Stats SA, 2014:36).

This section describes work-related travel and more specifically, provides a profile of workers who used public transport, the monthly cost of work-related trips and affordability of public transport for workers.

Table 14: Total number of workers who used public transport by geographic location

Mode of travel	Statistics ('000)	Geographic location			
		Metro	Urban	Rural	RSA
Train	Number	650	34	16	**700**
	Per cent	20,5	2,7	1,6	**12,9**
Bus	Number	446	235	380	**1 061**
	Per cent	14,0	18,7	38,0	**19,5**
Taxi	Number	2 080	987	603	**3 670**
	Per cent	65,5	78,6	60,3	**67,6**
Total	**Number**	**3 176**	**1 256**	**999**	**5 431**
	Per cent	**100,0**	**100,0**	**100,0**	**100,0**

Source: NHTS 2013

According to NHTS 2013, the total number of workers using public transport increased from 5 million to 5,4 million between 2003 and 2013. Table 14 shows that of the 5,4 million workers who used public transport as their mode of travel, most of them reside in metropolitan areas (3,1 million), followed by those in urban areas (1,3 million) and about a million from rural areas (999 000).

Across all geographic locations, taxis were the most used mode of transport, followed by buses and trains. Workers in metropolitan areas were more likely to use trains as their mode of travel compared to workers in other geographic locations.

Table 15: Workers who used public transport by work sector

Public transport mode	Statistics ('000)	Work sector		
		Formal sector	Informal sector	Total
Train	Number	593	108	**700**
	Per cent	13,6	9,9	**12,9**
Bus	Number	868	193	**1 061**
	Per cent	20,0	17,7	**19,5**
Taxi	Number	2 883	787	**3 670**
	Per cent	66,4	72,4	**67,6**
Total	**Number**	**4 344**	**1 087**	**5 431**
	Per cent	**100,0**	**100,0**	**100,0**

Source: NHTS 2013

Table 15 summarises the public transport modes used by workers. Of those workers who used public transport, about 4,3 million were from the formal sector and just over a million were from the informal sector.

For both sectors, taxis were the predominant mode of travel, followed by buses, then trains. It is important to note that workers from the informal sector were more likely to use taxis as their mode of travel compared to workers from the formal sector. Workers from the formal sector were more likely to use trains as their mode of travel compared to their counterparts.

Figure 34: Percentage of workers who used public transport by quintiles
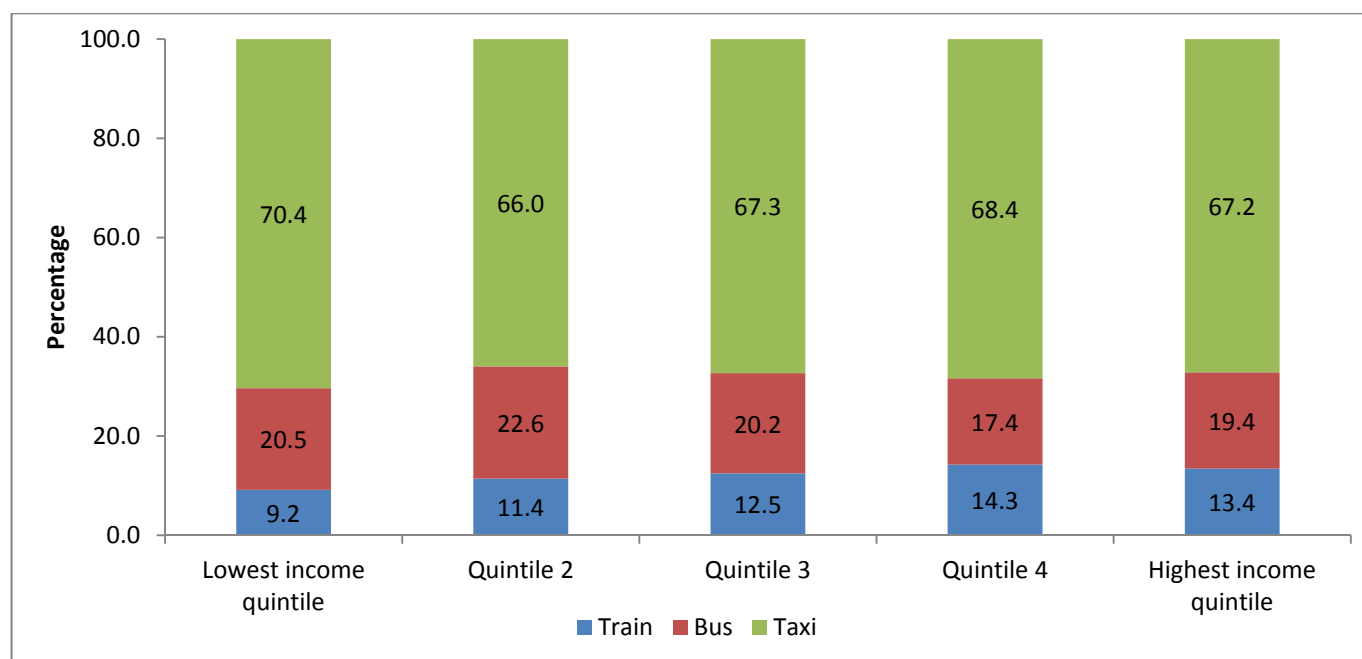
Source: NHTS 2013

Figure 34 shows that across all household income quintiles, the most used mode of travel were taxis, followed by buses and trains. Workers in households from quintile 4 and the highest income quintile were more likely to use trains as their mode of travel when compared to households from the lowest income quintile.

Figure 35: Average per capita monthly household income for workers by quintiles
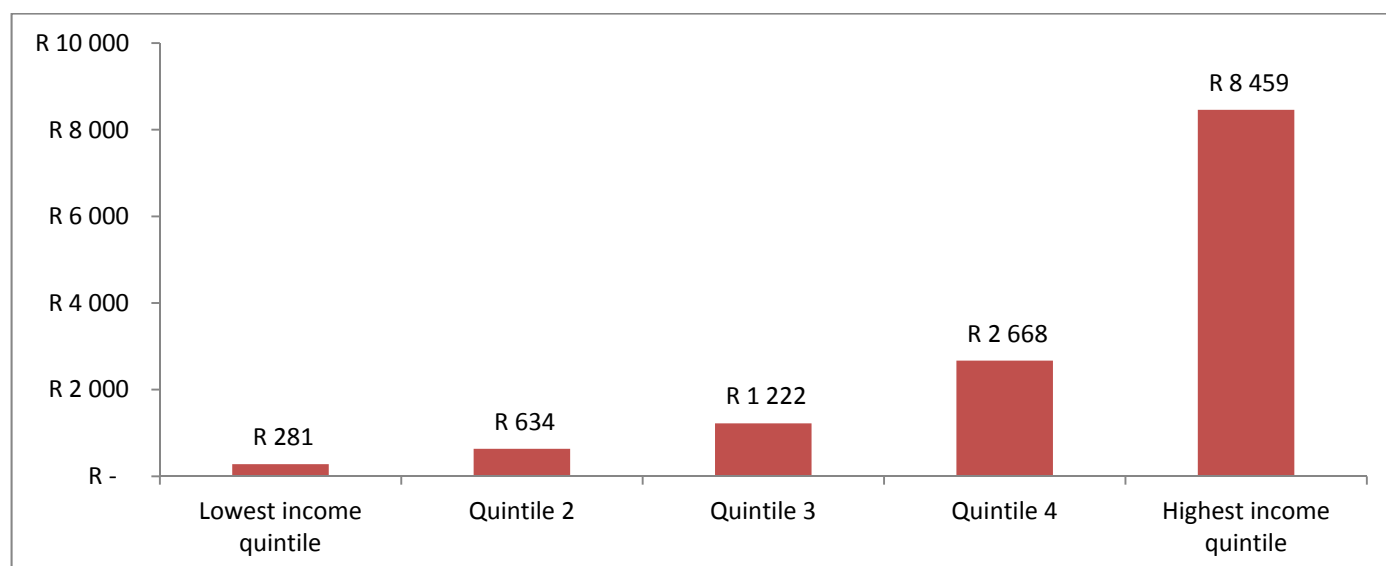
Source: NHTS 2013

Figure 35 shows that there are significant differences in average per capita monthly household income across all income quintiles. As expected, average per capita monthly household income is higher for workers in households from the highest income quintile (R8 459) compared to learners in households from the lowest income quintile (R281).

Figure 36: Average per capita monthly household income for workers by public transport modes
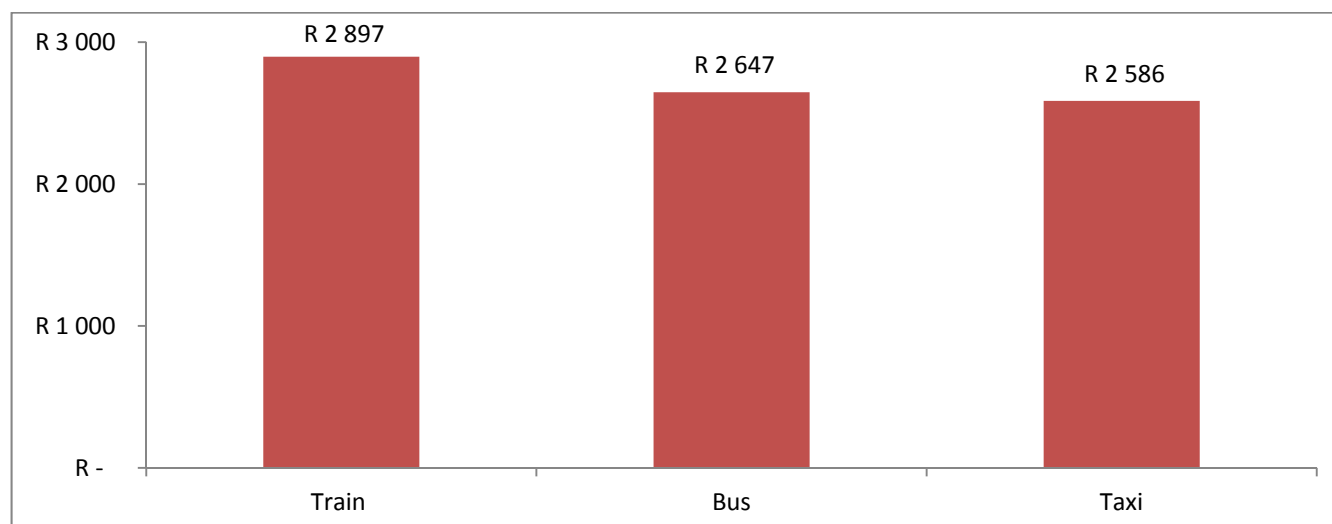
Source: NHTS 2013

Figure 36 shows that workers who used trains as their main mode reported the highest average per capita monthly household income which is R2 897, and which is higher than the average per capita monthly household income values reported by bus and taxi users (R2 647 and R2 586 respectively).

7.4.1 Cost of commuting using public transport for workers

The following tables and figures deal with the cost of public transport for workers. Note that the travel cost is monthly public transport travel cost incurred for work-related trips.

Table 16: Workers who used public transport and reported or did not report their travel cost

PT travel cost status	Statistics ('000)	Formal	Informal	RSA
	Number	372	85	457
Monthly PT travel cost not reported	Per cent	8,6	7,8	8,4
	Number	3 971	1 002	4 974
Monthly PT travel cost reported	Per cent	91,4	92,2	91,6
	Number	**4 344**	**1 087**	**5 431**
Total	**Per cent**	**100,0**	**100,0**	**100,0**

Source: NHTS 2013

Of the 5,4 million workers who used public transport, about 92% provided their monthly travel cost information (5 million), while 8,4% did not report (457 000).

Most workers who did not report their travel cost information were from the formal sector (372 000), followed by 85 000 from the informal sector. Note that households who did not report their travel cost information will not be included in the subsequent analysis.

Figure 37: Average per capita monthly household travel cost for workers by quintiles
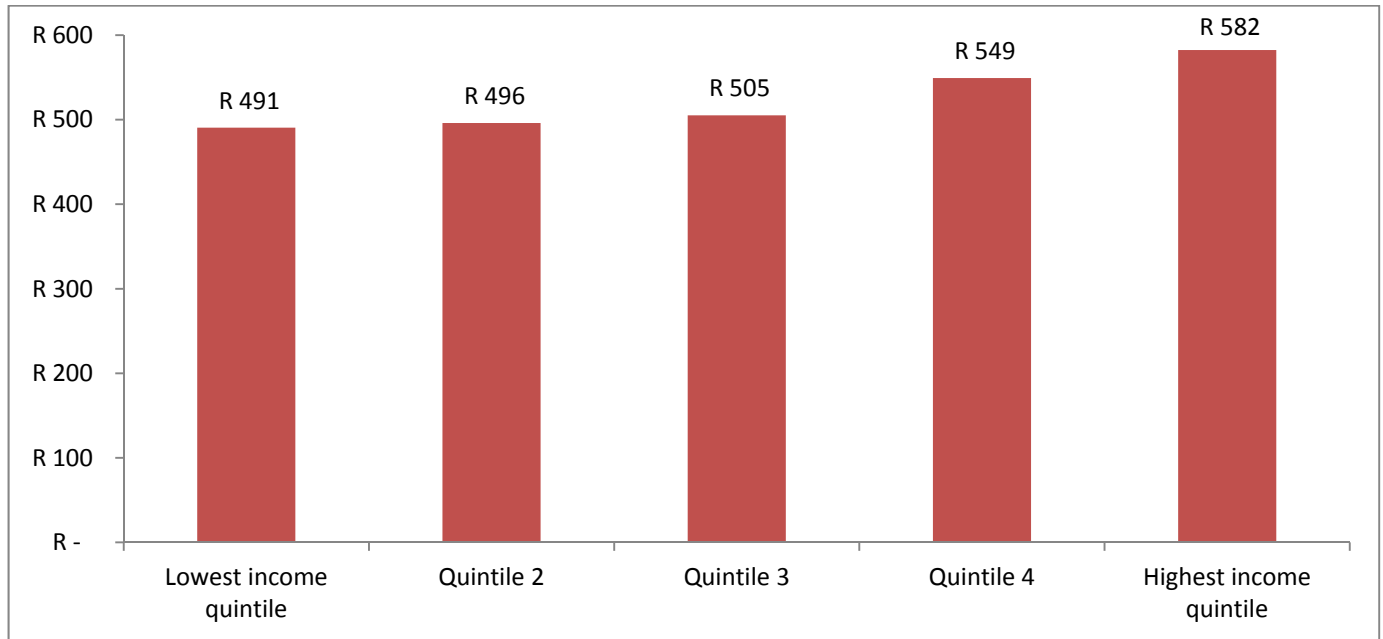
Source: NHTS 2013

Figure 37 reveals that workers in households from the highest income quintile (R582) were more likely to spend more on their travel costs compared to workers in households from the lowest income quintile (R491).

Figure 38: Average per capita monthly household travel cost for workers by public transport modes
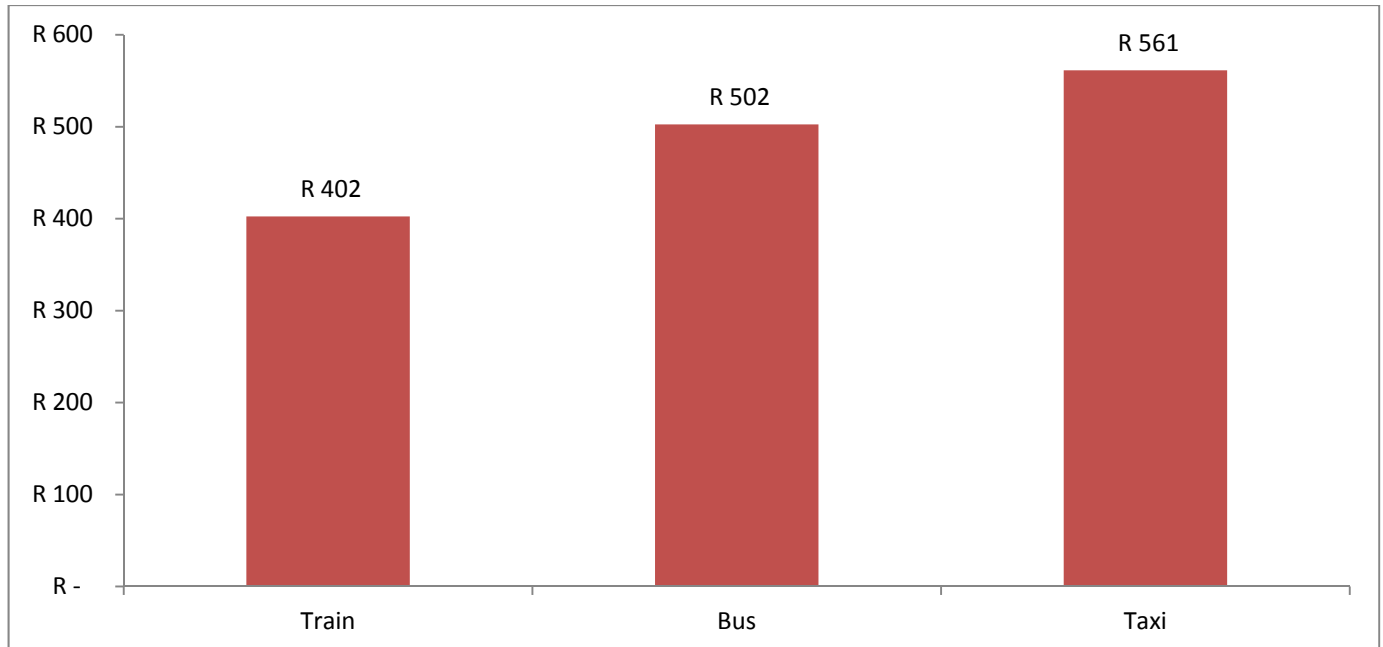
Source: NHTS 2013

The average per capita monthly household travel cost for workers by public transport modes are depicted in Figure 38. Taxis appeared to be the most expensive mode of travel with an average per capita monthly cost of R561, followed by travelling by buses (R502) and by trains (R402).

7.4.2 Affordability of public transport for workers

According to the NDP, by 2030 a large proportion of the population should live closer to places of work, and the transport they use to commute should be safe, reliable and energy efficient. This requires:

- Strong measures to prevent further development of housing in marginal places.
- Increased urban densities to support public transport and reduce sprawl.
- More reliable and affordable public transport and better coordination between various modes of transport.
- Incentives and programmes to shift jobs and investments towards the dense townships on the urban edge.
- Focused partnerships with the private sector to bridge the housing gap market.

According to the 2007 Public Transport Strategy, metropolitan cities aim to achieve a significant shift of work trips from cars to public transport networks by 2020.

This section covers analysis on the affordability of public transport for workers expressed as a share of their monthly household income per capita on public transport. Affordability is calculated by dividing monthly travel cost incurred for work-related trips by monthly household income per capita. This measure will be compared to a benchmark cited in the 1996 White Paper on Transport Policy — assess if households or individuals were spending more than 10% of their disposable income on public transport.

Note that workers who used public transport and did not provide their monthly household income and travel cost information were excluded when analysing the affordability of public transport — 5 million workers were considered out of 5,4 million workers that used public transport. The next tables and figures primarily deal with the affordability of public transport for workers.

Table 17: Monthly household income per capita spent on public transport to work

Province	Statistics ('000)	Monthly household income per capita spent on PT			Total
		Less than 10%	Between 10% and 20%	More than 20%	
Western Cape	Number	184	165	321	**670**
	Per cent	27,5	24,6	47,9	**100,0**
Eastern Cape	Number	43	81	222	**346**
	Per cent	12,5	23,5	64,0	**100,0**
Northern Cape	Number	10	7	23	**40**
	Per cent	25,5	16,4	58,1	**100,0**
Free State	Number	31	41	131	**203**
	Per cent	15,4	20,2	64,4	**100,0**
KwaZulu-Natal	Number	133	209	613	**955**
	Per cent	13,9	21,8	64,2	**100,0**
North West	Number	45	67	201	**314**
	Per cent	14,4	21,5	64,2	**100,0**
Gauteng	Number	363	425	1 046	**1 833**
	Per cent	19,8	23,2	57,0	**100,0**
Mpumalanga	Number	64	72	236	**372**
	Per cent	17,3	19,3	63,4	**100,0**
Limpopo	Number	40	44	156	**241**
	Per cent	16,8	18,4	64,8	**100,0**
RSA	**Number**	**914**	**1 110**	**2 949**	**4 974**
	Per cent	**18,4**	**22,3**	**59,3**	**100,0**
Monthly per capita household income					
Up to R1 000	Number	10	64	1 368	**1 442**
	Per cent	0,7	4,4	94,9	**100,0**
R1 001-R3 000	Number	201	621	1 447	**2 269**
	Per cent	8,9	27,4	63,7	**100,0**
R3 001-R6 000	Number	399	365	121	**885**
	Per cent	45,1	41,2	13,6	**100,0**
>R6 000	Number	304	60	14	**377**
	Per cent	80,4	15,9	3,7	**100,0**

Source: NHTS 2013
Note: PT = public transport

Of the 5 million workers who used public transport and provided their monthly household income and travel cost information, about 3 million of them spent more than 20 per cent of their monthly household income per capita on public transport, 1,1 million spent between 10% and 20% and about 914 000 spent less than 10% of their monthly household income per capita on public transport.

Of the workers who come from households earning R1 000 or less about 95 per cent spent more than 20% of their monthly household income per capita on public transport, while 80 per cent of workers who come from households earning more than R6 000 spent less than 10 per cent.

Figure 39: Percentage of monthly household income per capita spent on public transport to work
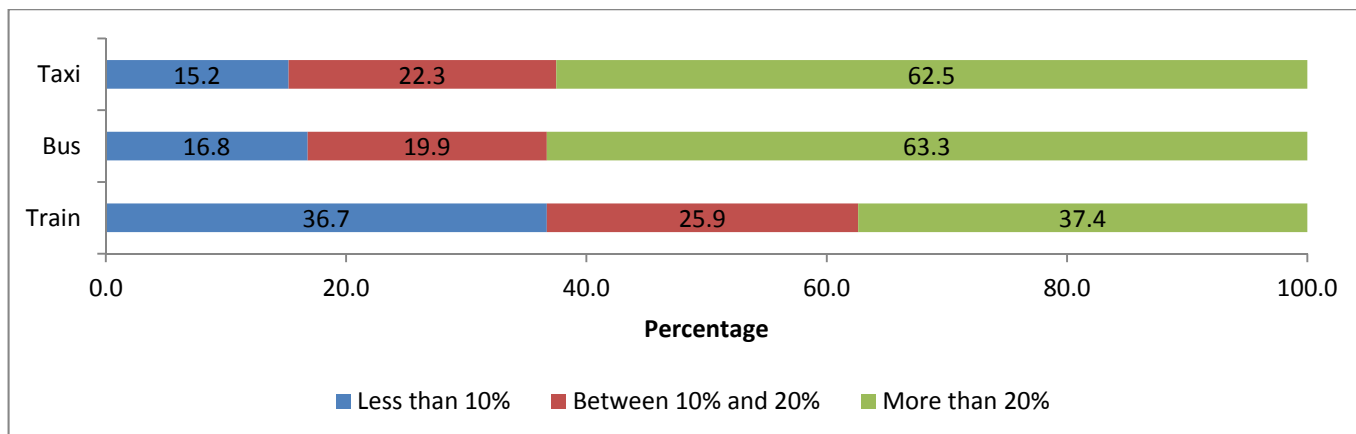
Source: NHTS 2013

Train users were most likely to spend less than 10% their monthly household income per capita (36,7%), followed by bus users (16,8%) and taxi users (15,2%). As presented in Figure 39, the largest proportion of income are expended by those workers using buses and taxis — 63,3% of bus users and 62,5% of taxi users spent more than 20% of their monthly household income per capita.

Figure 40: Percentage of monthly household income per capita spent on public transport to work by quintile
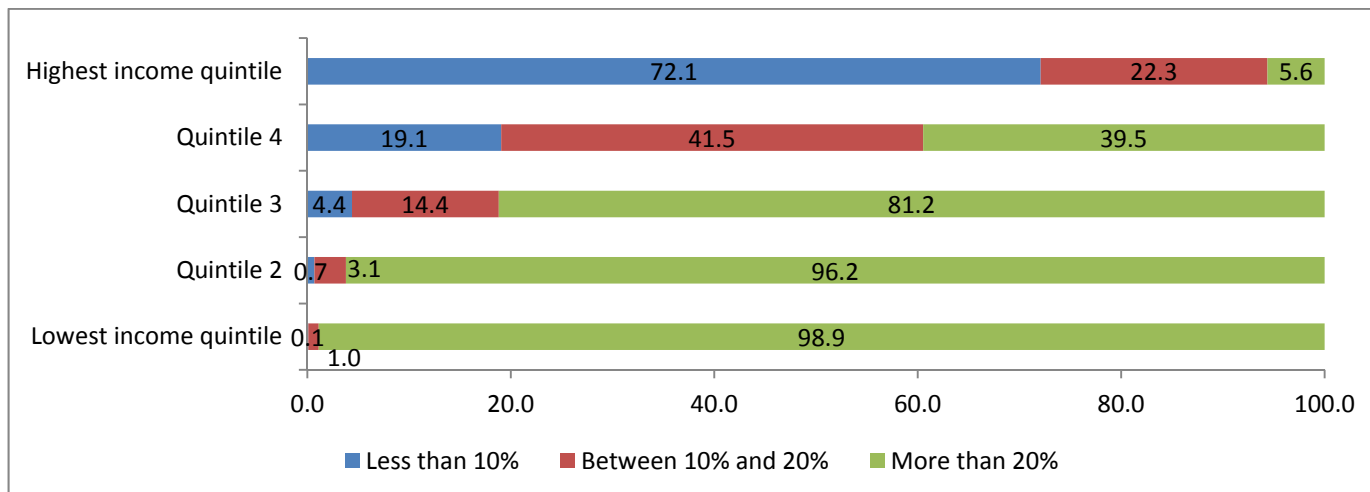
Source: NHTS 2013

It is evident from Figure 40 that workers in households from the lowest income quintile were more likely to spend more than 20% of their monthly household income per capita on public transport (98,9%). On the other hand, approximately 6% of workers in households from the highest income quintile spent more than 20% of their monthly household income per capita on public transport (5,6%).

According to Carruthers et al (2005), those who are having the most difficulty are working people on low incomes that have to travel to work. Their travel costs can form a significant part of their take-home pay and they have no choice but to pay it. They are also financially penalised by restricted hours of service operation, which means that they may sometimes have to take a taxi or walk.

Figure 41: Percentage of monthly household income per capita spent on public transport to work by geographic location
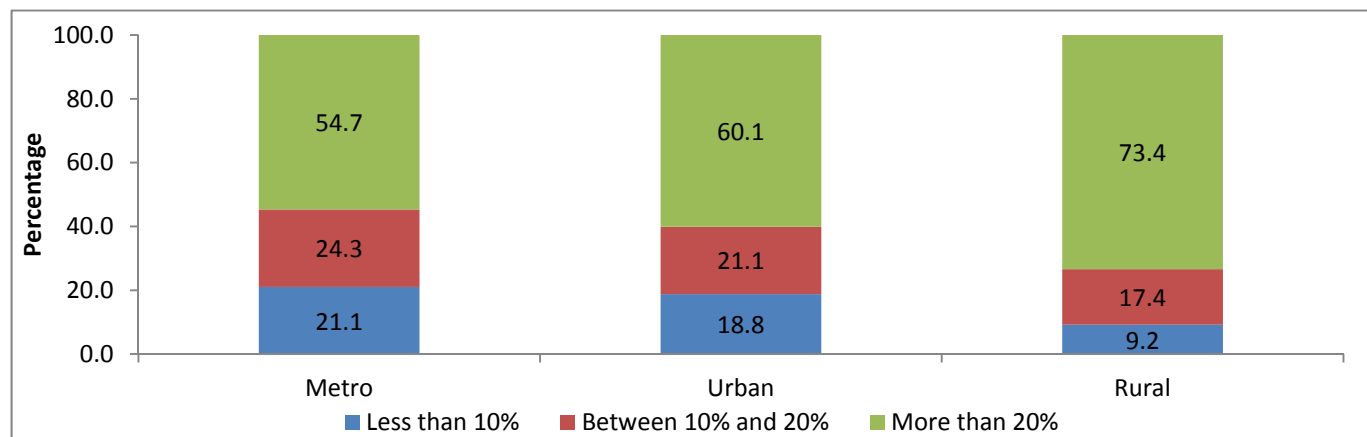
Source: NHTS 2013

There are stark differences between geographical locations. About 73,4% of rural workers come from households who spent more than 20% of their monthly household income per capita on public transport, as opposed to 60,1% in urban areas and 54,7% in metro areas. In contrast, less than ten per cent of rural workers come from households who spent less than 10% of their monthly household income per capita on public transport (9,2%), whilst as many as 21,1% in metros and 18,8% in urban area spent less than 10%.

Venter (2011) found that in many cases poorer households pay more (in absolute terms) for public transport trips than their richer counterparts do. Reasons for this discrepancy include the poor location of many low-income households in the urban periphery (where low demand and long travel distances push up fares), and a high dependence on informal transport modes with unsubsidised fares.

Figure 42: Percentage of monthly household income per capita spent on public transport to work by work sector
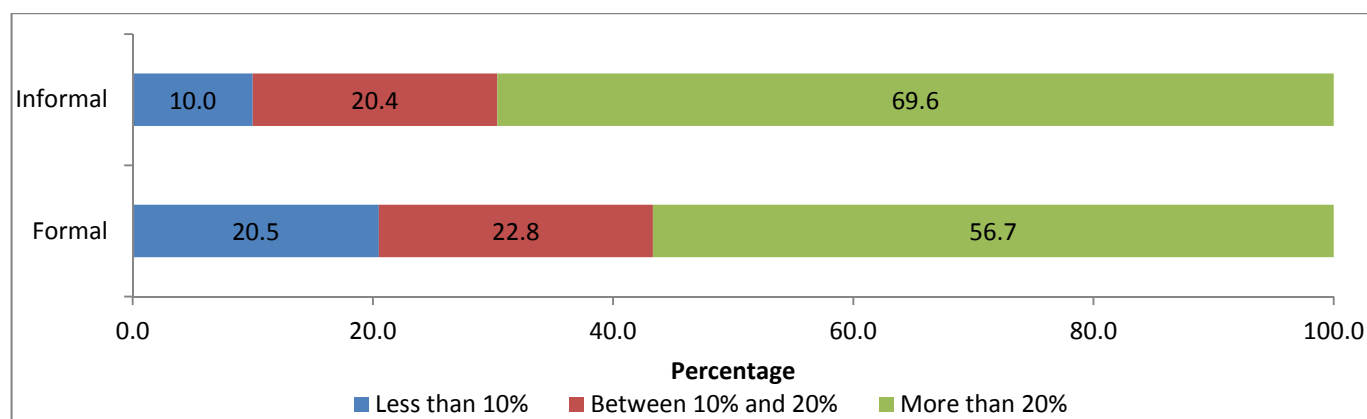
Source: NHTS 2013

Close to 70% of informal workers come from households who spent more than 20% of their monthly household income per capita on public transport (69,6%) as shown in Figure 42, whilst 56,7% of formal workers come from households who spent more than 20% of their monthly household income per capita on public transport.

Formal workers were more likely to come from households who spent less than 10% of their monthly household income per capita on public transport when compared to informal workers.

Figure 43: Percentage of workers spending more than 10 per cent of their monthly household income per capita on public transport
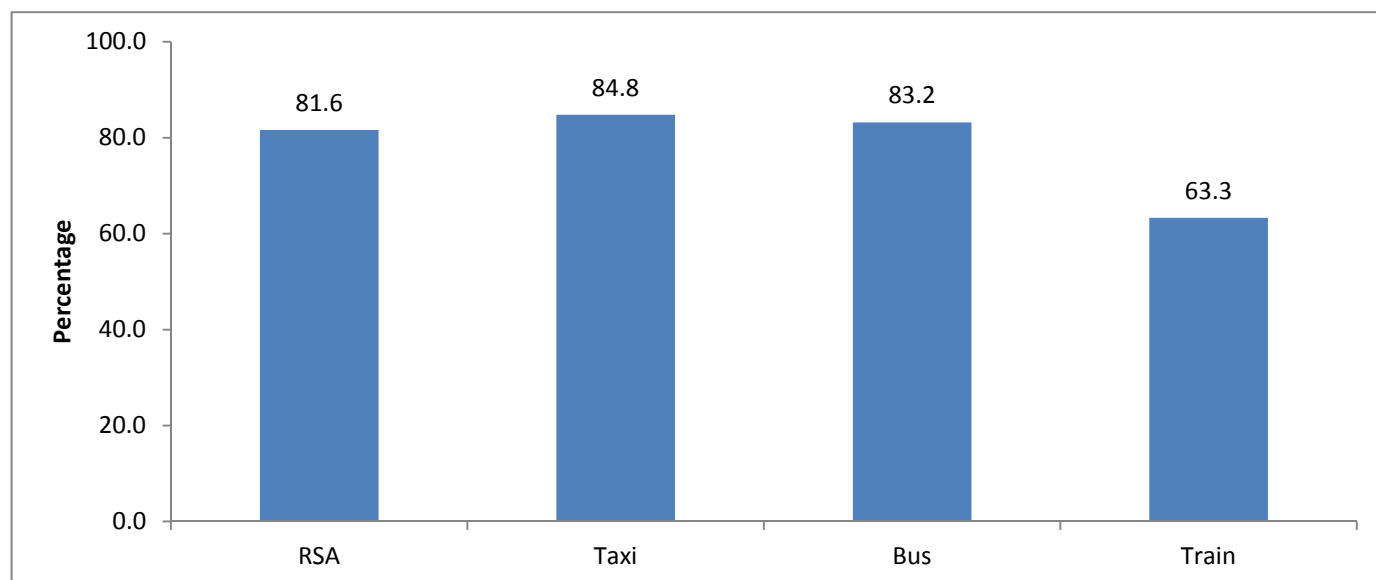
Source: NHTS 2013

The 2013 NHTS found that workers who use trains and buses needed more time than taxi users to reach their workplaces — total time travelled to the workplace by public transport were: Trains (74 minutes), buses (74 minutes) and taxis (50 minutes).

Figure 43 shows that the quickest public transport mode, which is taxis, had the highest proportion of users who spent more than 10% of their monthly household income per capita on public transport (84,8%), followed by bus (83,2%) and train users (63,3%).

7.5   Summary

This section was divided into three parts: the first part focused on households who used public transport, the second part provided a profile of learners who used public transport, and lastly we focused on workers who used public transport.

Profile of households who used public transport

Approximately 10,9 million households in South Africa used public transport as their main mode of travel. Across all geographic locations, taxis constituted the largest proportion as the mode of travel, followed by buses and trains.

Average per capita monthly household travel cost is higher for households from the highest income quintile (R404) compared to households from the lowest income quintile (R133). Furthermore, taxis appeared to be the most expensive mode of travel with an average per capita monthly cost of R254, followed by trains (R248) and buses (R231).

Households from the lowest income quintile spent a higher proportion of their income on public transport compared to households from the highest income quintile. More than two-thirds of households who fall in the lowest income quintile spent more than 20% of their monthly household income per capita on public transport (66,6%). Less than 3% of households from the highest income quintile spent more than 20 per cent of their monthly household income per capita (2,9%).

Profile of learners who used public transport

The results show that about 3,7 million learners used public transport as their main mode of travel. Across all geographic locations, taxis were the most commonly used mode of transport, followed by buses and trains.

Learners in households from the highest income quintile (R447) are more likely to spend more on their travel cost compared to learners in households from the lowest income quintile (R351). Trains appeared to be the most expensive mode of travel with an average monthly travel cost of R422, followed by travelling by bus (R393) and taxi (R375).

Most learners in households from the lowest income quintile spent more than 20% of their monthly household income per capita on public transport (98,2), followed by quintile 2 (88,7%) and quintile 3 (62,9%).

Profile of workers who used public transport

Approximately 5,4 million workers used public transport as their mode of travel. Across all geographic locations, taxis were the most often used mode of transport, followed by buses and trains.

Workers in households from the highest income quintile (R582) are more likely to spend more on their travel costs compared to workers in households from the lowest income quintile (R491). Taxis appeared to be the most expensive mode of travel with an average per capita monthly cost of R561, followed by travelling by buses (R502) and trains (R402).

It is evident from the results that workers in households from the lowest income quintile were more likely to spend more than 20% of their monthly household income per capita on public transport (98,9%). Approximately 6% of workers in households from the highest income quintile were likely to spend more than 20% of their monthly household income per capita on public transport (5,6%).

8.   Policy recommendations

The following recommendations can be made following this report.

As discussed in the report, there are many aspects that could contribute to surveys having households/cases with missing income information. It is important to understand the effect of excluding these cases on the analyses. The findings in this report suggest that including these cases in the analyses using the imputation method discussed in the report, improves the household income estimates for NHTS. In addition to this, it is also equally important to reduce the number of cases with missing income information: a need to invest in training of survey officers, shorten the length and complexity of the questionnaire to reduce respondent fatigue, and if possible use permanent survey officers for data collection — they are more experienced and willing to take risks in terms of probing for income information.

The analysis in this report further shows that households from the lowest income quintile spent more on public transport compared to households from the highest income quintile. In addition, the highest proportions of households who spent more than 20% of their monthly household income per capita on public transport were living in rural areas. This calls for the Department of Transport to foster a partnership with different key departments and other relevant stakeholders to integrate public transport and land-use planning to achieve change in the spatial distribution and accessibility of public transport.

Findings from the 2010/11 IES clearly indicate that transport expenditure ought not to be studied in isolation as there are relationships in household expenditure across expenditure groups. For that reason, it is absolutely imperative to adopt a holistic approach that considers public transport expenditures in the context of all other household expenditure groups. This implies that appropriate questions are needed to measure household expenditure on public transport modes on the 2010/11 IES questionnaire. Furthermore, transport as an expenditure group should be distinguished from a communication expenditure group.

Having said that, this does not suggest that the NHTS should not measure travel expenditure. In fact, both surveys should measure travel expenditure as they provide different but important perspective on household expenditure. For example, with NHTS, it will provide a better understanding of household expenditure in relation to travel patterns or travel time. IES will provide a deeper understanding of household expenditure on public transport in relation to other household expenditure groups. In addition, it is easy to measure the trade-offs done between expenditure groups, especially for poor households. Therefore, both surveys are important in shaping the discussion and direction on public transport subsidies in the country.

There is a need to reconsider the current public transport affordability measure, i.e. the benchmark set by the 1996 White Paper on National Transport Policy. As Venter and Behrens (2005) correctly argue, transport expenditure must be monotonic with respect to some measure of well-being. In other words, as the proportional expenditure on transport increases, the well-being of customers must decrease (or must remain constant). Only if this condition is met, can one confidently say that by moving some consumers from above the benchmark to below the benchmark, are we improving their well-being. The current public transport affordability measure provides a partial view of household well-being.

It is not about achieving the set benchmark, it is about improving the well-being of South Africans. Having access to reliable, sustainable and affordable public transport provides an opportunity for South Africans, especially those residing in rural areas or those living in poor households, to access essential social and other public services i.e. health, education and employment. In conclusion, there is a need to develop a public transport affordability measure that will link with poverty, deprivation and other social and economical measures.

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10. Annexure

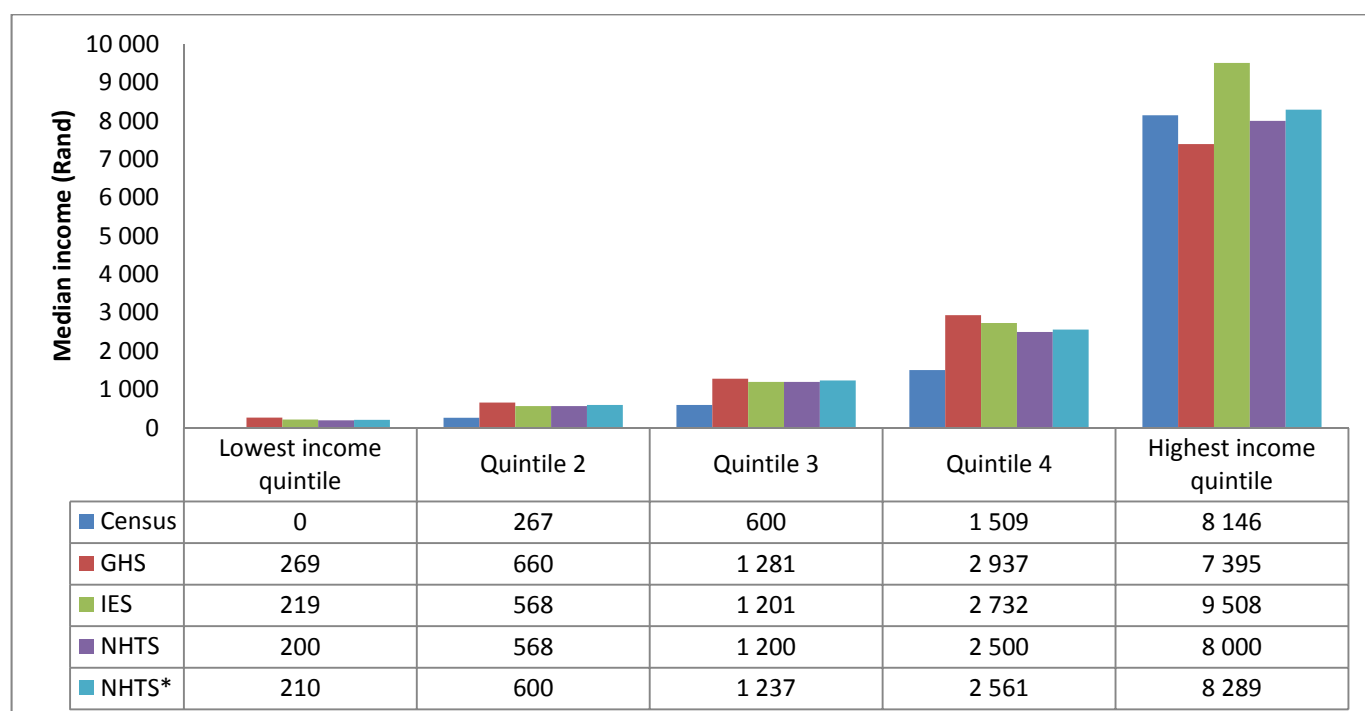## Annexure A: CPI headline index numbers (DEC 2002 = 100)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average
1960	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5
1961	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5
1962	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5
1963	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5
1964	1,5	1,5	1,5	1,6	1,6	1,6	1,6	1,6	1,6	1,6	1,6	1,6	1,6
1965	1,6	1,6	1,6	1,6	1,6	1,6	1,6	1,6	1,6	1,6	1,6	1,6	1,6
1966	1,6	1,6	1,7	1,7	1,7	1,7	1,7	1,7	1,7	1,7	1,7	1,7	1,7
1967	1,7	1,7	1,7	1,7	1,7	1,7	1,7	1,7	1,7	1,7	1,7	1,7	1,7
1968	1,7	1,7	1,7	1,7	1,7	1,7	1,8	1,8	1,8	1,8	1,8	1,8	1,8
1969	1,8	1,8	1,8	1,8	1,8	1,8	1,8	1,8	1,8	1,9	1,9	1,9	1,8
1970	1,9	1,9	1,9	1,9	1,9	1,9	1,9	2,0	2,0	2,0	2,0	2,0	1,9
1971	2,0	2,0	2,0	2,0	2,0	2,0	2,0	2,1	2,1	2,1	2,1	2,1	2,0
1972	2,1	2,1	2,1	2,1	2,1	2,1	2,2	2,2	2,2	2,3	2,3	2,3	2,2
1973	2,3	2,3	2,3	2,4	2,4	2,4	2,4	2,4	2,4	2,5	2,5	2,5	2,4
1974	2,5	2,5	2,6	2,6	2,6	2,7	2,7	2,7	2,8	2,8	2,8	2,8	2,7
1975	2,9	2,9	2,9	3,0	3,0	3,0	3,1	3,1	3,1	3,1	3,2	3,2	3,0
1976	3,2	3,2	3,3	3,3	3,3	3,4	3,4	3,5	3,5	3,5	3,5	3,5	3,4
1977	3,6	3,6	3,6	3,7	3,7	3,7	3,7	3,8	3,8	3,8	3,8	3,9	3,7
1978	3,9	3,9	3,9	4,0	4,0	4,0	4,2	4,2	4,3	4,3	4,3	4,3	4,1
1979	4,4	4,4	4,5	4,5	4,5	4,6	4,8	4,8	4,9	4,9	4,9	5,0	4,7
1980	5,0	5,1	5,1	5,1	5,2	5,3	5,4	5,4	5,5	5,7	5,7	5,8	5,4
1981	5,8	5,9	5,9	5,9	6,0	6,1	6,2	6,3	6,5	6,5	6,6	6,6	6,2
1982	6,6	6,7	6,9	6,9	7,0	7,0	7,1	7,2	7,3	7,4	7,5	7,5	7,1
1983	7,5	7,7	7,7	7,8	7,9	7,9	8,0	8,1	8,1	8,2	8,3	8,3	8,0
1984	8,4	8,4	8,5	8,7	8,8	8,8	8,9	9,0	9,1	9,2	9,3	9,4	8,9
1985	9,5	9,8	9,8	10,1	10,2	10,3	10,3	10,5	10,6	10,7	10,9	11,1	10,3
1986	11,4	11,5	11,7	11,9	11,9	12,1	12,3	12,5	12,7	12,9	13,0	13,1	12,3
1987	13,3	13,5	13,7	13,9	14,0	14,1	14,2	14,4	14,7	14,8	15,0	15,1	14,2
1988	15,2	15,2	15,5	15,6	15,8	15,9	16,1	16,3	16,5	16,7	16,8	17,0	16,1
1989	17,2	17,4	17,7	17,9	18,2	18,3	18,5	18,8	18,9	19,1	19,3	19,6	18,4
1990	19,8	20,0	20,3	20,4	20,7	20,8	21,0	21,3	21,6	21,8	22,3	22,4	21,0
1991	22,7	23,0	23,1	23,5	23,8	24,0	24,3	24,6	25,0	25,4	25,7	26,0	24,3
1992	26,4	26,6	26,8	27,2	27,3	27,6	27,9	28,2	28,3	28,4	28,6	28,6	27,7
1993	28,9	29,0	29,4	30,1	30,2	30,4	30,6	30,8	30,9	31,1	31,2	31,3	30,3
1994	31,7	31,8	32,0	32,2	32,4	32,6	33,1	33,6	34,0	34,2	34,3	34,3	33,0
1995	34,8	35,0	35,4	35,8	35,9	35,9	36,1	36,2	36,2	36,3	36,5	36,7	35,9
1996	37,2	37,3	37,5	37,8	38,0	38,4	38,7	38,8	39,2	39,6	39,8	40,2	38,5
1997	40,6	40,9	41,1	41,5	41,7	41,8	42,2	42,2	42,5	42,6	42,5	42,6	41,9
1998	43,0	43,1	43,4	43,6	43,8	44,0	45,0	45,5	46,3	46,5	46,5	46,5	44,8
1999	46,8	46,8	46,8	46,9	46,9	47,1	47,1	47,0	47,1	47,3	47,4	47,5	47,1
2000	48,1	47,9	48,4	49,0	49,3	49,6	50,0	50,2	50,4	50,6	50,7	50,8	49,6
2001	51,5	51,6	51,9	52,2	52,4	52,6	52,6	52,5	52,6	52,6	52,9	53,1	52,4
2002	54,1	54,6	55,2	56,0	56,4	56,8	57,7	57,9	58,6	59,4	59,7	59,7	57,2
2003	60,3	60,2	60,9	61,0	60,9	60,7	60,7	60,9	60,7	60,3	59,9	59,9	60,5
2004	60,4	60,7	61,1	61,2	61,2	61,4	61,6	61,6	61,6	61,8	62,1	62,0	61,4
2005	62,2	62,3	62,9	63,2	63,2	63,1	63,7	63,9	64,2	64,2	64,2	64,2	63,4
2006	64,6	64,7	65,0	65,4	65,7	66,2	66,9	67,4	67,6	67,7	67,6	68,0	66,4
2007	68,5	68,4	69,0	69,9	70,3	70,9	71,6	71,9	72,5	73,1	73,4	74,0	71,1
2008	74,8	75,1	76,3	77,7	78,5	79,6	81,2	81,8	81,9	81,9	82,0	81,1	79,3
2009²	81,4	82,3	83,4	83,8	84,1	84,5	85,4	85,6	86,0	86,0	86,0	86,2	84,6
2010	86,4	87,0	87,7	87,8	88,0	88,0	88,6	88,6	88,7	88,9	89,0	89,2	88,2
2011	89,6	90,2	91,3	91,6	92,0	92,4	93,2	93,4	93,8	94,2	94,5	94,6	92,6
2012	95,2	95,7	96,8	97,2	97,2	97,5	97,8	98,0	98,9	99,5	99,8	100,0	97,8
2013	100,3	101,3	102,5	102,9	102,6	102,9	104,0	104,3	104,8	105,0	105,1	105,4	103,4
2014	106,1	107,3	108,7	109,2	109,4	109,7	110,6	111,0	111,0	111,2	111,2	111,0	109,7
2015	110,8	111,5	113,1	114,1	114,4	114,9							

¹ Primary urban areas up to and including December 2008. All urban areas from January 2009. The series were linked so as to provide a continuous index.

² Substantial changes were made to the compilation of the CPI in January 2009. Documentation is available on the Stats SA website

Effects of excluding households who did not report their monthly household income information

Annexure B: Distribution of median per capita monthly household income by quintiles

	Lowest income quintile	Quintile 2	Quintile 3	Quintile 4	Highest income quintile
■ Census	0	267	600	1 509	8 146
■ GHS	269	660	1 281	2 937	7 395
■ IES	219	568	1 201	2 732	9 508
■ NHTS	200	568	1 200	2 500	8 000
■ NHTS*	210	600	1 237	2 561	8 289

Source: Census 2011, GHS 2013, IES 2011/2011 and NHTS 2013

Main mode of travel at glance

Annexure C: Main modes of transport used by households

Household income quintile		Main mode							Total
		Public Transport			Private Transport		Walking all the way	Other	
		Train	Bus	Taxi	Car driver	Car Passenger			
Lowest income quintile	Number	154	648	1713	38	87	98	13	**2753**
	Percent	5,6	23,6	62,2	1,4	3,2	3,6	0,5	**100,0**
Quintile 2	Number	193	621	1688	50	140	62	14	**2768**
	Percent	7,0	22,5	61,0	1,8	5,1	2,2	0,5	**100,0**
Quintile 3	Number	254	532	1612	109	200	55	13	**2775**
	Percent	9,2	19,2	58,1	3,9	7,2	2,0	0,5	**100,0**
Quintile 4	Number	312	490	1370	273	329	30	9	**2813**
	Percent	11,1	17,4	48,7	9,7	11,7	1,1	0,3	**100,0**
Highest income quintile	Number	134	237	692	903	745	10	8	**2729**
	Percent	4,9	8,7	25,4	33,1	27,3	0,4	0,3	**100,0**
Total	**Number**	**1048**	**2528**	**7075**	**1373**	**1500**	**256**	**58**	**13838**
	Percent	**7,6**	**18,3**	**51,1**	**9,9**	**10,8**	**1,9**	**0,4**	**100,0**

Source: NHTS 2013

Annexure C1: Main modes used to travel to educational institutions by income quintiles

Household income quintile	Statistics ('000)	Main mode							Total
		Public transport			Private transport		Walking all the way	Other	
		Train	Bus	Taxi	Car driver	Car passenger			
Lowest income quintile	Number	30	212	479	14	184	4487	16	**5422**
	Per cent	0,6	3,9	8,8	0,3	3,4	82,8	0,3	**100,0**
Quintile 2	Number	41	242	544	10	235	3482	31	**4585**
	Per cent	0,9	5,3	11,9	0,2	5,1	75,9	0,7	**100,0**
Quintile 3	Number	45	202	578	24	280	1725	27	**2881**
	Per cent	1,6	7,0	20,1	0,8	9,7	59,9	0,9	**100,0**
Quintile 4	Number	52	155	597	54	540	932	32	**2362**
	Per cent	2,2	6,6	25,3	2,3	22,9	39,5	1,3	**100,0**
Highest income quintile	Number	27	84	330	174	977	244	36	**1872**
	Per cent	1,4	4,5	17,6	9,3	52,2	13,1	1,9	**100,0**
Total	**Number**	**195**	**895**	**2528**	**277**	**2216**	**10870**	**142**	**17122**
	Per cent	**1,1**	**5,2**	**14,8**	**1,6**	**12,9**	**63,5**	**0,8**	**100,0**

Source: NHTS 2013

Annexure C2: Main modes used to travel to work by income quintiles

Household income quintile		Main mode							Total
		Public Transport			Private Transport		Walking all the way	Other	
		Train	Bus	Taxi	Car driver	Car Passenger			
Lowest income quintile	Number	25	53	183	58	40	359	18	**736**
	Percent	3,4	7,2	24,9	7,8	5,4	48,8	2,5	**100,0**
Quintile 2	Number	102	206	607	199	150	753	43	**2060**
	Percent	5,0	10,0	29,5	9,7	7,3	36,6	2,1	**100,0**
Quintile 3	Number	192	303	1007	390	227	829	45	**2993**
	Percent	6,4	10,1	33,6	13,0	7,6	27,7	1,5	**100,0**
Quintile 4	Number	270	337	1314	927	309	709	45	**3910**
	Percent	6,9	8,6	33,6	23,7	7,9	18,1	1,2	**100,0**
Highest income quintile	Number	112	162	559	2701	334	275	27	**4171**
	Percent	2,7	3,9	13,4	64,8	8,0	6,6	0,7	**100,0**
RSA	**Number**	**700**	**1061**	**3670**	**4275**	**1060**	**2925**	**179**	**13870**
	Percent	**5,1**	**7,7**	**26,5**	**30,8**	**7,6**	**21,1**	**1,3**	**100,0**

Source: NHTS 2013

Public transport at a glance

Profile of households who used public transport

Annexure D: Percentage of households who used public transport by quintiles

Mode of travel	Statistics (numbers in thousands)	Lowest income quintile	Quintile 2	Quintile 3	Quintile 4	Highest income quintile	RSA
		Household income quintile					
Train	Number	154	193	254	312	134	1 048
	Per cent	6,1	7,7	10,6	14,4	12,6	**9,8**
Bus	Number	648	621	532	490	237	**2 528**
	Per cent	25,8	24,8	22,2	22,5	22,3	**23,7**
Taxi	Number	1 713	1 688	1 612	1 370	692	**7 075**
	Per cent	68,1	67,4	67,2	63,1	65,1	**66,4**
Total	**Number**	**2 516**	**2 502**	**2 398**	**2 172**	**1 063**	**10 652**
	Per cent	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**

Source: NHTS 2013

Annexure D1: Average per capita monthly household income of households who used public transport by quintiles
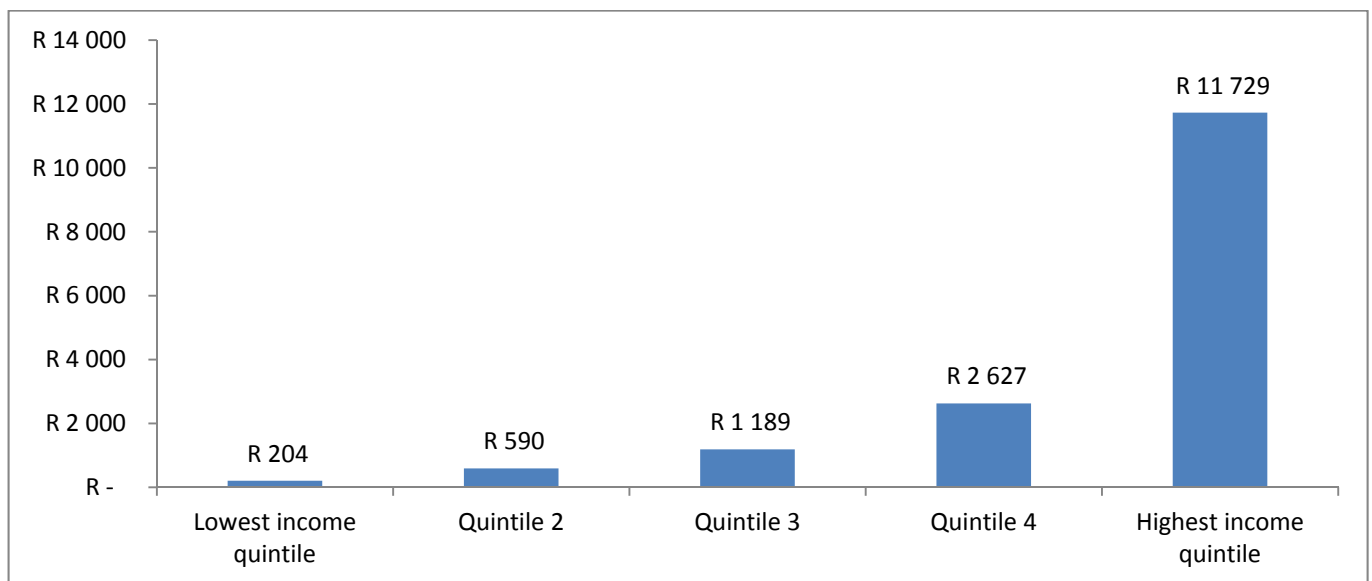
Source: NHTS 2013

Annexure D2: Average per capita monthly household income of households who used public transport by type of public transport modes
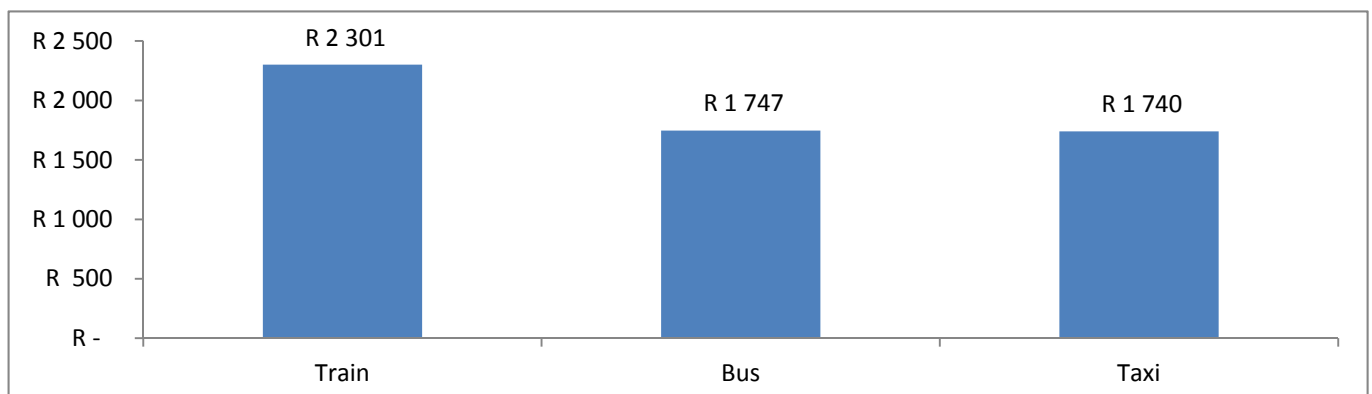
Cost of commuting public transport for households

Annexure D3: Average per capita monthly household travel cost of households who used public transport by quintile
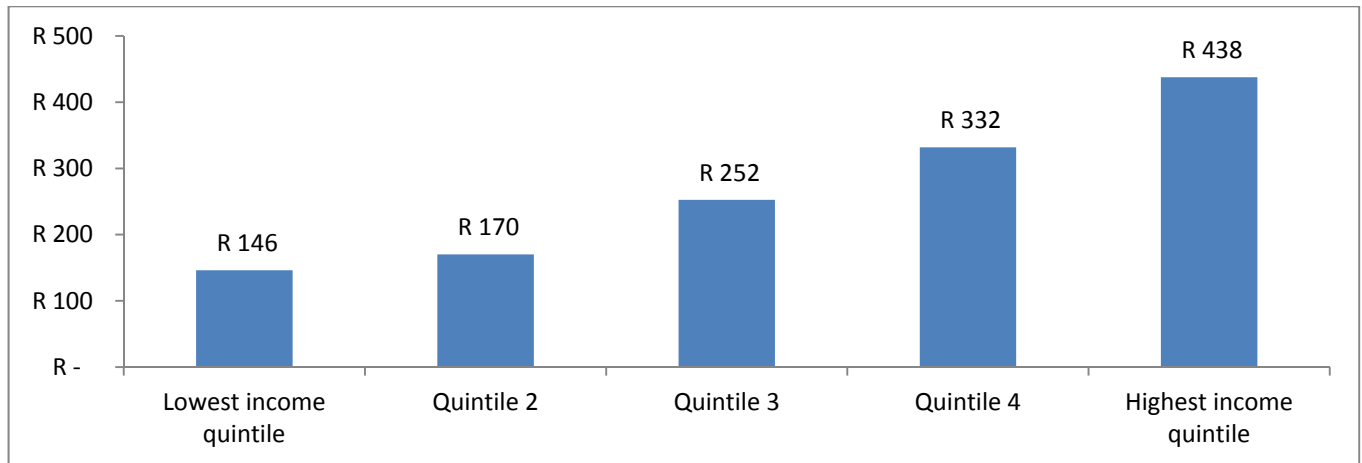
Annexure D4: Median per capita monthly household travel cost of households who used public transport by quintile
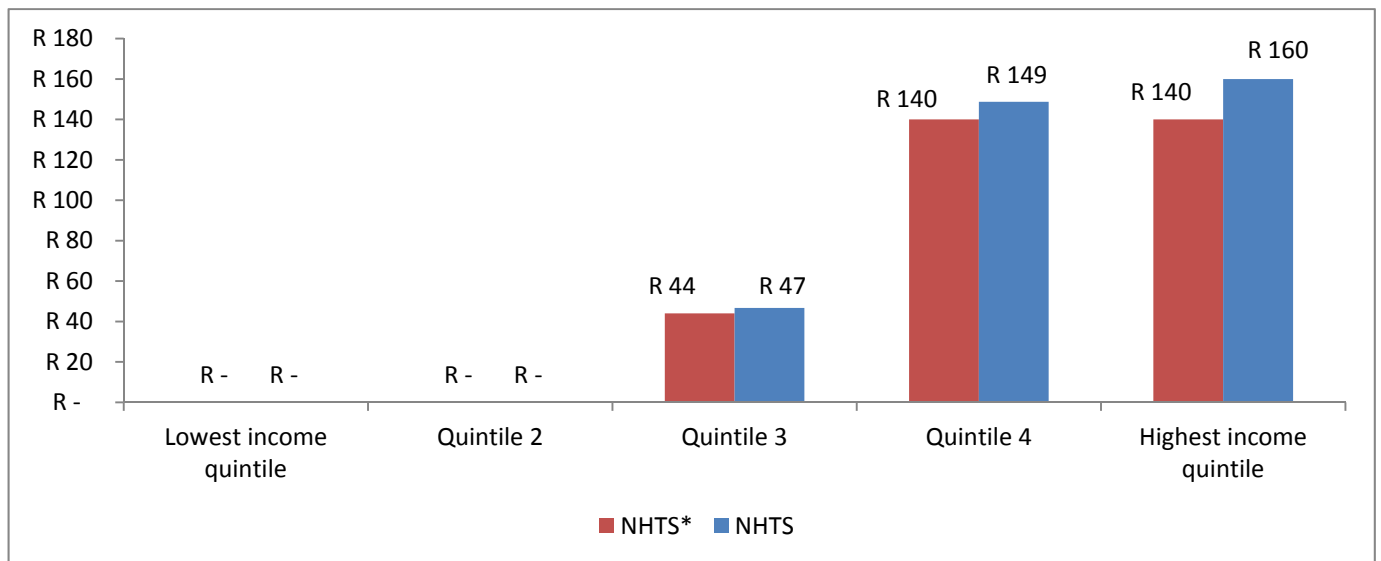
Annexure D5: Average per capita monthly household travel cost of households who used public transport by public transport modes
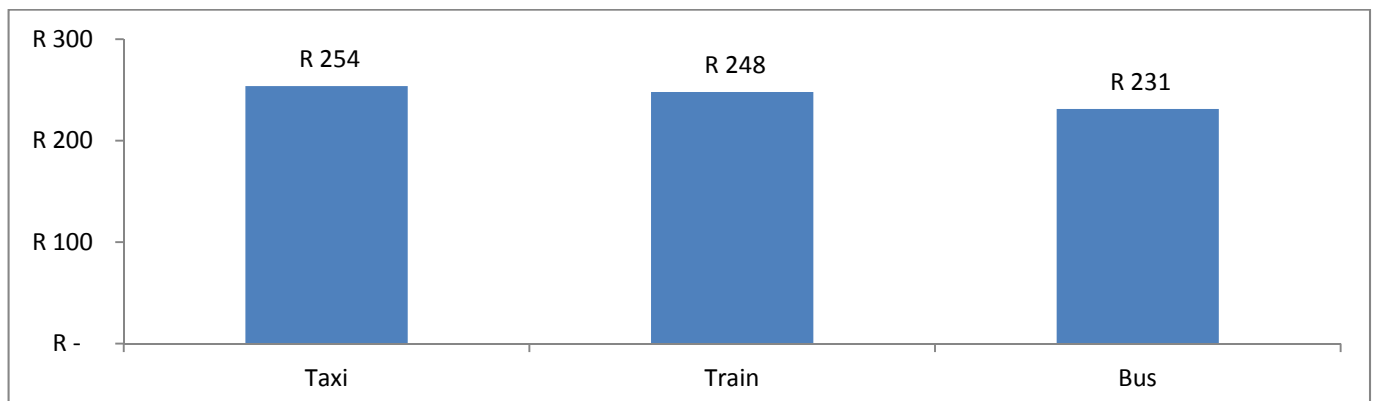
Source: NHTS 2013

Affordability of public transport for households

Annexure D6: Distribution of monthly household income per capita spent on public transport

Province	Statistics (numbers in thousands)	Monthly household income per capita spent on PT			Total
		Less than 10%	Between 10% and 20%	More than 20%	
Western Cape	Number	327	133	116	**576**
	Per cent	56,7	23,1	20,2	**100,0**
Eastern Cape	Number	174	142	124	**440**
	Per cent	39,5	32,2	28,2	**100,0**
Northern Cape	Number	31	12	9	**52**
	Per cent	59,0	22,8	18,3	**100,0**
Free State	Number	108	67	75	**250**
	Per cent	43,3	26,7	30,0	**100,0**
KwaZulu-Natal	Number	396	283	321	**1 001**
	Per cent	39,6	28,3	32,1	**100,0**
North West	Number	148	111	93	**352**
	Per cent	42,2	31,5	26,3	**100,0**
Gauteng	Number	662	510	567	**1 739**
	Per cent	38,1	29,3	32,6	**100,0**
Mpumalanga	Number	170	131	96	**397**
	Per cent	42,9	32,9	24,2	**100,0**
Limpopo	Number	184	94	130	**408**
	Per cent	45,1	23,0	31,8	**100,0**
RSA	**Number**	**2 200**	**1 483**	**1 532**	**5 216**
	Per cent	**42,2**	**28,4**	**29,4**	**100,0**
Monthly per capita household income					
Up to R500	Number	3	3	99	**105**
	Per cent	1,4	1,5	45,7	**48,6**
R501-R1 000	Number	10	25	182	**217**
	Per cent	0,7	1,8	13,2	**15,7**
R1 001-R3 000	Number	269	451	665	**1 384**
	Per cent	16,9	28,4	41,8	**87,1**
R3 001-R6 000	Number	631	560	398	**1 589**
	Per cent	32,9	29,2	20,7	**82,8**
>R6 000	Number	1 287	444	188	**1 920**
	Per cent	24,7	8,5	3,6	**36,8**

Source: NHTS 2013
Note: PT = public transport

Annexure D7: Percentage of monthly household income per capita spent on public transport
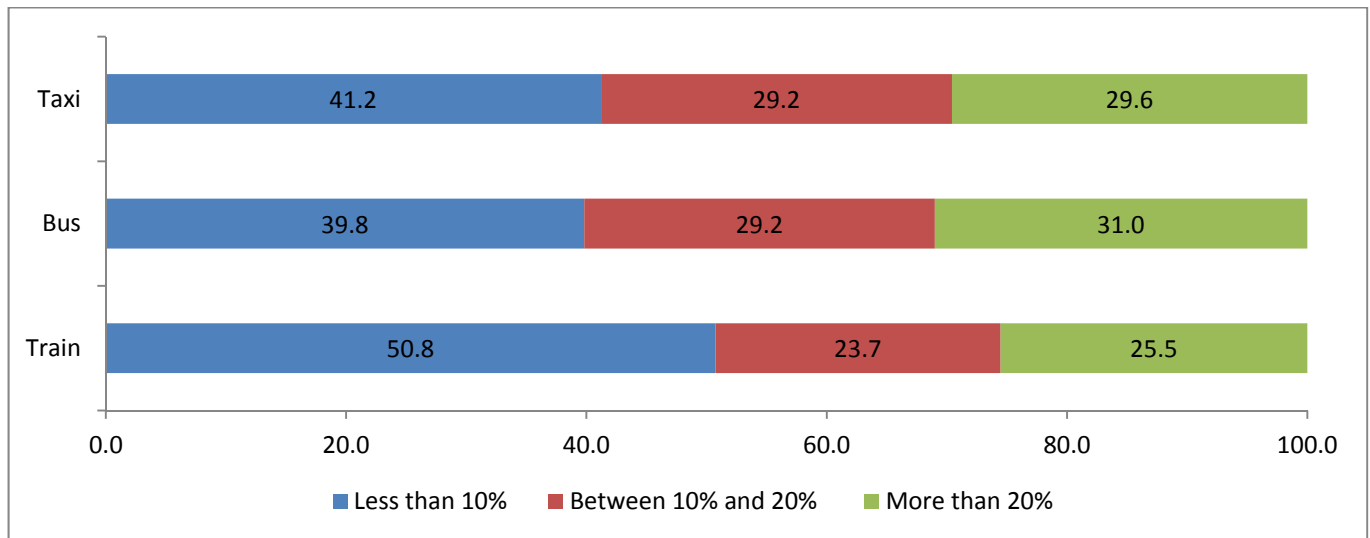
Source: NHTS 2013

Annexure D8: Percentage of monthly household income per capita spent on public transport by quintile
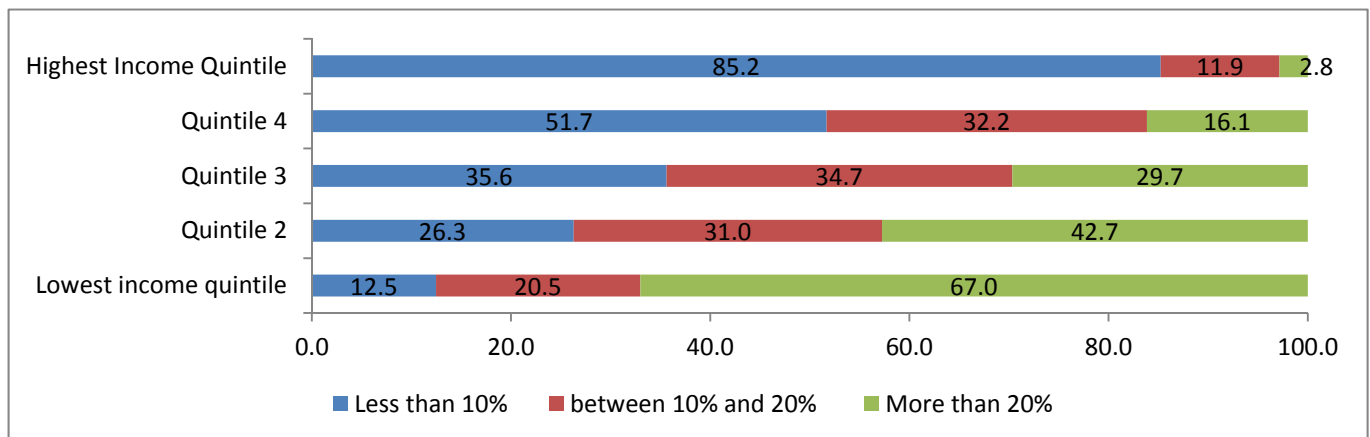
Source: NHTS 2013
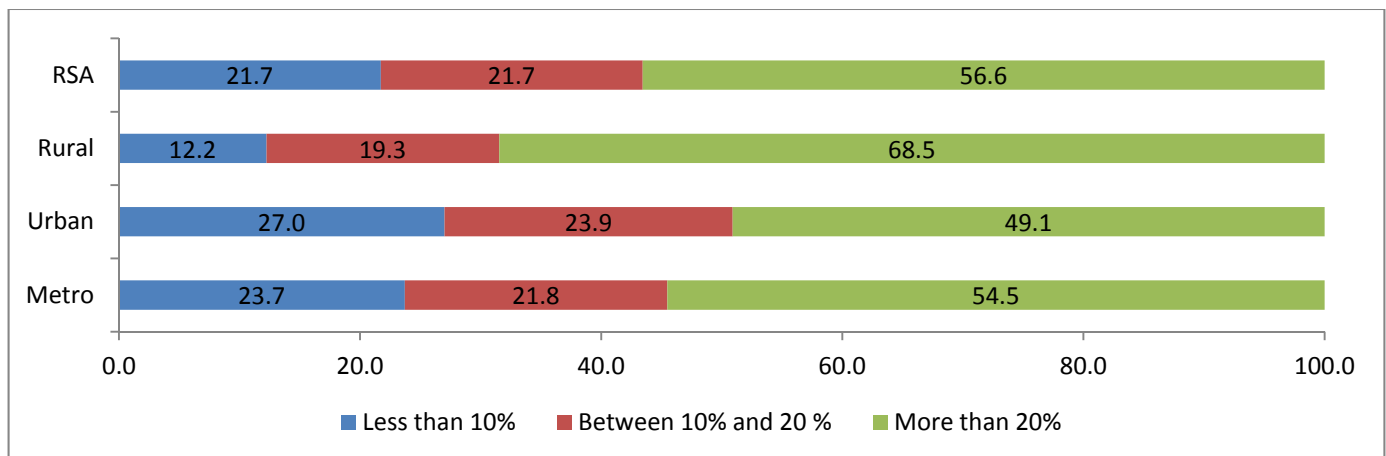Percentages excluded households who reported zero income value.

Annexure D9: Percentage of monthly household income per capita spent on public transport by geographic location
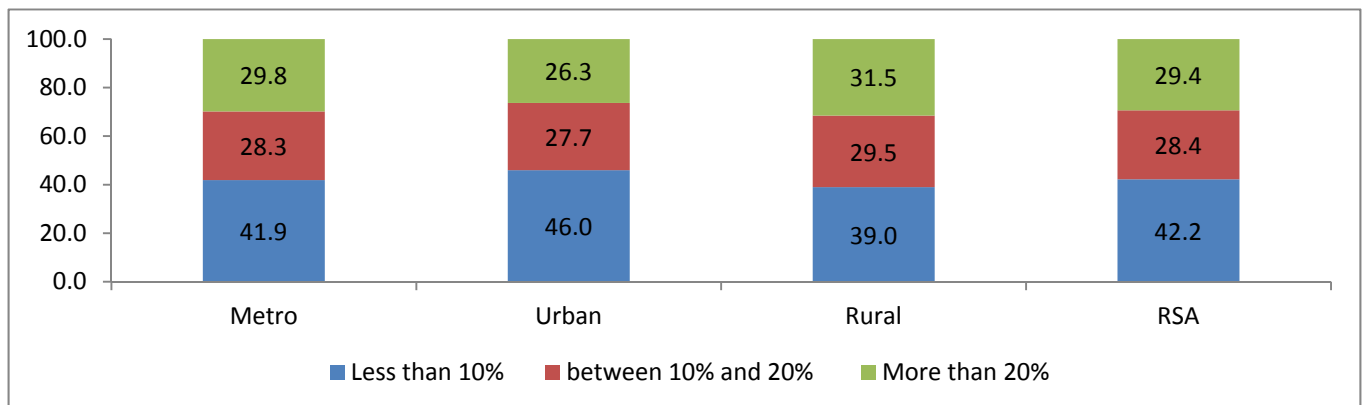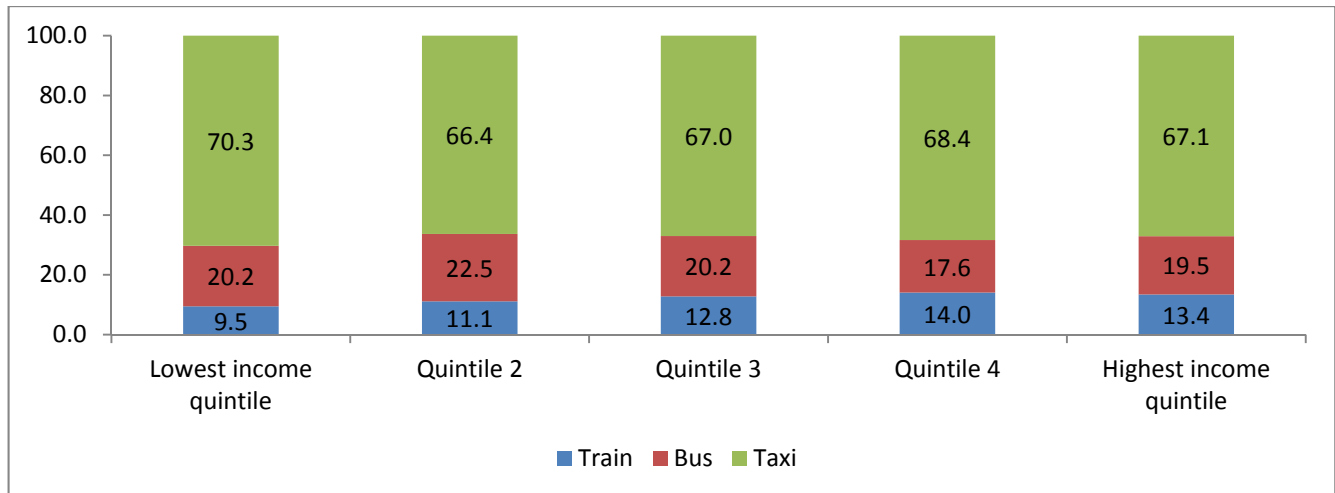

Source: NHTS 2013

Annexure D10: Households spending more than 10 per cent of monthly household income per capita on public transport
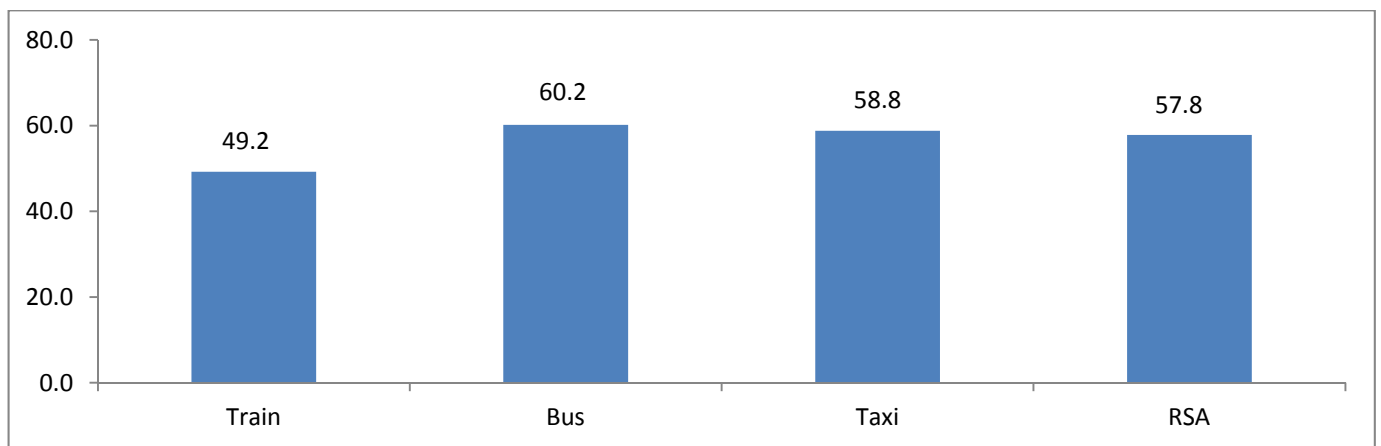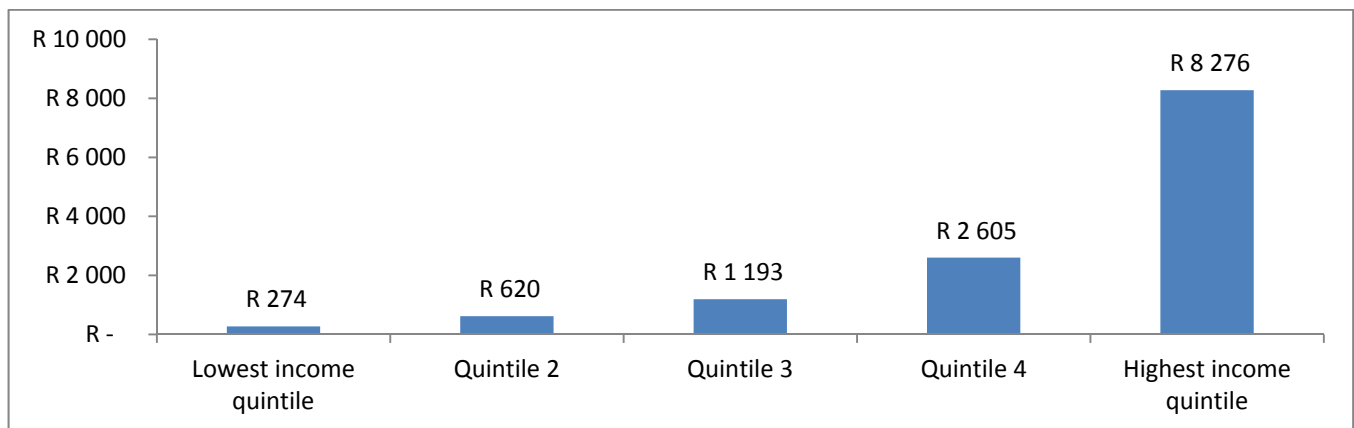

Source: NHTS 2013

Profile of learners who used public transport

Annexure E: Percentage of learners who used public transport by quintiles
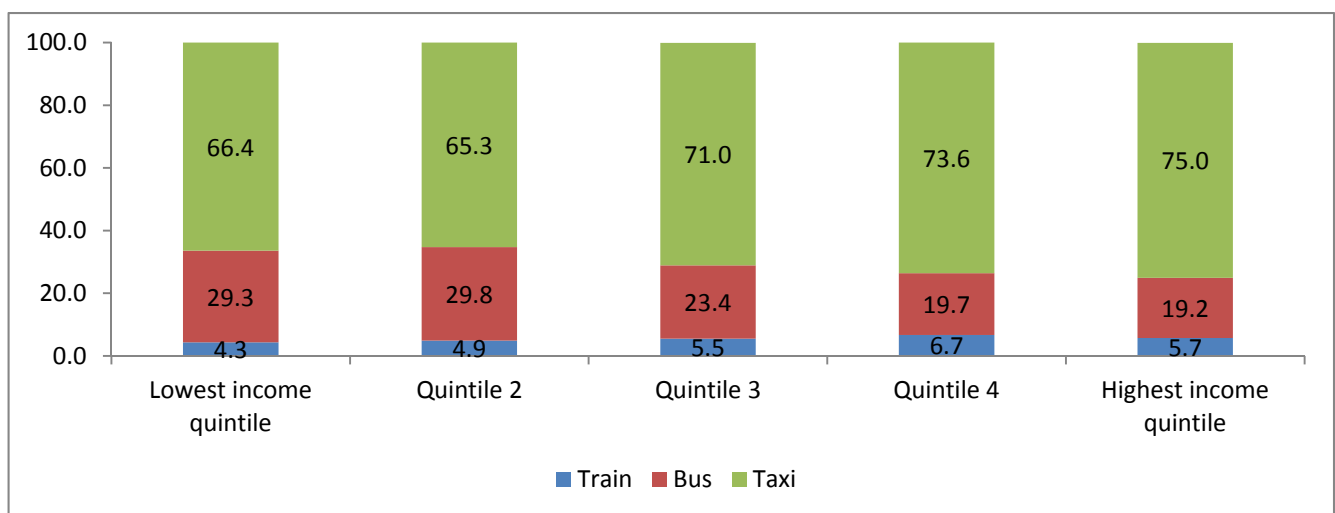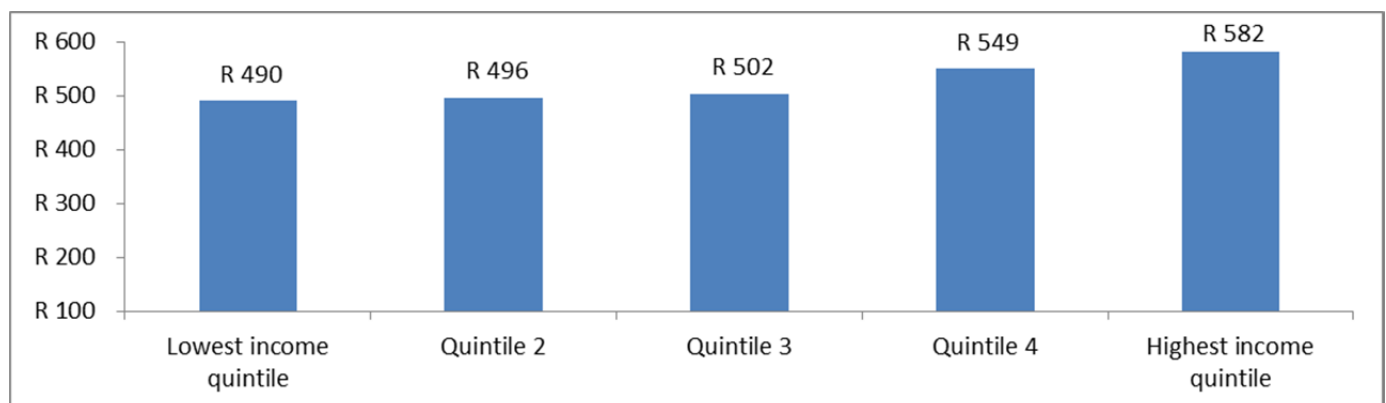

Source: NHTS 2013

Annexure E1: Average per capita monthly household income for learners who used public transport by quintiles
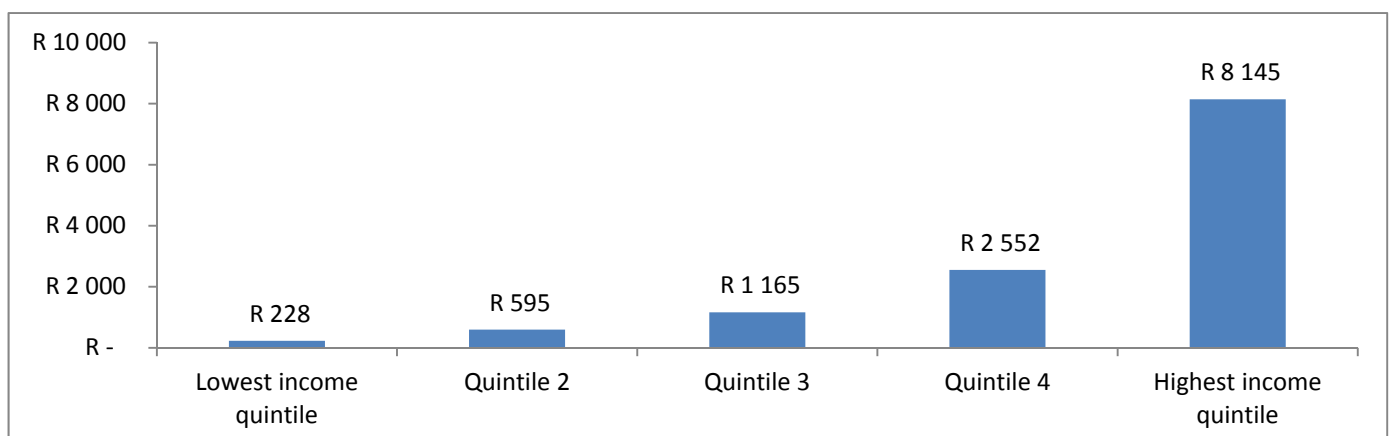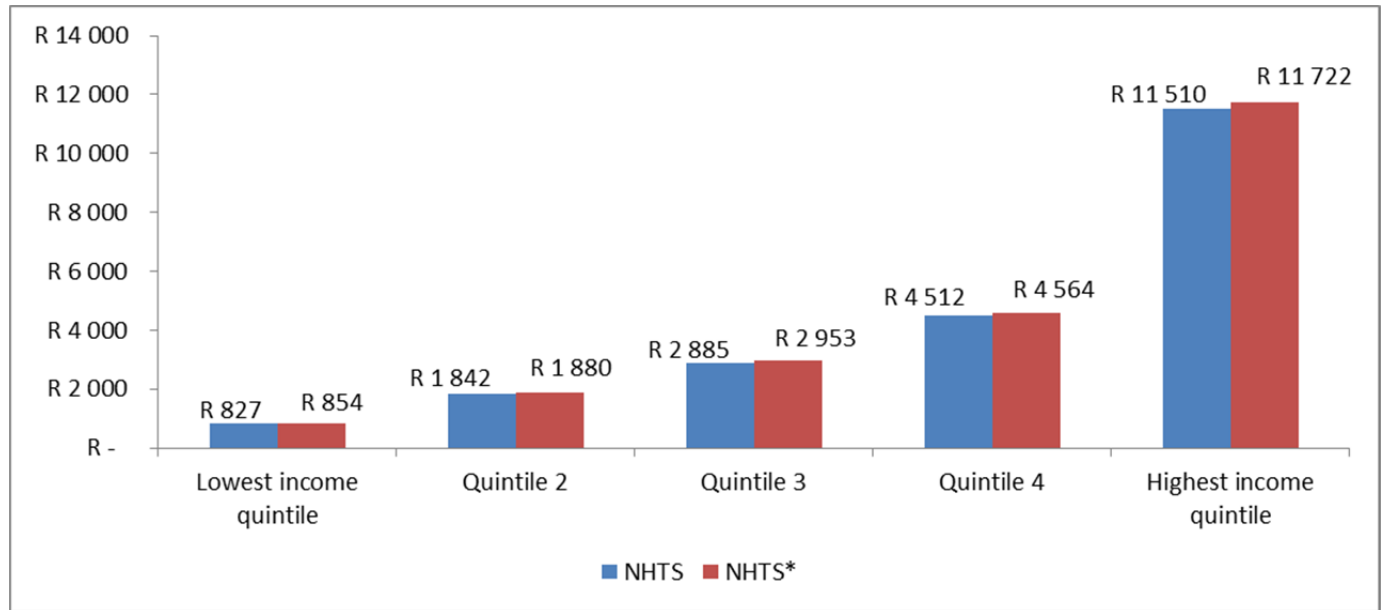

Source: NHTS 2013

Annexure E2: Average per capita monthly household income for learners who used public transport by public transport modes
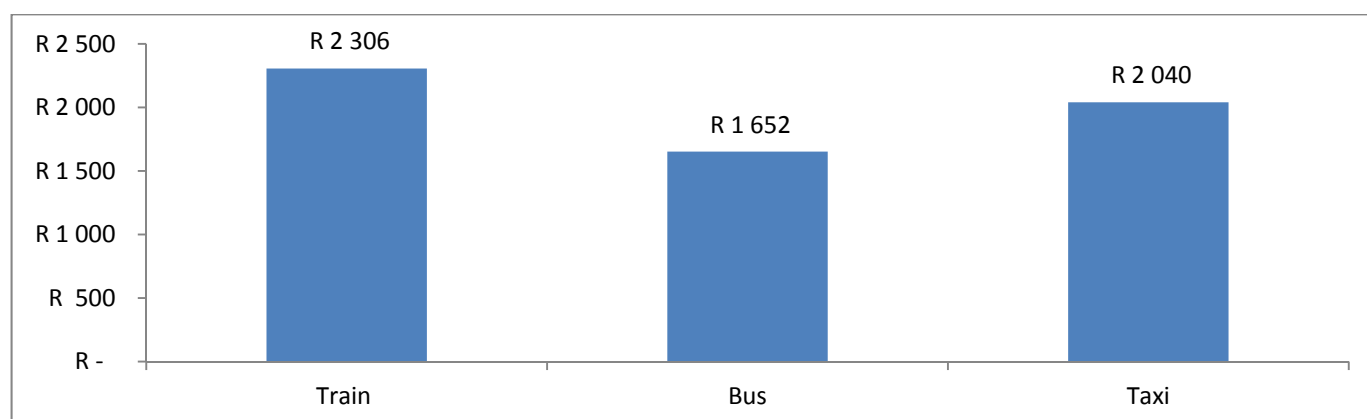
Source: NHTS 2013

Cost of commuting public transport for learners

Annexure E3: Average per capita monthly household travel cost for learners who used public transport by quintile
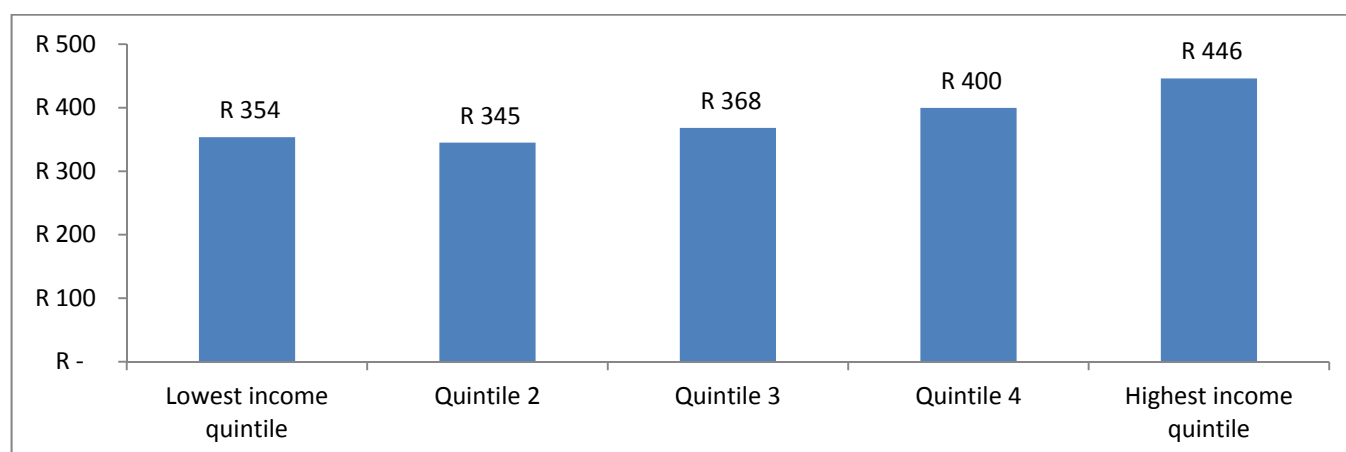
Source: NHTS 2013

Affordability of public transport for learners

Annexure E4: Percentage of monthly household income per capita spent on public transport to educational institutions
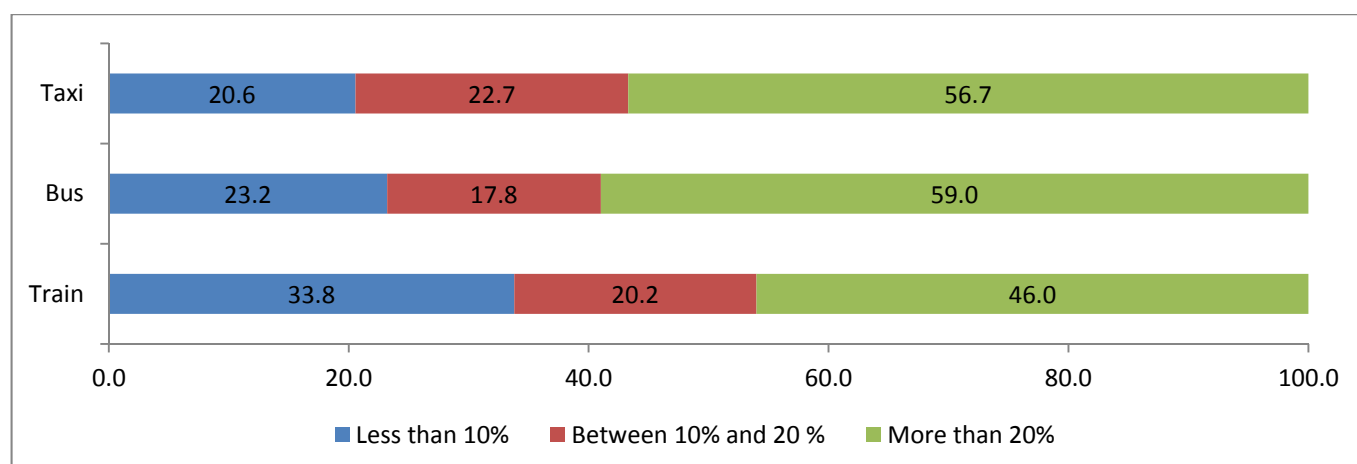
Source: NHTS 2013

Annexure E5: Percentage of monthly household income per capita spent on public transport to educational institutions by quintile

	Less than 10%	Between 10% and 20%	More than 20%
Highest income quintile	84.9	12.3	2.8
Quintile 4	34.2	44.4	21.4
Quintile 3	6.0	31.1	62.9
Quintile 2	2.0	9.2	88.8
Lowest income quintile	0.8	1.0	98.2
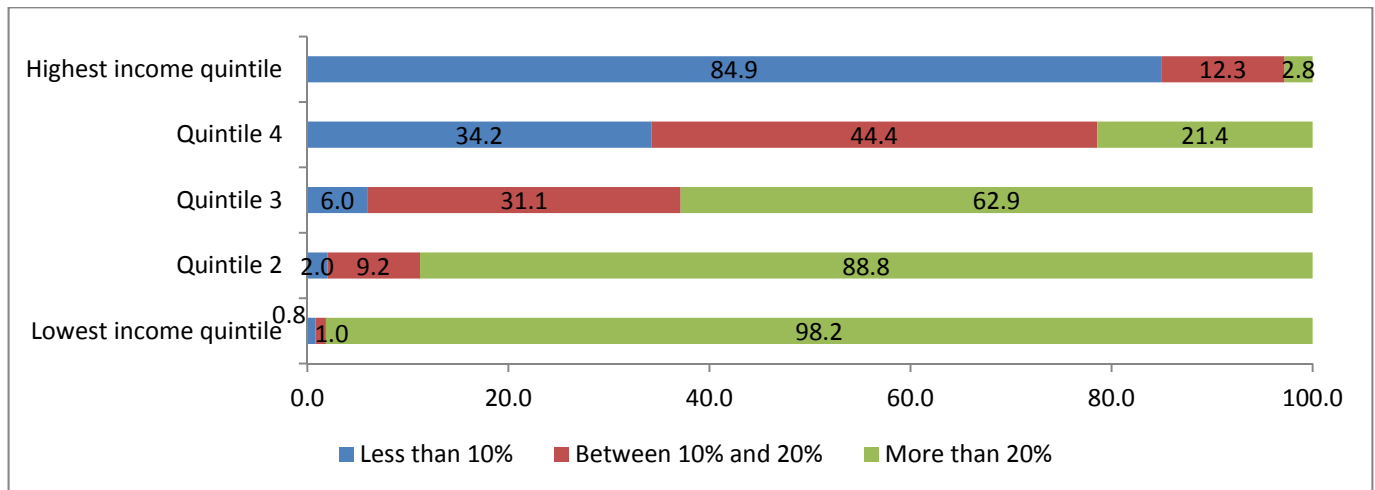
Source: NHTS 2013

Annexure E6: Percentage of monthly household income per capita spent on public transport to educational institutions by geographic location

	Less than 10%	Between 10% and 20 %	More than 20%
RSA	21.7	21.7	56.6
Rural	12.2	19.3	68.5
Urban	27.0	23.9	49.1
Metro	23.7	21.8	54.5

Source: NHTS 2013

Annexure E7: Percentage of learners spending more than 10 per cent of their monthly household income per capita on public transport

Train	Bus	Taxi	RSA
66.2	76.8	79.4	78.3
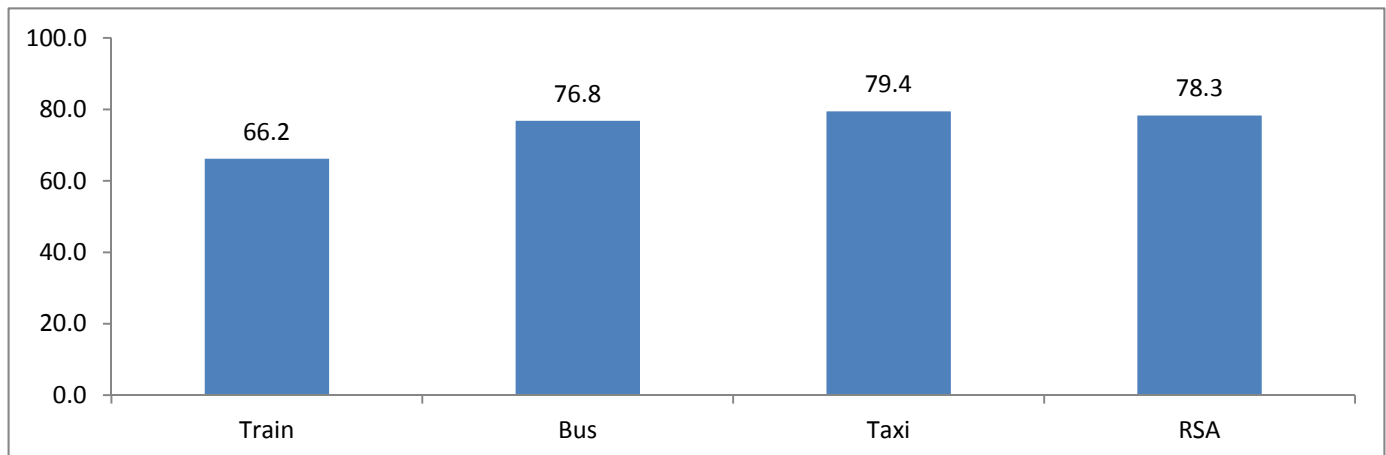
Source: NHTS 2013

Profile of workers who used public transport

Annexure F: Percentage of workers who used public transport by quintiles

Source: NHTS 2013

Annexure F1: Average per capita monthly household income for workers who used public transport by quintiles

Source: NHTS 2013

Cost of commuting public transport for workers

Annexure F3: Average per capita monthly household travel cost for workers who used public transport by quintiles
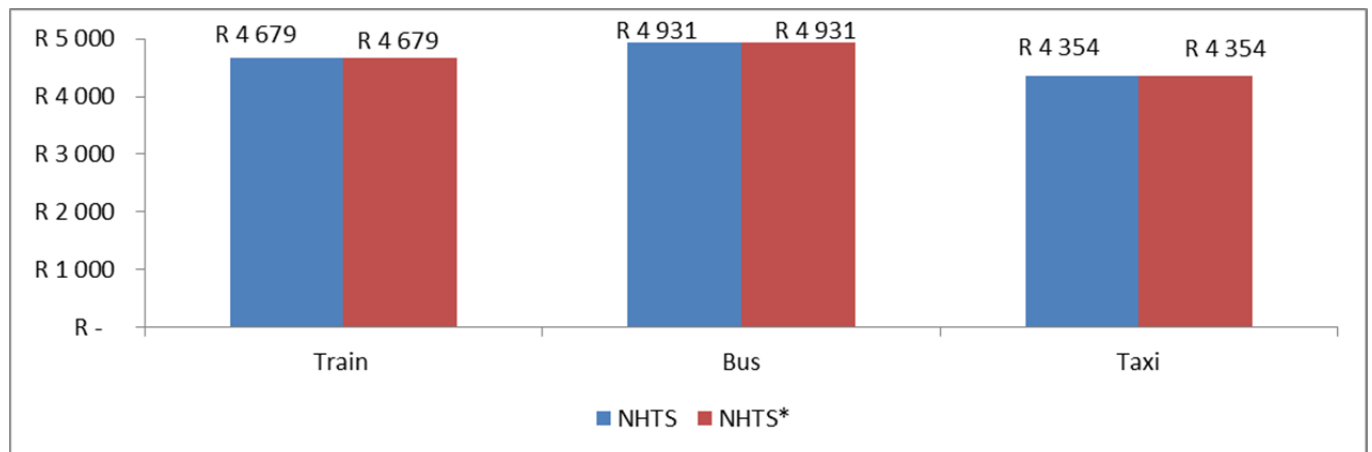

Source: NHTS 2013

Annexure F4: Average monthly salaries for workers who used public transport by quintiles

Source: NHTS 2013

Annexure F5: Average monthly salaries for workers who used public transport by public transport modes

Source: NHTS 2013

Affordability of public transport for workers

Annexure F6: Percentage of monthly salary spent on public transport to work
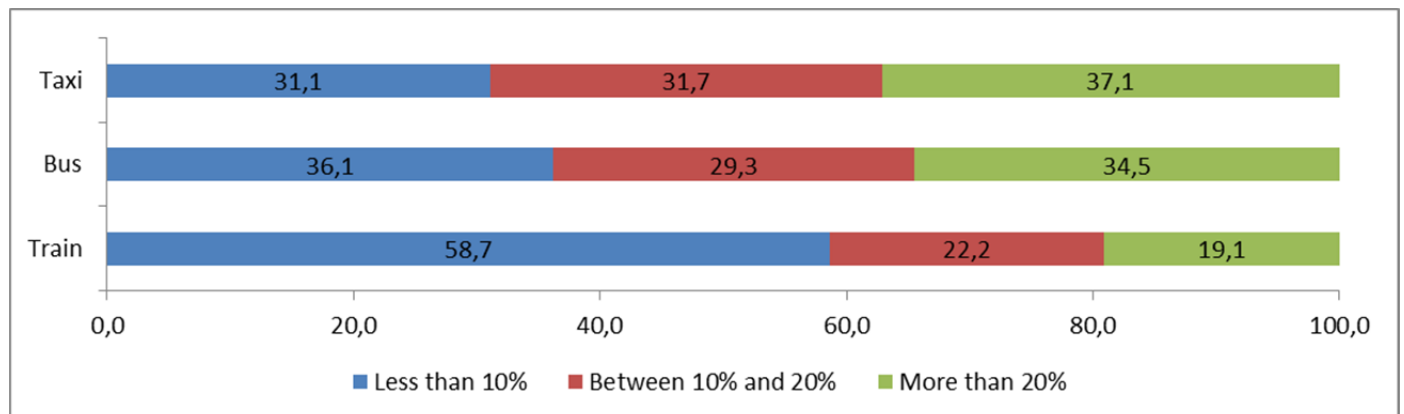
Source: NHTS 2013

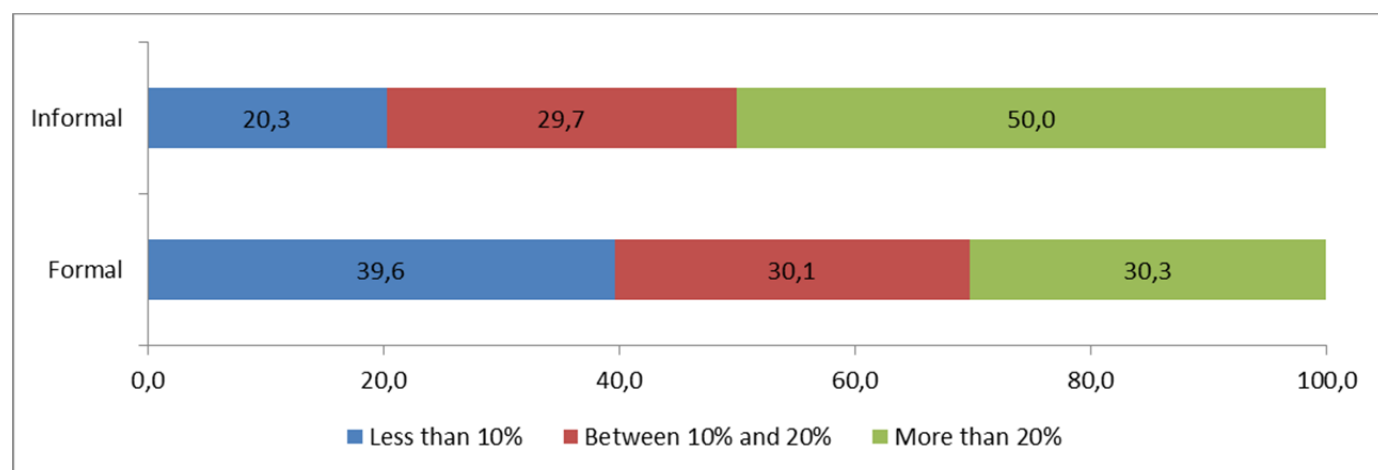**Annexure F7: Percentage of monthly salary spent on public transport to work by quintile**

| Quintile	Less than 10%	Between 10% and 20%	More than 20%
Highest income quintile	75.0	15.9	9.1
Quintile 4	50.1	29.5	20.4
Quintile 3	32.1	36.8	31.1
Quintile 2	13.4	31.1	55.5
Lowest income quintile	2.8	13.1	84.2
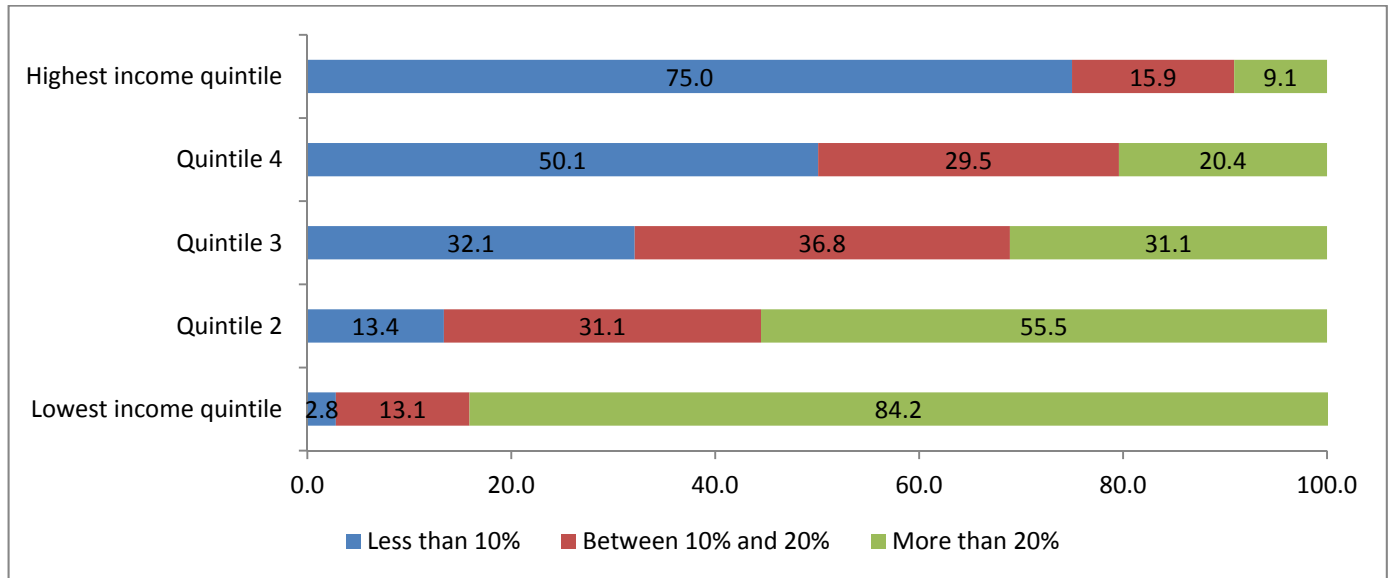
Source: NHTS 2013

Annexure F8: Percentage of monthly salary spent on public transport to work by geographic location

	Less than 10%	Between 10% and 20%	More than 20%
Metro	38,3	29,9	31,8
Urban	35,1	31,2	33,6
Rural	28,0	29,1	42,9
RSA	35,7	30,0	34,2
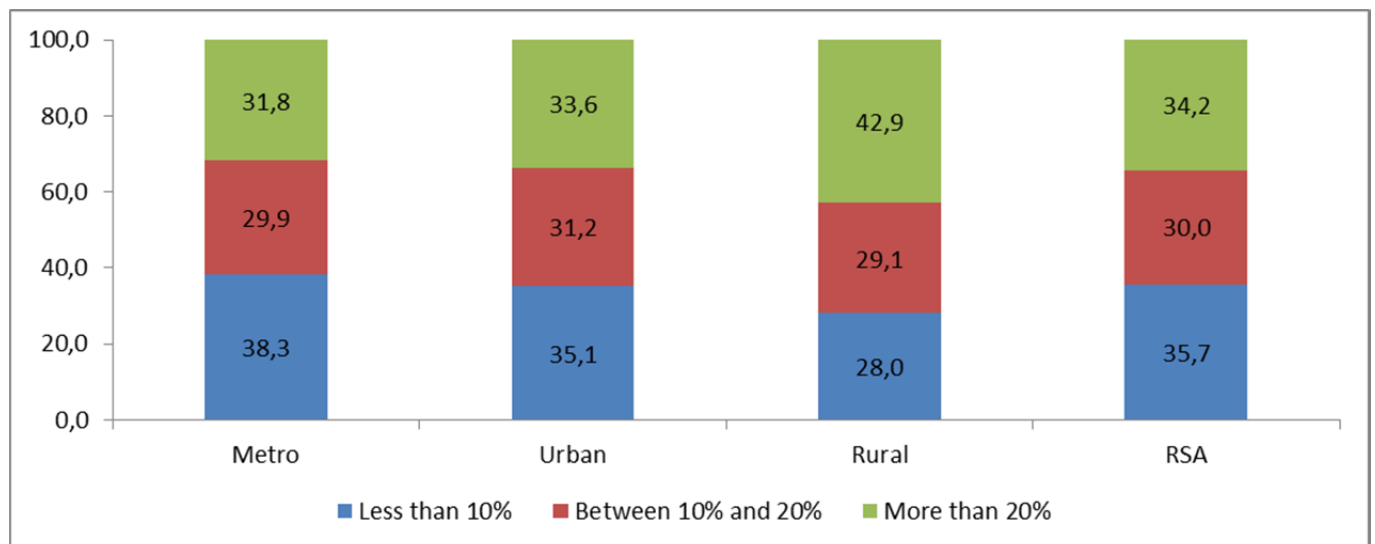
Source: NHTS 2013

Annexure F9: Percentage of monthly salary spent on public transport to work by work sector

Source: NHTS 2013

Annexure F10: Percentage of workers spending more than 10 per cent of their monthly salary on public transport
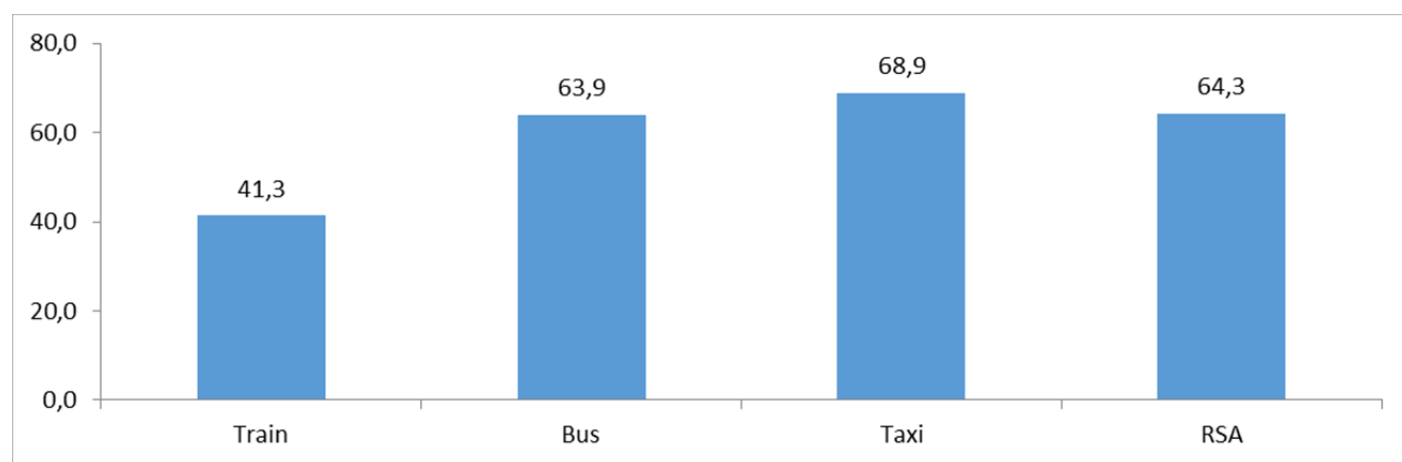
Source: NHTS 2013

Map 7: Number of households who used public transport and percentage of monthly household income per capita spent on public transport in Western Cape
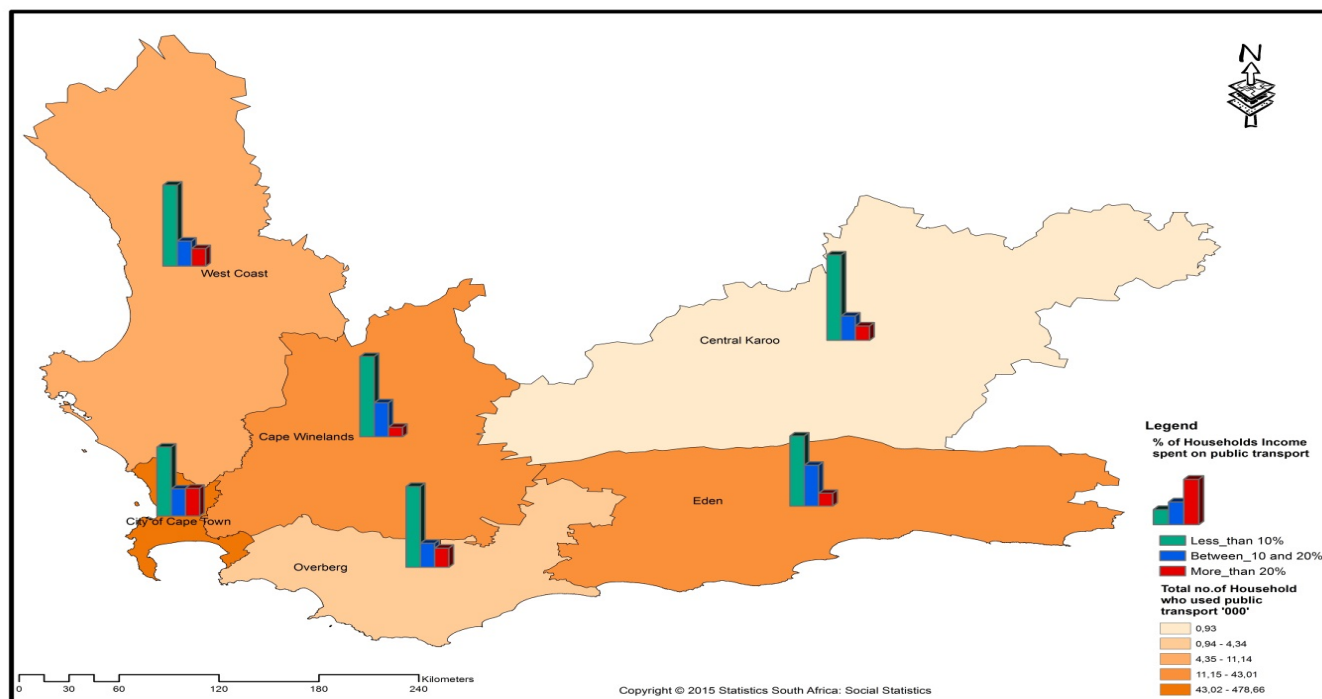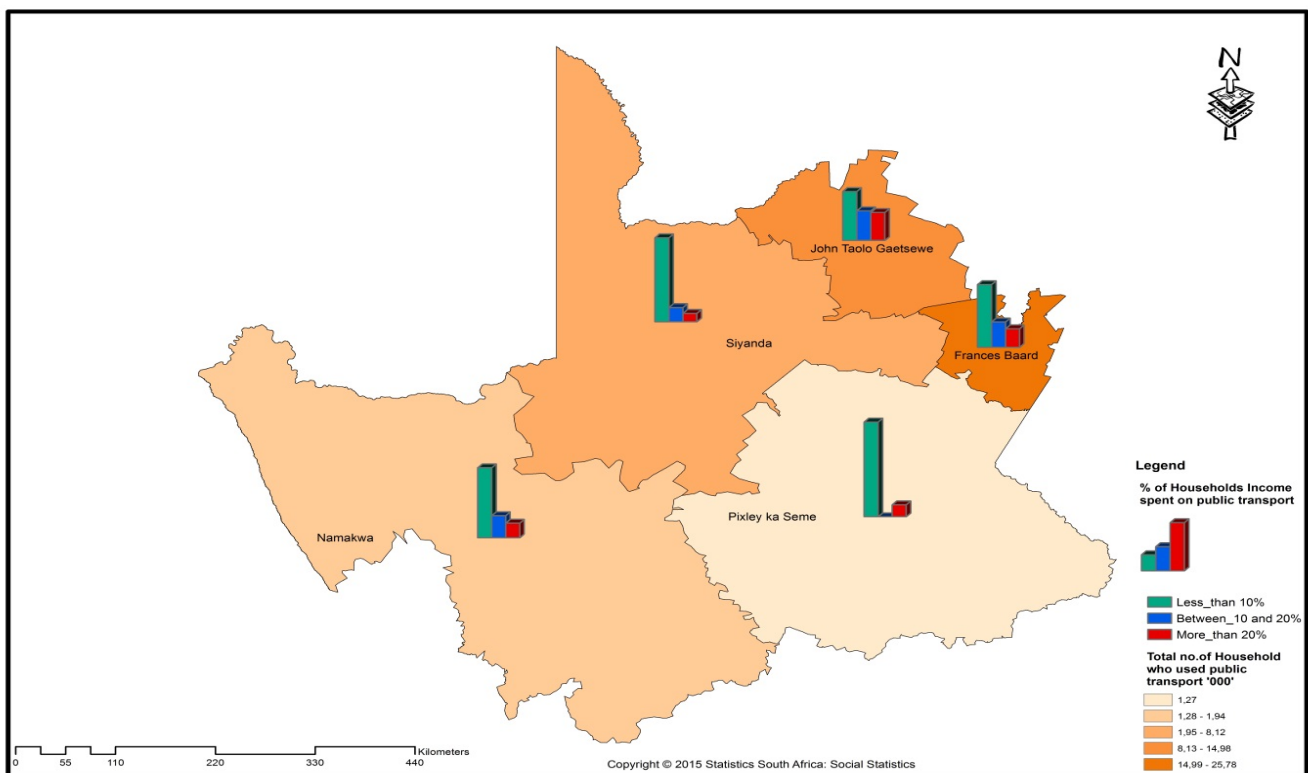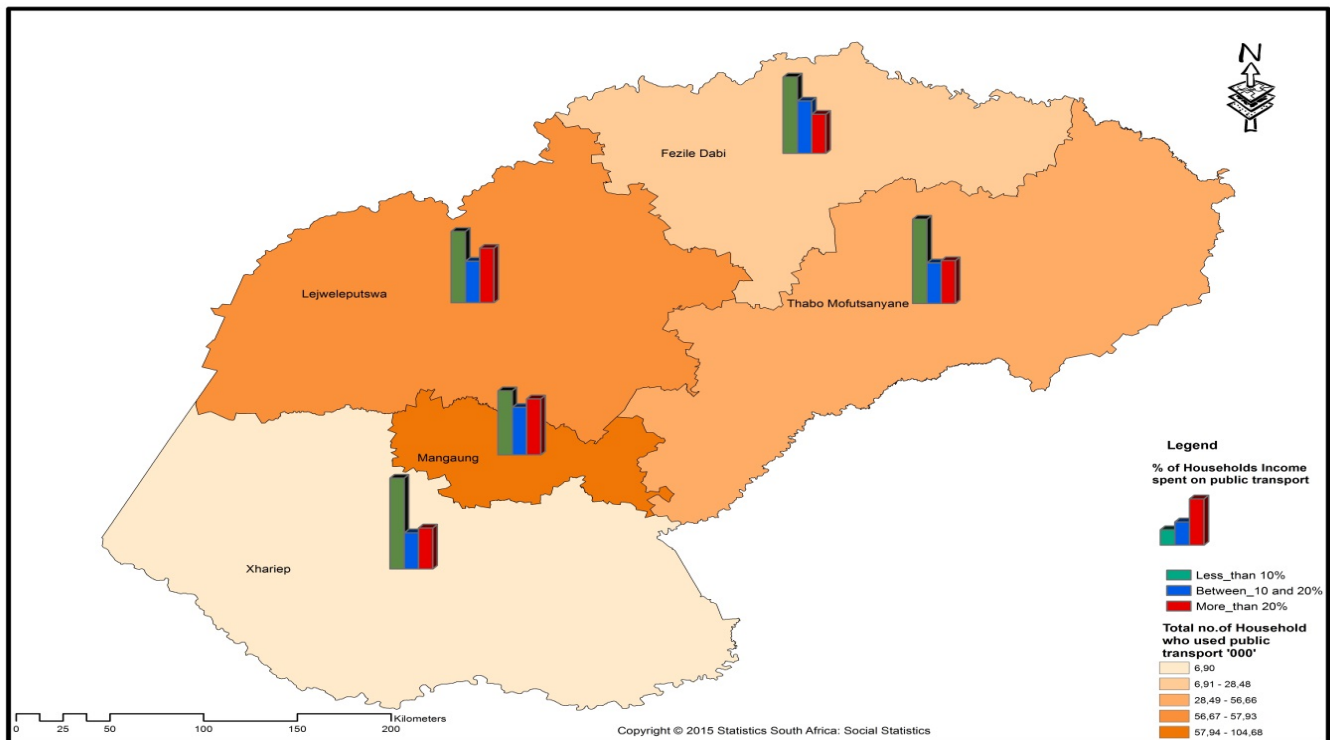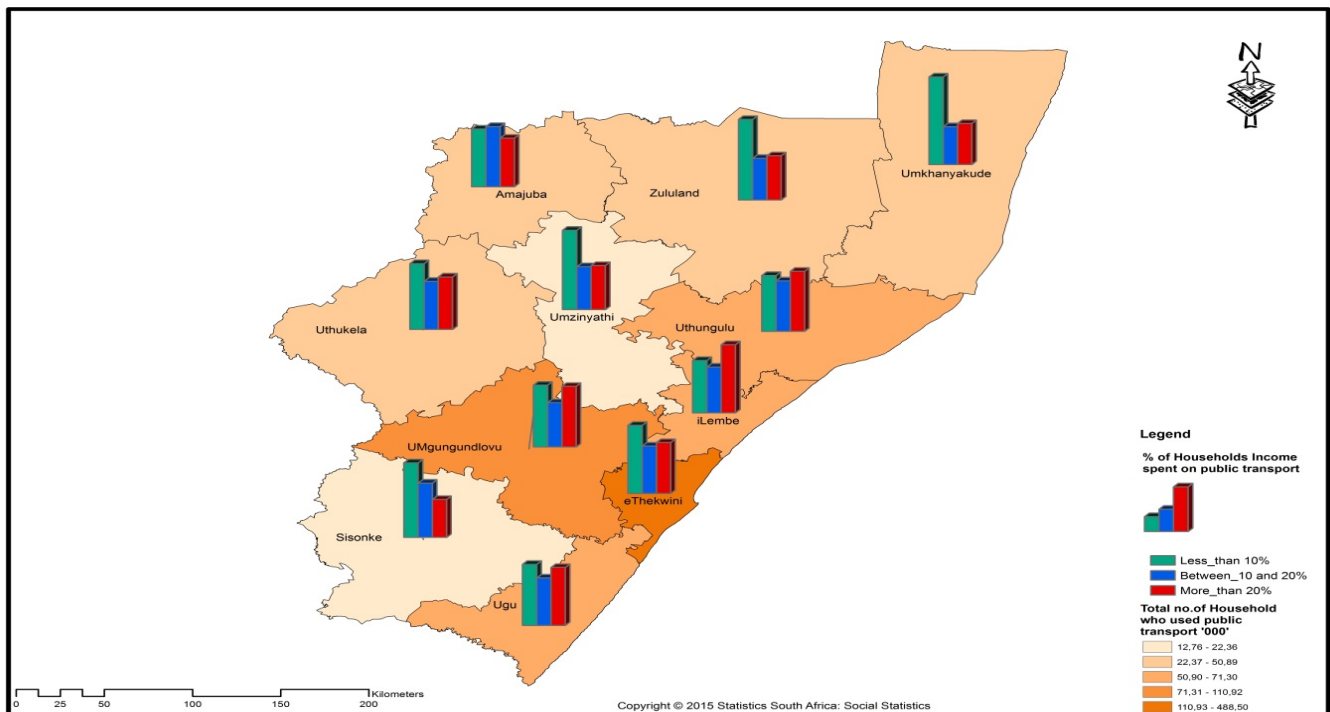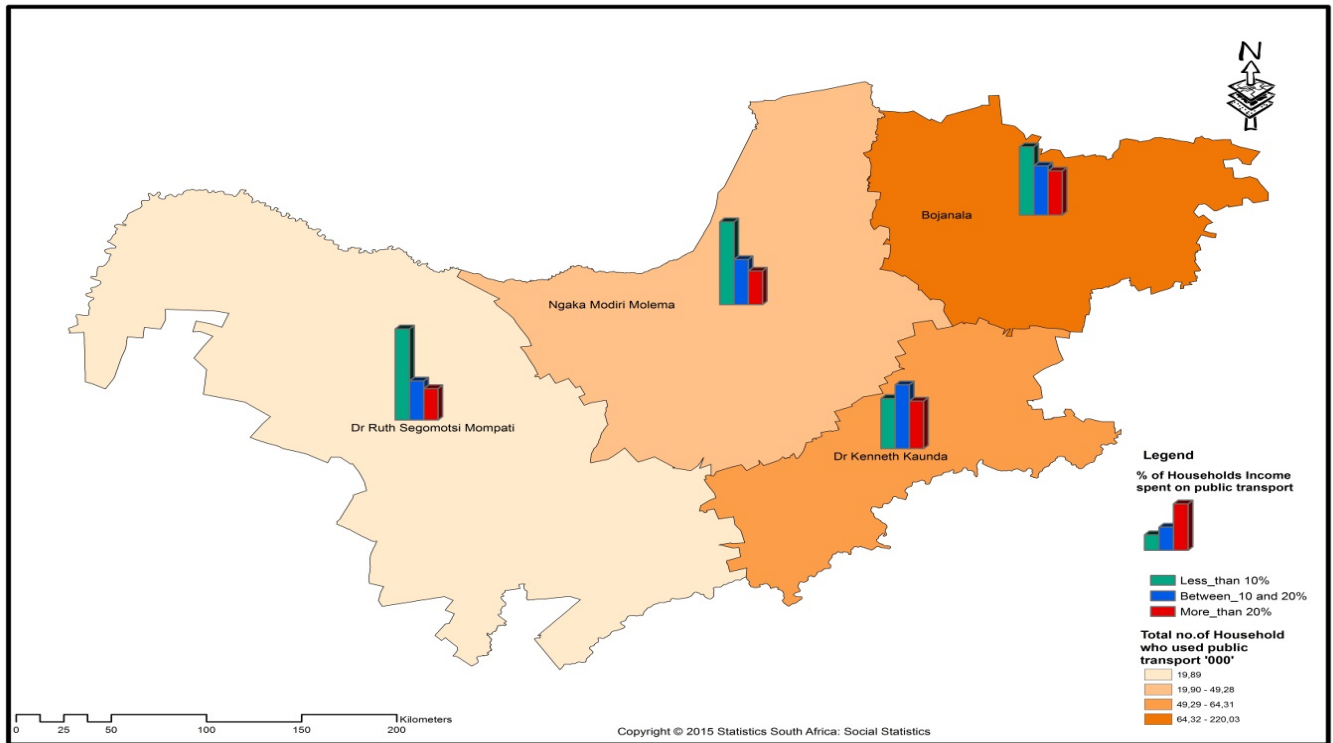
Source: NHTS 2013

Map 8: Number of households who used public transport and percentage of monthly household income per capita spent on public transport in Eastern Cape
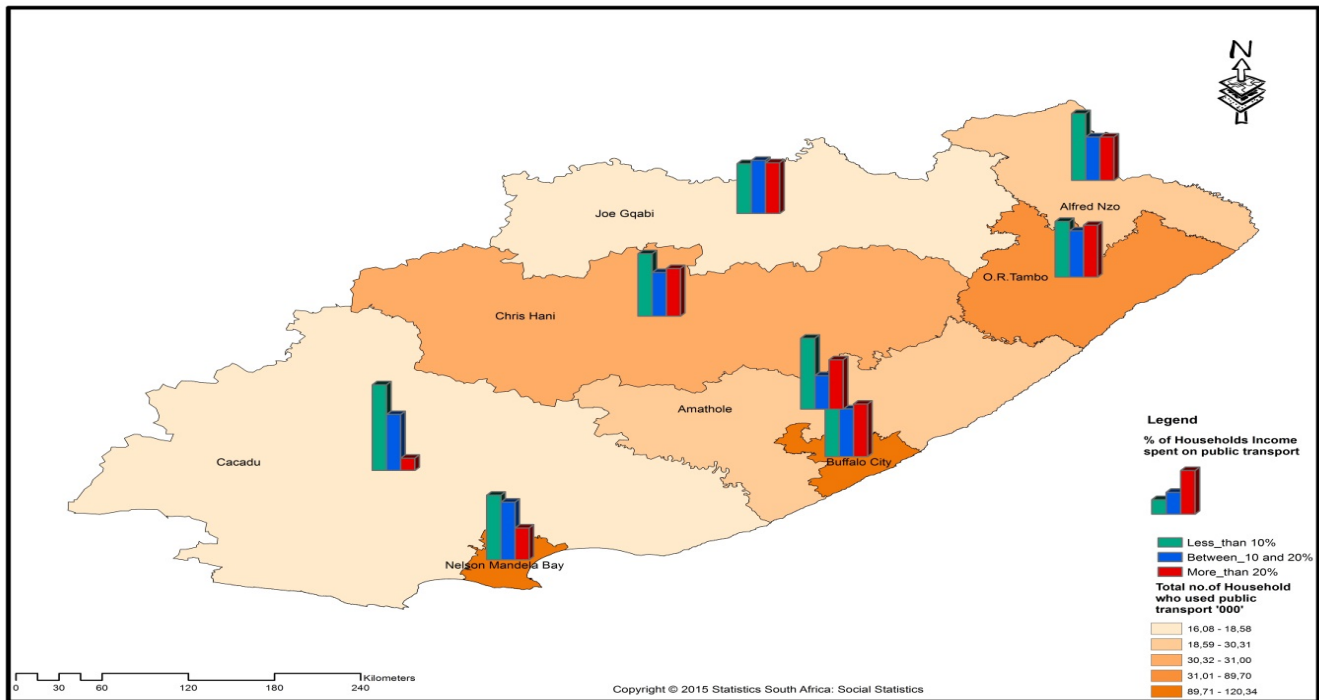
Source: NHTS 2013

Map 9: Number of households who used public transport and percentage of monthly household income per capita spent on public transport in Northern Cape

Source: NHTS 2013

Map 10: Number of households who used public transport and percentage of monthly household income per capita spent on public transport in Free State

Source: NHTS 2013

Map 11: Number of households who used public transport and percentage of monthly household income per capita spent on public transport in KwaZulu-Natal
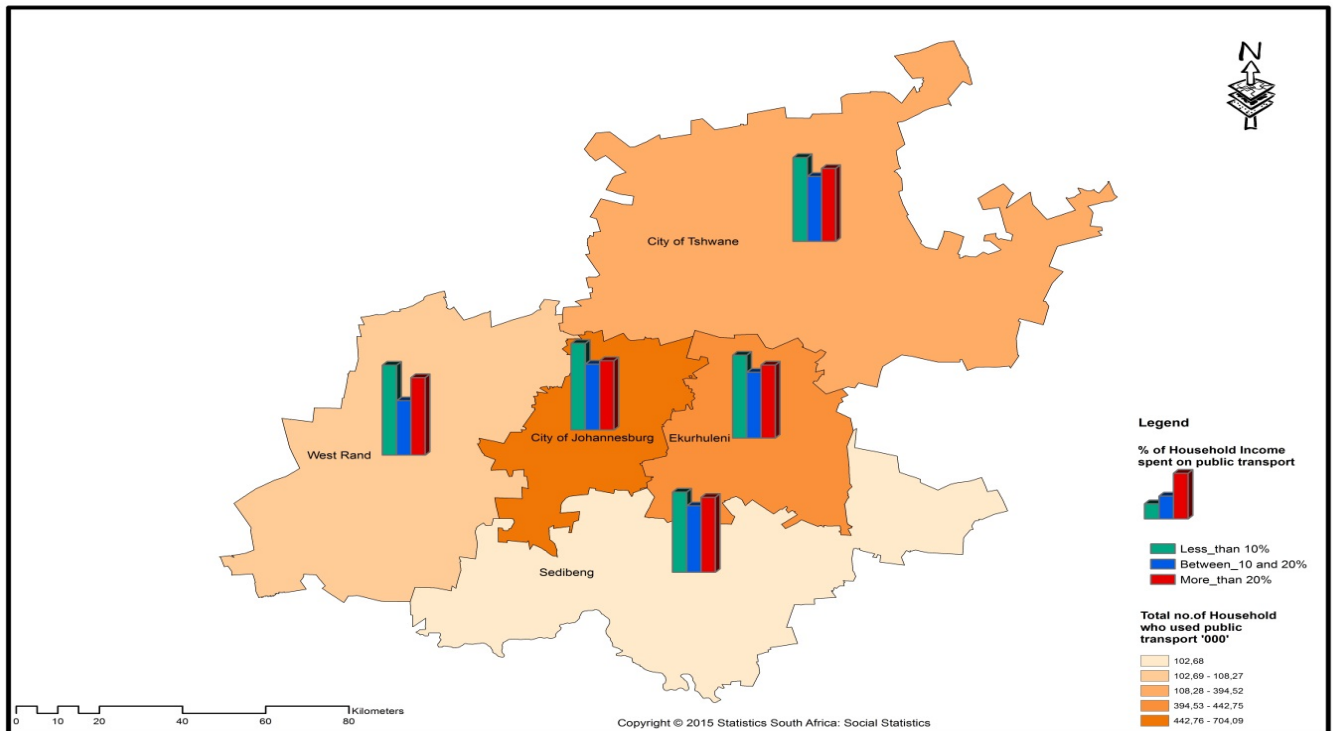

Source: NHTS 2013

Map 12: Number of households who used public transport and percentage of monthly household income per capita spent on public transport in North West
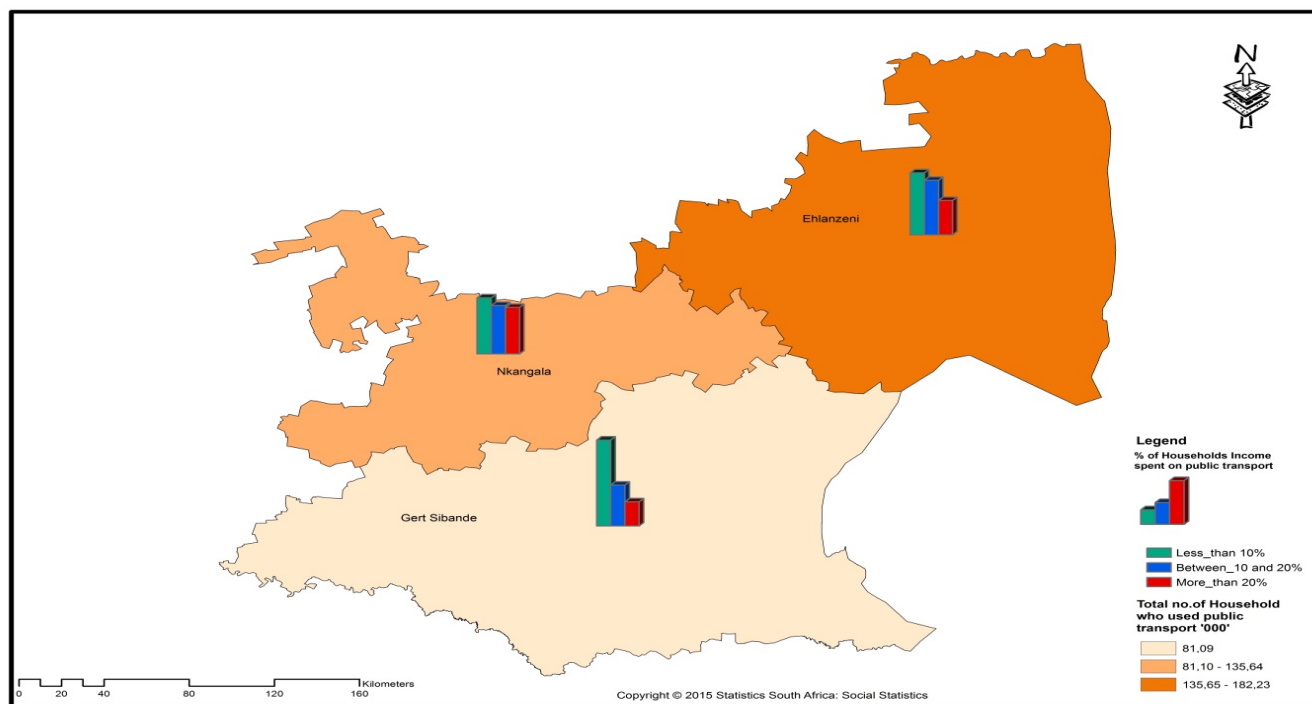
Source: NHTS 2013

Map 13: Number of households who used public transport and percentage of monthly household income per capita spent on public transport in Gauteng
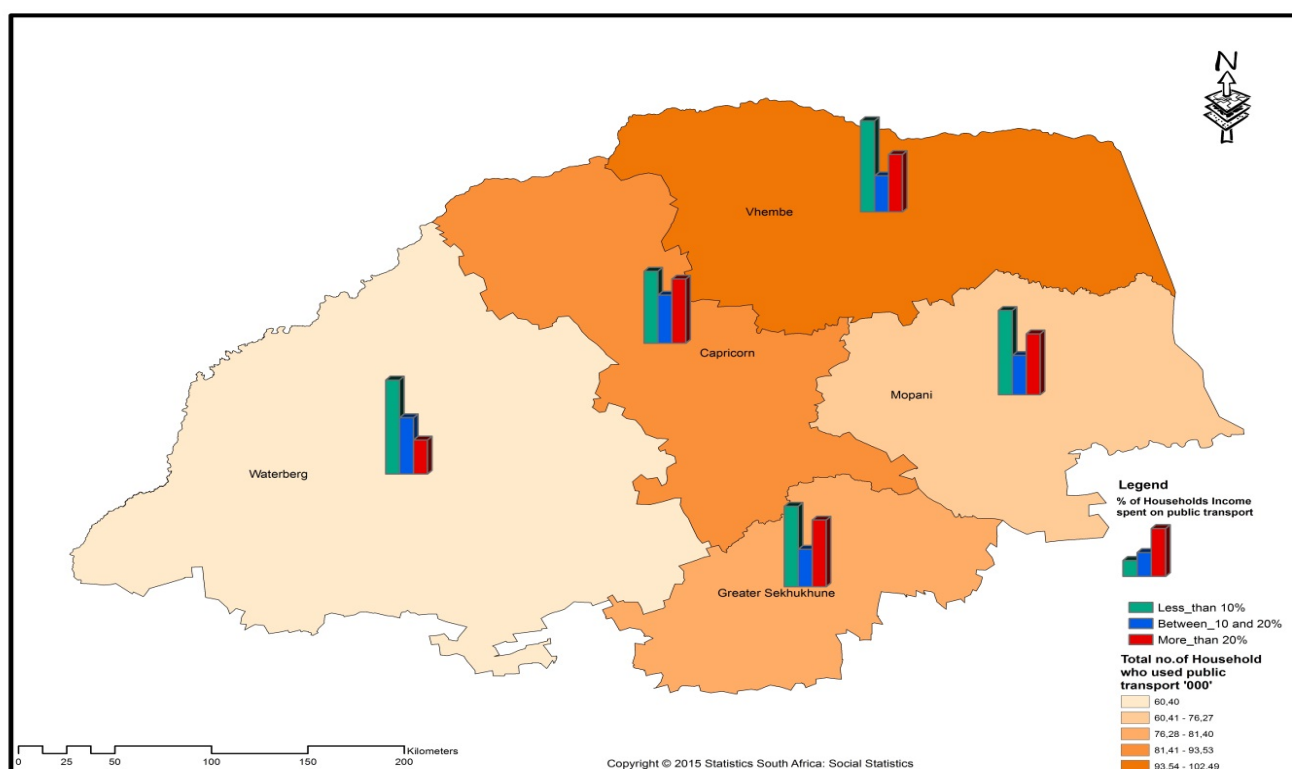

Source: NHTS 2013

Map 14: Number of households who used public transport and percentage of monthly household income per capita spent on public transport in Mpumalanga

Source: NHTS 2013

Map 15: Number of households who used public transport and percentage of monthly household income per capita spent on public transport in Limpopo

Source: NHTS 2013