

Transport Series Volume III

Profile of non-motorised users

In-depth analysis of the National Household Travel Survey data, 2020



IMPROVING LIVES THROUGH DATA ECOSYSTEMS



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Transport Series Volume III

Profile of non-motorised transport users

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2020

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Statistics South Africa

Risenga Maluleke

Statistician-General

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List of abbreviations and acronyms

DoT	Department of Transport
EC	Eastern Cape
FS	Free State
GP	Gauteng
KPI	Key Performance Indicators
KZN	KwaZulu-Natal
LP	Limpopo
MP	Mpumalanga
NATMAP	National Transport Master Plan
NC	Northern Cape
NDP	National Development Plan
NHTS	National Household Travel Survey
NMT	Non-motorised transport
NW	North West
RSA	Republic of South Africa
RTSSA	Rural Transport Strategy for South Africa
Stats SA	Statistics South Africa
TVET	Technical and Vocational Education and Training
UN-HABITAT	United Nations Human Settlements Programme
WC	Western Cape

Glossary of concepts and definitions

Concept	Definition
Animal-drawn transport:	Mechanised piece of equipment with two or four wheels, pulled by one or more animals and is used to carry passengers and/or loads.
Bus	A road-based public transport vehicle that can carry more than 18 passengers (including Bus Rapid Transit system)
Car	A passenger motor vehicle used by a private individual for his/her own convenience
Commuter	Any person who regularly travels to and from work whether on foot, by bicycle 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 (EA)	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 businesses with employees that are registered in any way
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
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: <ol style="list-style-type: none"> 1. Train 2. Bus 3. Taxi 4. Car driver 5. Car passenger 6. Walking all the way 7. Other
Metropolitan (Metro)	Covers the eight metropolitan municipalities defined by the Municipal Structures Act, namely the entire jurisdictions of Cape Town, Ekurhuleni, eThekweni, Nelson Mandela Bay, Buffalo City, Mangaung, Johannesburg and Tshwane

Concept	Definition
Mode of travel	Type/means of transport used for travel purposes. This includes non-motorised transport, e.g. walking all the way, cycling or animal-drawn vehicles
Non-motorised transport	Any mode of travel without a motor to provide the motive force for movement
Private transport	All forms of motorised transport which were used by individuals and that are not considered 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
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 only children are found in a household (child-headed household), the eldest or the one taking responsibility is interviewed
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 of these 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 run along a rail track to transport cargo or passengers (includes the Gautrain)
Scholar	A person attending primary or secondary school
Walking all the way	Walking from one point to another without using any other form of transport
Worker	This term applies to any person who considers themselves as working. No distinction is made between occupational categories or classes, full or part-time and/or being employed by someone else versus self-employment
Work seeker	This term applies to any person who is not employed, who travelled to look for employment or start a business a week before the survey.

Foreword

The 2030 global agenda for development in advocacy to end poverty and protect the environment calls for the improvement of road safety by reducing the number of deaths and injuries from road accidents, improving urban access for the poor and marginalised, and developing quality, reliable, sustainable and resilient infrastructure (United Nations 2016). The latest global statistics on road accident deaths based on 2016 data show that the African region accounts for the highest road traffic fatality rate at 26,6% compared to the European region at 9,3% (WHO 2018). Considering the high rates of road fatalities, where victims are mainly pedestrians, cyclists and young people, the African Union in 2016 adopted the *African Road Safety Charter*, committing to ensuring that infrastructural development incorporates Non-motorised Transport (NMT) as a priority requirement in the design of all types of roads (African Union 2016).

South Africa's blueprint for development, the *National Development Plan 2030*, seeks to achieve a sustainable transport system that is "efficient, inclusive and intricately linked to the need for the spatial change in South African cities" (NPC 2011:188). The Department of Transport (DoT), as the custodian for transport, is responsible for legislation, policy and strategic directions for achieving this vision. Key actions undertaken by the department in response to this mandate include developing the *National Transport Master Plan 2050* (NATMAP), *The Rural Transport Strategy for South Africa* (RTSSA), Shova Kulula Programme and the Draft Policy on Non-motorised Transport.

Statistics South Africa collects and measures transport statistics by conducting the *National Household Travel Survey* (NHTS) to provide insightful data that assists in evidence-based decision-making for policymakers. The NHTS provides a strategic insight into the everyday travel patterns and travel problems faced by the people of South Africa. The survey further explores the different modes of transport people use and have access to, and the affordability and safety of those transport modes.

NMT as the most basic form of transportation is being explored as an alternative to supplement the existing transport system. DoT is looking at increasing the role of NMT and integrating it into the public systems by improving its infrastructure. Improving NMT road infrastructure is one way that can promote its use, reduce pedestrian accidents and create a more harmonised existence between motorised and non-motorised transport users.

This report uses data from the NHTS 2013 and 2020 to provide a comprehensive profile of NMT users. The following were key findings from the analysis:

- In 2020, approximately 12,7 million households used public transport, followed by 4,0 million who used private transport, and more than half a million (586 000) used NMT. NMT was most likely to be used by households to access food or grocery shops (49,3%), religious institutions (46,9%) and medical services (38,8%) in 2020.
- The majority (59,4%) of learners walked all the way to their educational institutions, followed by those that used taxis (15,9%) and those that travelled by car/truck as a passenger (14,0%). The majority of learners who walked all the way were school learners (63,0%), followed by pre-school learners (56,0%).
- Over 30,0% of workers walked all the way to work, and the dominating work sectors for those who walked all the way were the informal sector (36,6%) and private households (35,1%). Male workers were more likely to use NMT than female workers in both (2013 and 2020) years.
- About 1,9 million unemployed individuals travelled a week prior to the survey looking for a job or trying to start a business. Of those who travelled, 849 000 (44,0%) used a taxi, followed by those who walked all the way (730 000).

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Statistician-General



Section:

Introduction

Main mode of travel at a glance
Non-motorised transport explored in greater detail
Modelling non-motorised transport
Conclusions
Reference and Annexure



1. Introduction

1.1 Background

One of the key targets of Sustainable Development Goal 11, which aims to facilitate the achievement of sustainable cities and communities by connecting people to local economies and public services, is to provide safe, affordable, accessible, and sustainable transportation systems for all (UN-Habitat 2016). Investment in a sustainable transport system in South Africa means reversing spatial disparities rooted in the country's colonial and apartheid histories, as well as developing infrastructure to support economic growth and social inclusion (NPC 2011; Turok, Scheba and Visagie 2017).

As a developing country, South Africa is experiencing rapid urbanisation that has resulted in increased carbon pollution and traffic congestion in its major cities. The transportation sector is said to account for about 12,7% of the country's greenhouse gas emissions (DFFE 2022:xii). These greenhouse gases are hazardous to human health (increasing the risk of respiratory diseases, heart disease, and lung cancer), water and air quality, and they contribute to climate change which disrupts food supply, desertifies fertile lands, increases wildfires, and causes flooding of islands and coastal areas (DoT 2018; IPCC 2019; Maino & Emrullahu 2022).

Non-motorised transport (NMT) investment is regarded as critical for mitigating some of the challenges associated with traffic congestion, transportation affordability, threats to human health, and access to public services. Moreover, to reduce negative social attitudes towards the use of NMT and improve safety levels, both infrastructure development and improved governance are required (AUC 2017). Undeniably, the time costs associated with NMT, the experience of social crime such as street robbery and rape, and the high levels of pedestrian fatalities make it unappealing. According to the World Health Organization's *Global Status Report on Road Safety 2018*, 1,35 million deaths from road traffic accidents were recorded in 2016, with pedestrians, cyclists, and motorcyclists accounting for more than half of these fatalities (WHO 2018).

In South Africa, efforts have been made to respond to the needs of NMT users; most notable is the Department of Transport's (DoT) Draft Non-motorised Transport policy, which seeks to integrate NMT into the South African transport system. This represents a paradigm shift in transportation planning. Walking, cycling, variants such as small-wheeled transport (rickshaws, skates, skateboards, push scooters and hand carts) and wheelchair travel are recognised as components of NMT that should be considered in transportation planning in the draft policy. This policy allows transportation ecosystem partners to prioritise and budget for NMT rather than focusing solely on road space for cars (DoT 2008; UNEP 2022).

As a result, this report has been prepared to profile NMT users in South Africa using the *National Household Travel Survey (NHTS)* conducted in 2013 and 2020. This information is critical for ensuring accurate policy planning and development, particularly for the DoT, which is tasked with advancing the agenda of a safe, efficient, reliable, and affordable transportation system for all (DoT 2018).

2. Overview of legal and policy environment

2.1 Introduction

This section outlines key aspects of the legislative framework, policies and strategies that influence Non-motorised Transport (NMT). The Constitution of the Republic of South Africa (Act 108 of 1996) section 85(1)(b) mandates the Department of Transport with the role of developing transport policy. This mandate places an immense responsibility on the Department's role to ensure that transport policy development addresses the mobility needs of all citizens (DoT 2011).

2.2 Draft National Non-motorised Transport Policy

The Draft Non-motorised Transport Policy document provides a single framework and an enabling environment for the DoT, other government departments and stakeholders to address the challenges inherent in non-motorised transportation. The primary objectives of this draft NMT policy are, among others, to increase the role of NMT as one of the key transport modes, integrate NMT as an essential element of public transport, provide safe NMT infrastructure, and allocate adequate and sustainable funding for the development and promotion of NMT. The following are the strategic objectives that the policy aims to attain:

- Integration of NMT into the transport system, including transport and spatial planning
- Endorsement and facilitation of the use of NMT modes
- Development of infrastructure and maintenance standards that recognise NMT as an essential mode of transport
- Enhancement of traffic legislation that recognises NMT as an alternative transport mode
- Facilitation of NMT as a feeder system to other modes of transport
- Empowerment of the marginalised group promotion of SMME through NMT
- Allocation of adequate and sustainable funding for promotion and development of NMT
- Promotion of NMT as a reliable, healthy, affordable, accessible and safe transport mode
- Reduction of the number of traffic fatalities of vulnerable non-motorised road users
- Facilitation of research and new initiatives to improve NMT performance

The draft policy aims to reverse challenges of accessibility and mobility and recognises NMT as a mode of transport. It advocates for optimal use of NMT and bridging the economic and social gaps between urban and rural areas or first and second economies. Furthermore, it highlights the role that NMT could play in economic development, poverty alleviation and empowerment of marginalised groups. This draft policy is governed by and derived from a number of policies, frameworks and acts, which include the following:

- White Paper on National Transport Policy (1996)
- National Land Transport Transition Act, Act No. 22 of 2000
- National Land Transport Strategic Framework
- Public Transport Action Plan (2007)
- National Road Traffic Act, Act No. 93 of 1996
- Animal Protection Act, Act No. 71 of 1962
- National Environment Management Act, Act No. 107 of 1998

In terms of roles and responsibilities, the national DoT has an overarching role of developing a national policy on NMT in collaboration with all relevant stakeholders. At the same time, the Provincial Departments of Transport (PDOT) and municipalities must develop implementation strategies and plans respectively, in consultation with key NMT stakeholders. Furthermore, PDOT must ensure coordination and alignment of provincial and local government NMT operational plans.

The NMT policy sets out a number of relevant policy principles, which will guide the DoT in achieving policy objectives, outlined as follows:

- Integrating non-motorised transportation into the transport system is considered a priority
- The need to improve the quality of life of marginalised people
- The imperative to adhere to the principle of environmental protection and energy conservation
- The integration and connectivity of the first and second economies and the connectivity and integration of the rural and urban areas
- The need for economic revitalisation of the rural areas
- The promotion of safety as a critical facet of public and freight transport
- The need to increase accessibility and mobile

3. Objectives of the report

Provided the need for reliable data to inform planning, budget allocation and other decision-making by government and stakeholders in the transport ecosystem, this report aims to achieve the following objectives:

- To present information on the main modes of travel used by households, learners, workers and work seekers
- To profile the demographic and socio-economic status of NMT users
- To assess the trend of non-motorised transport usage between 2013 to 2020

4. Organisation and presentation of the report

This report is divided into eleven sections. The first, second and third sections provide the introduction, an overview of the legal and policy environment and the objectives of the report, respectively. Section five outlines the methodology, data sources and comparison with other data sources.

Detailed discussions of the findings are provided in sections six to eight, as follows:

- Section 6: Main mode of travel at a glance

The main aim of this section is to locate the position of NMT in everyday travel relative to the other modes. To investigate which modes of transport are mostly used for everyday travelling, the difference in travel time between the different modes of travel and other associated socio-demographic factors that affect households, learners, workers and work seekers travel patterns.

- Section 7: NMT in greater detail

This section focuses on the use of NMT, it aims to profile the users of NMT in terms of their household composition, the main source of income, income quintile and the time they usually leave their place of residence. Non-motorised transport consists of categories such as walking all the way, bicycles and animal-drawn transport.

- Section 8: Modelling non-motorised transport

This section will take a closer look at factors associated with mode of travel choice for members of households who took a trip a week before the survey. Using binomial logistic regression, the model presents a list of variables hypothesised to be associated with mode choice on a given travel day for those who took a trip.

The conclusion is found in section nine, followed by references and annexures, found in sections ten and eleven, respectively.

5. Methodology and data sources

5.1 National Household Travel Survey

This report is based on the findings from the *National Household Travel Survey* (NHTS) 2013 and 2020.

The NHTS conducted in 2003, 2013 and 2020 aimed to provide insights into South African households' travel modes, patterns, times and costs. The survey serves as the basis for the Department of Transport's (DoT) research, planning and policy formulation and also assists transport authorities in effectively targeting subsidies. Moreover, the NHTS serves as an important data source for defining and measuring Key Performance Indicators (KPI) for land passenger transport, as required in terms of the National Land Transport Transition Act (Act No. 22 of 2000).

NHTS primarily covers land transport travel, focusing on public and private transport, including Non-motorised Transport (NMT) such as walking all the way, cycling or making use of animal-drawn transport. It looks into travel related to education, work, business, leisure, and migration for individuals. Most of the work and education-related

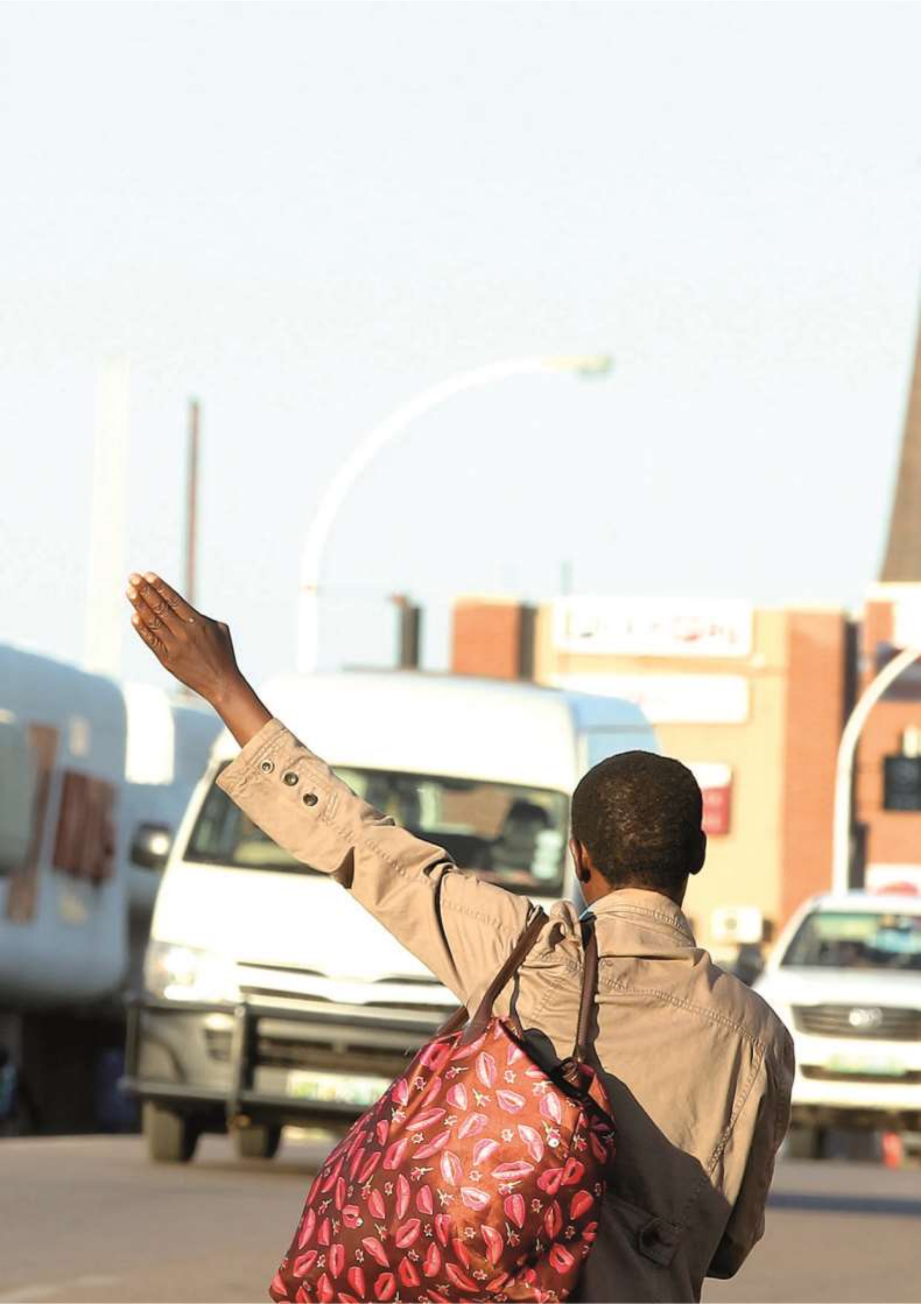
questions in the survey were associated with a randomly selected travel day (Monday to Sunday). In addition to these themes, household-level information was also collected about the demographic profiles of individuals, socio-economic circumstances of households and general attitudes and perceptions about transport.

The first NHTS was conducted in 2003 and Stats SA was only responsible for the data collection phase of this project. The second was NHTS 2013 which was the first one to be conducted by Stats SA throughout the value chain. NHTS 2013 was executed across all nine provinces using a two-staged random stratified sample of 51 341 dwelling units (DUs) and data collection was executed from February to March 2013 using Paper-Assisted Personal Interviews (PAPI) data collection method. Similarly, NHTS 2020 was conducted across all provinces with a total of 65 523 sampled dwelling units across the country.

The NHTS 2020 data collection was scheduled for a two-month period stretching from 27 January to 20 March 2020 using Computer-Assisted Personal Interviews (CAPI). A mop-up period was planned for the week of 23–27 March 2020, but this had to be cancelled following the suspension of all fieldwork on 19 March 2020 due to the COVID-19 pandemic. Although the suspension, fortunately, happened on the last day of regularly scheduled fieldwork, it still meant that non-response and out-of-scope verifications could not be completed.

5.2 Comparison with other data sources

Considering that the NHTS is a sample survey and relies on population estimates and weighting processes to extrapolate sample estimates to population estimates, the absolute number of cases does not always correspond with census or administrative data sources. The use of a proxy in the collection methodology of the NHTS poses a particular challenge, where it is likely to yield different estimates for travel mode compared to the self-reported method. Moreover, due to a low number in representation, this report was not able to disaggregate data by use of wheelchair; an important measure in establishing the use of NMT by a part of the marginalised in society.



Section:

Introduction

Main mode of travel at a glance

Non-motorised transport explored in greater detail

Modelling non-motorised transport

Conclusions

Reference and Annexure



6. Main mode of travel at a glance

6.1 Introduction

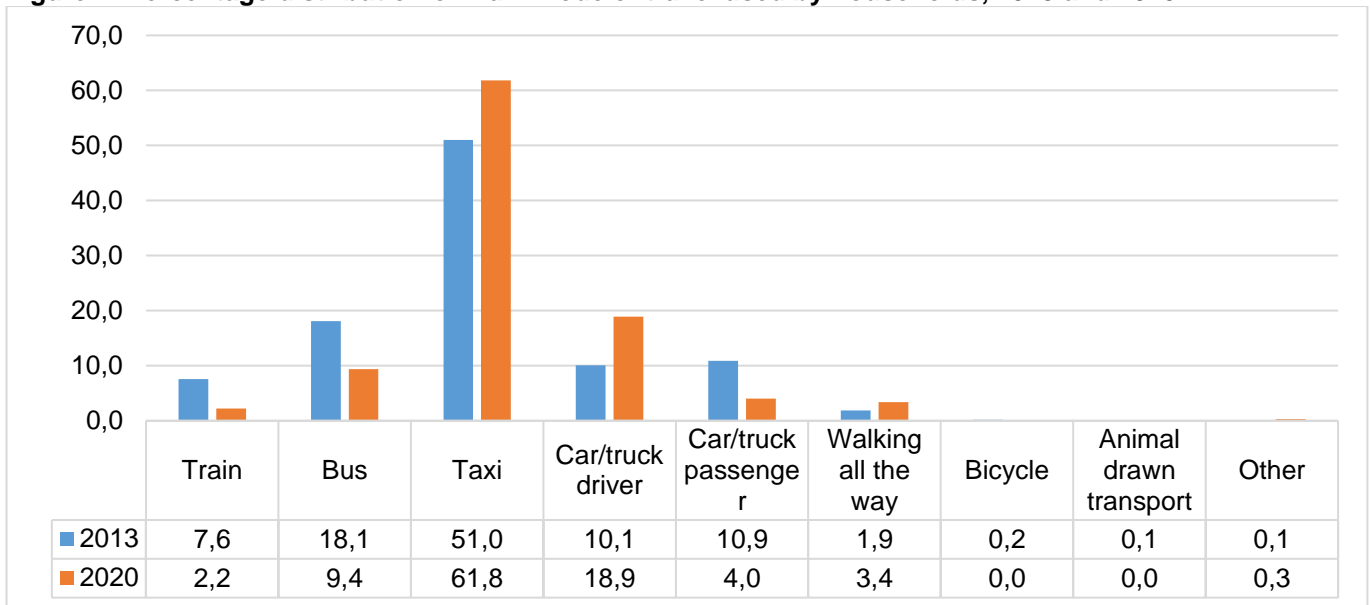
In South Africa, access to transportation is a major issue, particularly for low-income communities that are also marginalised by their location (Mthimkhulu 2017). This has resulted in poor or no road and rail infrastructure, low-cost public transportation such as buses and trains are overcrowded, unreliable and mostly unavailable to people living in rural areas.

Transport needs influence critical aspects of life such as employment opportunities, education, market access, medical facilities and all other essential services required for a high quality of life (World Bank 2022). As a result, it is critical to understand what modes of transportation are available to the public and to investigate what other modes can be improved to mitigate adversaries in transportation access.

This section focuses on the main modes of travel used by households, learners, workers and work seekers. It aims to investigate which modes of transport are mostly used for everyday travelling, the difference in travel time between the different modes of travel and the position of Non-motorised Transport (NMT) in everyday travel relative to other modes.

6.2 Main modes of travel used by households

Figure 1: Percentage distribution of main mode of travel used by households, 2013 and 2020



Source: NHTS, 2013 and 2020

'Other' includes aircraft, scooter/motorcycle, tuk-tuk, etc.

Figure 1 shows the percentage of the main mode of travel used by households between 2013 and 2020. Taxis were the main mode of travel used by households in both 2013 and 2020. However, in 2020 there were more households that used taxis at 61,8% compared to 2013 (51,0%). The use of a car/truck as a driver at 18,9%, was the second most common mode of travel in 2020, while in 2013, buses at 18,1% were the second most used mode of travel by households.

There was a percentage increase in the number of households that walked all the way to their destinations, from 1,9% in 2013 to 3,4% in 2020. Animal-drawn transport, bicycles and other transport were the least used modes of transport by households in both 2013 and 2020.

Table 1: Mode of travel used to access services and facilities, 2013 and 2020

Mode of travel	Service/facility (per cent calculated within services/facilities)												
	Food or grocery shops	Other shops	Religious institution	Medical service	Post office	Welfare office	Police station	Municipal office	Tribal authority	Financial services/banks	Traditional healer	Library	Home Affairs
2013													
Public transport	53,0	21,2	15,0	35,2	31,2	36,3	37,9	38,0	9,5	52,2	5,2	-	-
Private transport	28,3	20,0	20,1	24,6	20,2	12,4	20,3	19,6	2,5	26,5	2,1	-	-
Non-motorised transport	18,1	54,5	47,6	31,7	22,5	13,2	23,3	16,7	16,5	14,0	9,7	-	-
Do not need to get there	0,7	4,3	17,4	8,4	26,2	38,1	18,5	25,6	71,6	7,2	83,0	-	-
Total	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	-	-
2020													
Mode of travel	Food or grocery shops	Other shops	Religious institution	Medical service	Post office	Welfare office	Police station	Municipal office	Tribal authority	Financial services/banks	Traditional healer	Library	Home Affairs
Public transport	27,6	55,9	14,6	32,7	34,4	40,9	43,0	45,0	9,9	54,0	-	20,1	56,1
Private transport	21,3	27,4	21,0	24,7	19,5	16,0	22,4	22,0	4,2	25,7	-	12,1	22,8
Non-motorised transport	49,3	12,9	46,9	38,8	18,3	12,1	23,7	15,2	18,6	17,2	-	20,4	7,8
Do not need to get there	1,5	3,5	15,9	3,4	26,2	29,6	10,4	17,1	63,4	2,9	-	43,0	12,7
Cannot get there	0,3	0,3	1,6	0,3	1,6	1,4	0,4	0,8	4,0	0,3	-	4,5	0,6
Total	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	-	100,0	100,0

Source: NHTS, 2013 and 2020

- Categories not available in the year of collection estimates

Table 1 presents the mode of travel used by households to access services and facilities in 2013 and 2020. In 2013, households mainly used public transport to access food or grocery shops (53,0%), followed by financial services/banks (52,2%) and municipal services (38,0%). A different pattern was observed in 2020, where households mostly used public transport to access Home Affairs services (56,1%), other shops (55,9%) and financial services/banks (54,0%).

On the other hand, NMT in 2013 was most likely to be used by households to access other shops (54,5%), religious institutions (47,6%) and medical services (31,7%). Though in 2020, it was most likely to be used by households to access food or grocery shops (49,3%), religious institutions (46,9%) and medical services (38,8%).

Table 2: Household travel time to services and facilities by mode of travel, 2020

Services and facilities 2020 (per cent of households within facility category)												
Travel time	Food or grocery shops	Other shops	Religious institution	Medical service	Post office	Welfare office	Police station	Municipal office	Home Affairs	Library	Tribal authority	Financial services/banks
Public transport												
Up to 30 minutes	69,3	68,1	73,3	67,3	67,7	65,8	65,8	66,8	69,1	68,3	54,1	67,6
Between 31 and 60 minutes	23,1	24,2	21,2	24,9	25,1	26,4	26,1	25,7	23,6	26,7	36,4	25,9
More than 60 minutes	7,7	7,7	5,5	7,7	7,3	7,8	8,0	7,5	7,3	4,9	9,4	6,5
Total	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Private transport												
Up to 30 minutes	88,4	86,5	88,7	87,6	87,2	84,9	87,5	87,9	87,4	88,6	71,7	88,3
Between 31 and 60 minutes	7,8	9,6	8,3	8,6	9,2	11,3	9,1	9,0	9,4	8,9	21,5	9,1
More than 60 minutes	3,8	3,9	3,1	3,8	3,6	3,8	3,4	3,1	3,2	2,5	6,8	2,6
Total	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Non-motorised transport												
Up to 30 minutes	71,2	80,6	68,3	72,1	76,0	74,4	78,8	78,7	77,2	84,0	49,8	87,0
Between 31 and 60 minutes	20,3	11,7	23,0	19,4	18,2	18,7	15,2	15,5	16,0	12,7	36,5	11,3
More than 60 minutes	8,5	7,8	8,7	8,5	5,8	6,9	6,0	5,7	6,8	3,2	13,8	1,7
Total	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0

Source: NHTS, 2020

Table 2 summarises households' travel time to services and facilities by mode of travel in 2020. More than eight in ten households that used private transport indicated that they travelled up to 30 minutes to access all services and facilities, with the exception of tribal authority (71,7%). Furthermore, about 21,5% of households travelled between 31 and 60 minutes to access tribal authority using private transport. A high percentage of households that used NMT travelled up to 30 minutes to access financial services/banks (87,0%), followed by library (84,0%), and other shops (80,6%). Approximately 14,0% (13,8%) of households travelled more than 60 minutes to access tribal authority using NMT.

Table 3: Percentage of main mode of transport used by household income quintiles, 2013 and 2020

Household income quintile	Main mode								Other	Total
	Public transport			Private transport		Non-motorised transport				
	Train	Bus	Taxi	Car driver	Car passenger	Walking all the way	Bicycle	Animal-drawn transport		
2013										
Lowest income quintile	5,7	23,6	62,1	1,4	3,2	3,5	0,3	0,1	0,1	100,0
Quintile 2	7,0	22,6	60,7	1,8	5,0	2,3	0,3	0,1	0,1	100,0
Quintile 3	9,2	18,9	58,3	3,9	7,3	2,0	0,3	0,1	0,1	100,0
Quintile 4	11,1	17,3	48,7	9,9	11,6	1,0	0,2	0,0	0,1	100,0
Highest income quintile	4,8	8,6	24,9	33,4	27,6	0,5	0,1	0,0	0,1	100,0
2020										
Lowest income quintile	2,4	6,1	51,6	32,0	3,2	4,3	0,0	0,0	0,3	100,0
Quintile 2	2,1	10,1	75,6	3,8	3,6	4,6	0,0	0,0	0,2	100,0
Quintile 3	1,9	10,9	68,3	8,4	5,6	4,3	0,0	0,0	0,6	100,0
Quintile 4	3,1	11,9	69,9	8,0	4,0	2,9	0,0	0,0	0,1	100,0
Highest income quintile	1,6	9,0	49,1	35,4	3,9	0,9	0,0	0,0	0,2	100,0

Source: NHTS, 2013 and 2020

'Other' includes aircraft, scooter/motorcycle, tuk-tuk, etc.

Table 3 shows the percentage distribution of the main mode of transport used by household income quintiles for the years 2013 and 2020. In 2013, the main mode of transport used by households in the lowest income quintile was taxi at 62,1% followed by bus at 23,6%. In 2020, this order slightly changed, where households in the lowest income quintiles used taxis (51,6%) as their main mode of transport, which was followed by the use of a car as a driver at 32,0%.

In 2013, households in the highest income quintile mostly used cars as drivers (33,4%), followed by the use of a car as a passenger at 27,6% and taxi at 24,9%. In 2020 the pattern completely changed for households in the highest income quintile, where taxi was the main mode of travel used at 49,1%, followed by the use of a car as a driver at 35,4%, then bus at 9,0%.

Looking at the use of NMT by households in different income quintiles, more households indicated that they walked all the way in 2020 compared to 2013 for all household income quintiles. The use of bicycles and animal-drawn transport, however, showed a decrease in 2020 compared to 2013 for all household income quintiles.

Table 4: Main mode of transport used by household income quintiles, 2020

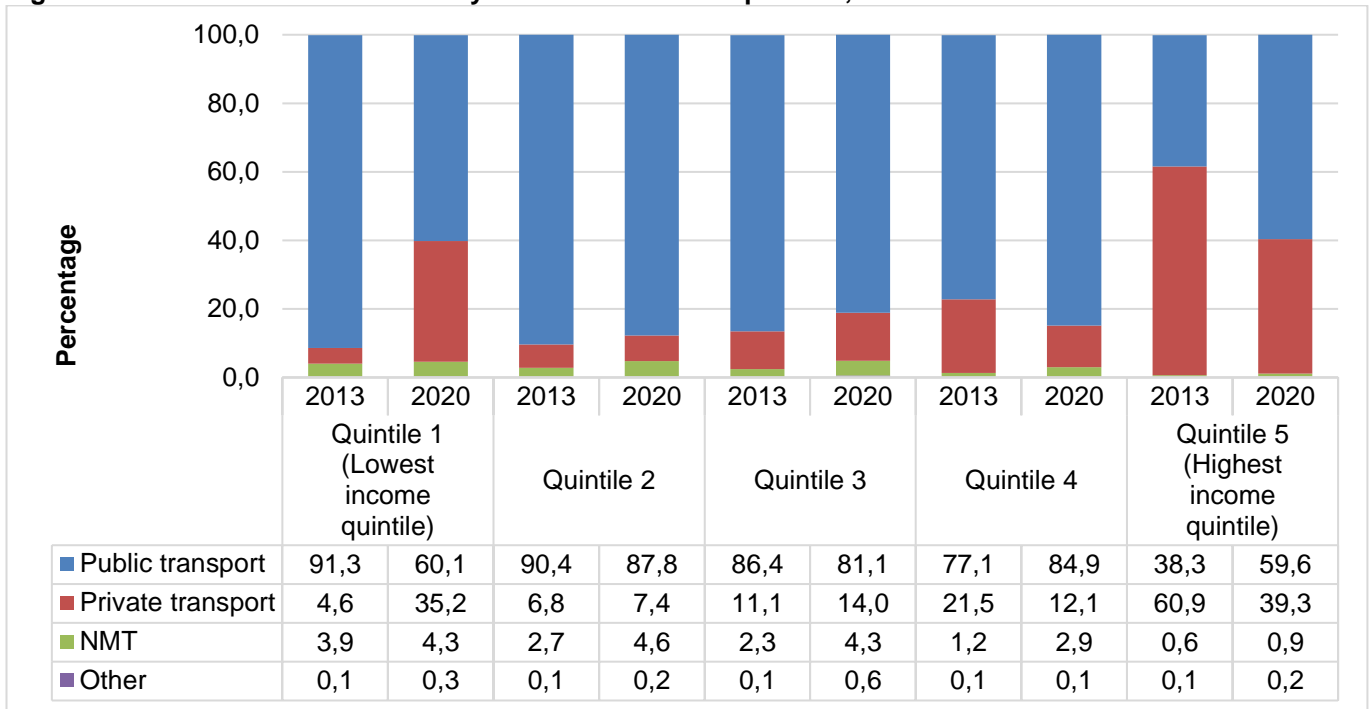
Household income quintile	Statistics ('000)	Main mode 2020								Other	Total
		Public transport			Private transport		Non-motorised transport				
		Train	Bus	Taxi	Car driver	Car passenger	Walking all the way	Bicycle	Animal-drawn transport		
Lowest income quintile	Number	100	252	2 110	1 310	132	175	0	0	14	4 093
	Per cent	2,4	6,1	51,6	32,0	3,2	4,3	0,0	0,0	0,3	100,0
Quintile 2	Number	68	334	2 496	126	119	151	0	0	5	3 299
	Per cent	2,1	10,1	75,6	3,8	3,6	4,6	0,0	0	0,2	100,0
Quintile 3	Number	58	331	2 077	255	170	132	0	0	17	3 040
	Per cent	1,9	10,9	68,3	8,4	5,6	4,3	0,0	0,0	0,6	100,0
Quintile 4	Number	97	372	2 188	251	126	91	0	0	5	3 131
	Per cent	3,1	11,9	69,9	8,0	4,0	2,9	0,0	0,0	0,1	100,0
Highest income quintile	Number	59	340	1 857	1 338	147	36	0	0	6	3 784
	Per cent	1,6	9,0	49,1	35,4	3,9	0,9	0,0	0,0	0,2	100,0
Total	Number	382	1 629	10 727	3 280	695	584	1	1	47	17 346
	Per cent	2,2	9,4	61,8	18,9	4,0	3,4	0,0	0,0	0,3	100,0

Source: NHTS, 2020

'Other' includes aircraft, scooter/motorcycle, tuk-tuk, etc.

Table 4 presents the main mode of transport used by household income quintiles. Out of a total of 17,3 million households that travelled using various modes of transport across the country, about 12,7 million used public transport, followed by 4,0 million that used private transport and more than half a million households (586 000) that used NMT. Households in quintile two constitute the majority of households (75,6%), that used a taxi as their main mode of transport, followed by households in income quintile four (69,9%) and quintile three (68,3%).

Figure 2: Main mode of travel used by household income quintiles, 2013 and 2020

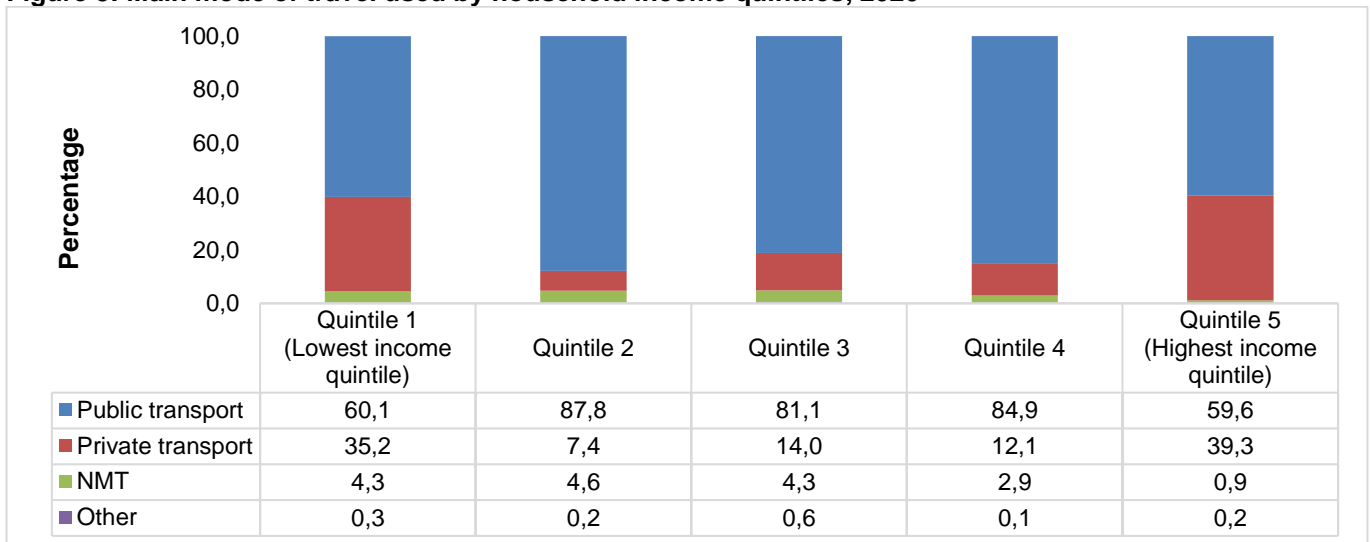


Source: NHTS, 2013 and 2020
 'Other' includes aircraft, scooter/motorcycle, tuk-tuk, etc.

Figure 2 presents the percentage distribution for main mode of travel grouped by household income quintile in 2013 and 2020. In both years, public transport was the main mode of transport used by households in different income quintiles, except for those in the highest income quintile, where in 2013, the main mode of travel was private transport.

In 2013, NMT was more prominent in households with the lowest income quintile at 3,9%. In 2020, the use of NMT was more for households in income quintile two at 4,6%. An overall increase in the use of NMT was observed for all household income quintiles between the two years.

Figure 3: Main mode of travel used by household income quintiles, 2020

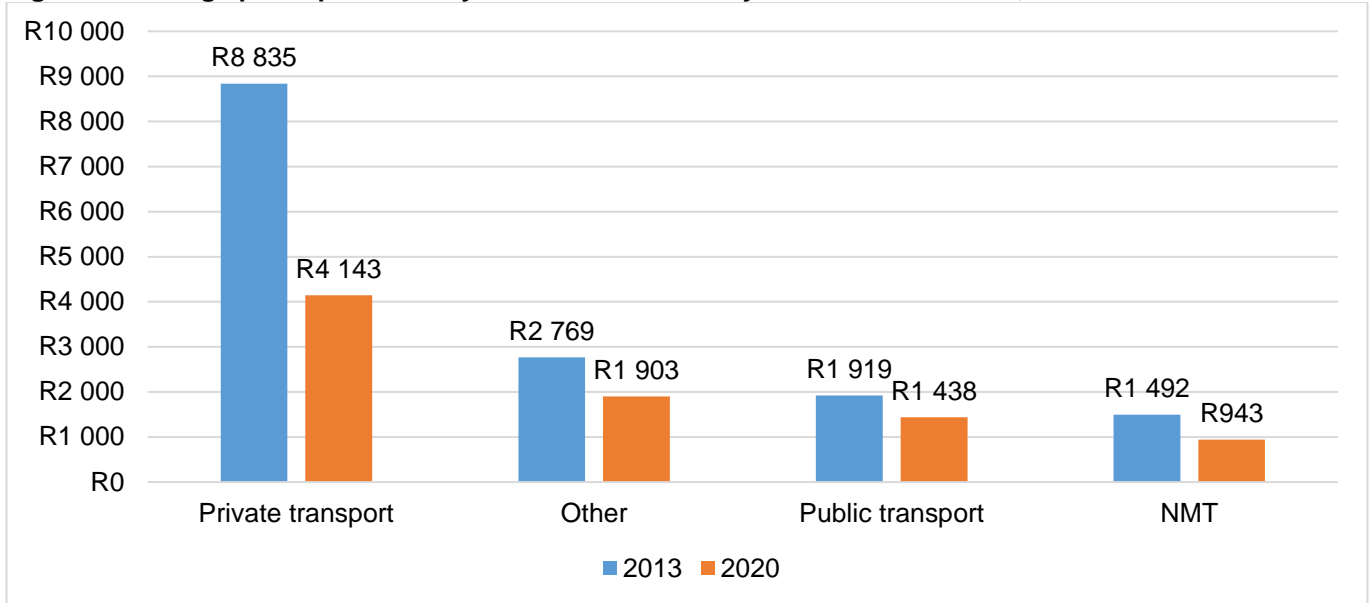


Source: NHTS, 2020
 'Other' includes aircraft, scooter/motorcycle, tuk-tuk, etc.

Figure 3 presents the percentage distribution for main mode of transport by household income quintiles in 2020. The figure shows that public transport was the main mode of travel used by households across all household income quintiles, followed by private transport. Over 80,0% of the households that used public transport were from

households in income quintile two, quintile four and quintile three. NMT was the third main mode of travel used by households across all household income quintiles.

Figure 4: Average per capita monthly household income by main mode of travel, 2013 and 2020

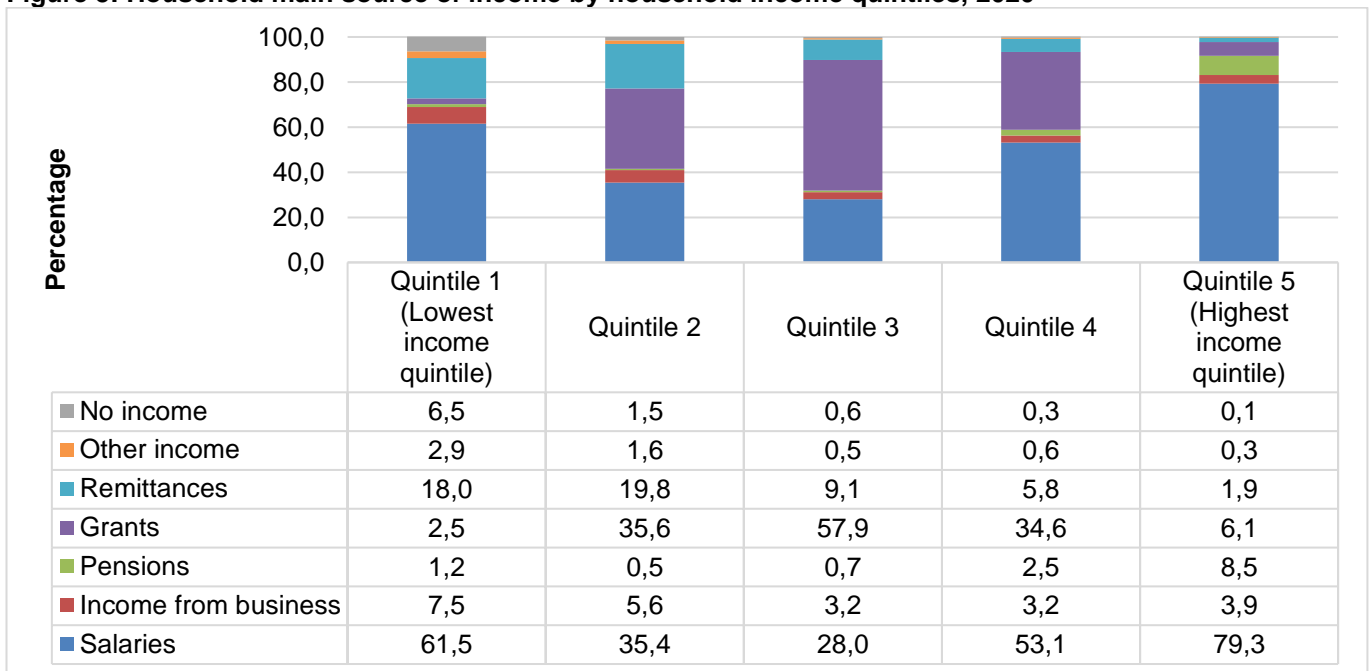


Source: NHTS, 2013 and 2020

'Other' includes aircraft, scooter/motorcycle, tuk-tuk, etc.

Figure 4 shows the average per capita monthly household income by main mode of travel in 2013 and 2020. The average per capita monthly income decreased across all modes of travel from 2013 to 2020. The largest decrease in average per capita monthly household income was observed for households that used private transport from R8 835 in 2013 to R4 143 in 2020, followed by those that used other transport, from R2 769 in 2013 to R1 903 in 2020. The average per capita monthly household income for those that used NMT also decreased; from R1 492 to R943.

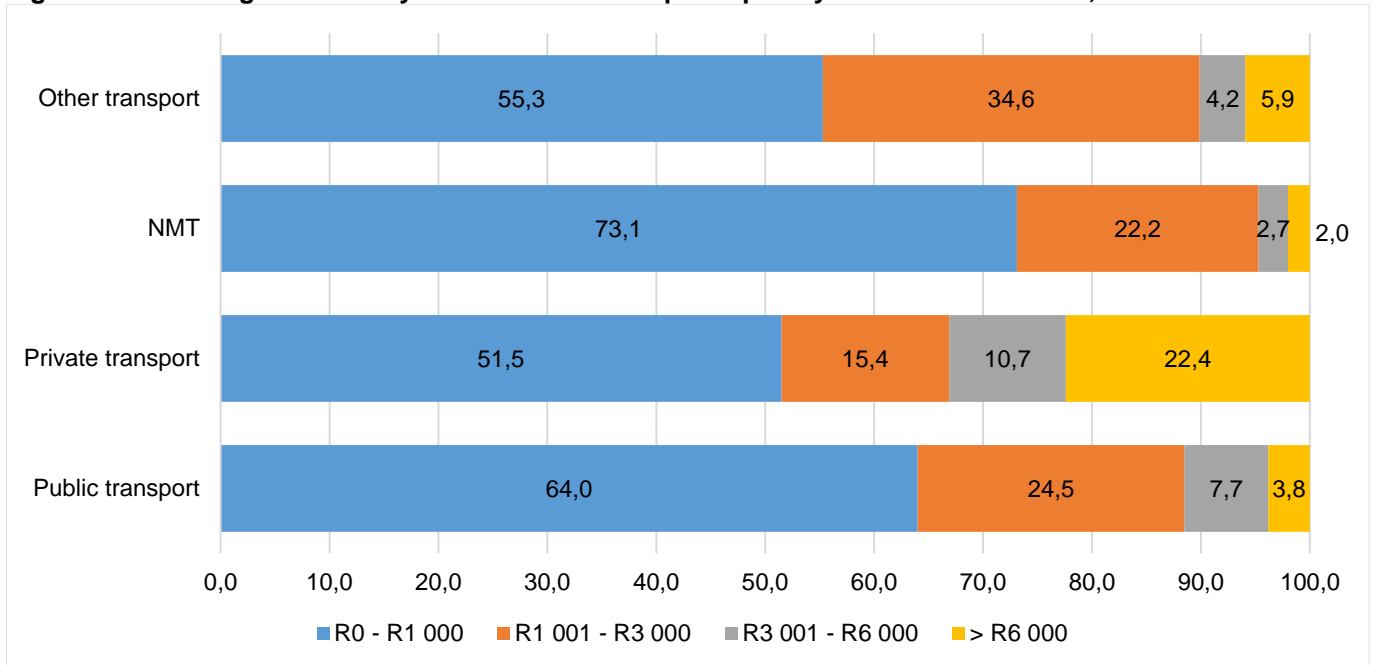
Figure 5: Household main source of income by household income quintiles, 2020



Source: NHTS, 2020

Figure 5 shows that almost 80,0% of households in the highest income quintile (quintile five) reported salaries as their main source of income at 79,3%. Similarly with households in income quintile one and four, salaries were largely mentioned as the main source of income at 61,5% and 53,1% respectively. Households in income quintile three mostly reported grants as their main source of income at 57,9%, even those in income quintile two at 35,6%. Households in the lowest income quintile (quintile one) were more likely to have no income when compared to the other income quintiles, this quintile had the highest percentage of households that said they have no income at 6,5%.

Figure 6: Percentage of monthly household income per capita by main mode of travel, 2020



Source: NHTS, 2020

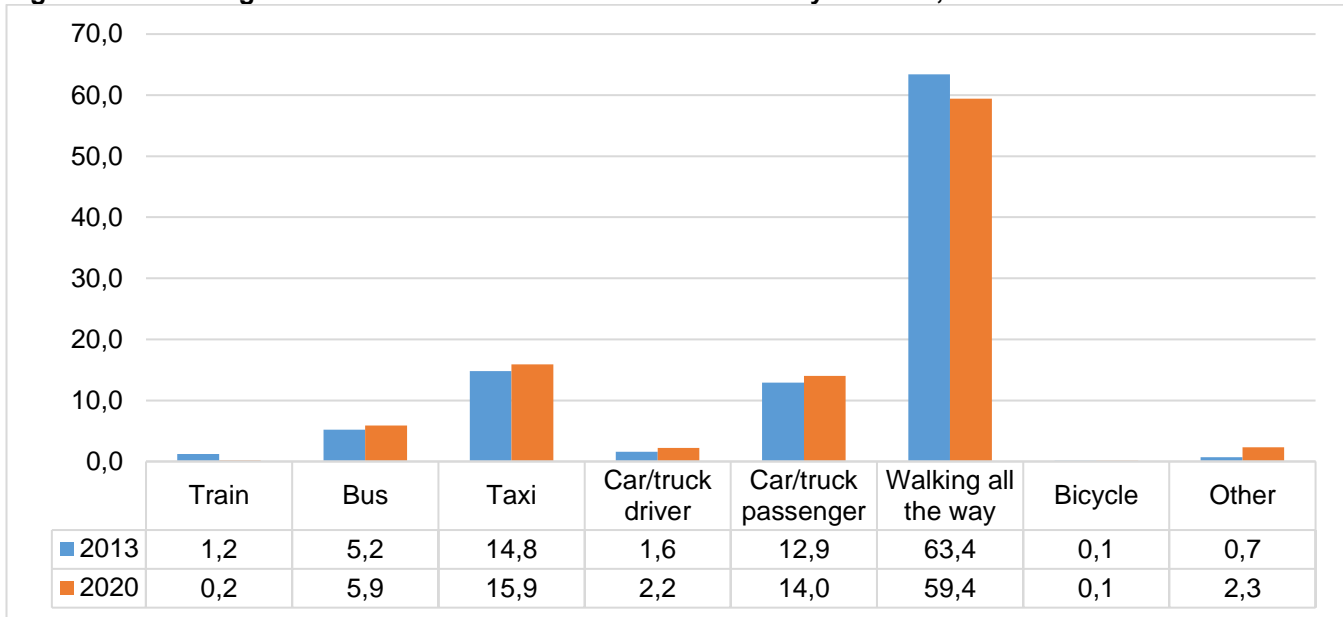
'Other' includes aircraft, scooter/motorcycle, tuk-tuk, etc.

Figure 6 depicts the percentage of monthly household income per capita by main mode of travel in 2020. The highest percentage of households that had an income per capita between R0 – R1 000 used NMT (73,1%), followed by those that used public transport (64,0%) and other transport (55,3%).

Households with an average per capita that is more than R6 000 were more likely to use private transport at 22,4%, while other modes of transport had less than 6,0% of households in this income group.

6.3 Main modes of travel used by learners

Figure 7: Percentage distribution of main mode of travel used by learners, 2013 and 2020



Source: NHTS, 2013 and 2020
 'Other' includes aircraft, scooter/motorcycle, tuk-tuk, etc.

From 2013 to 2020, the percentage of learners who used buses, taxis, car/truck as a driver, car/truck as a passenger, and other increased, while those who used trains and walked all the way decreased as shown in Figure 7. The percentage of learners who walked all the way decreased from 63,4% in 2013 to 59,4% in 2020 and the percentage of learners who cycled remained the same.

Table 5: Main mode of transport used by learners by type of educational institution, 2020

Main mode	Statistics ('000)	Educational institution 2020					RSA	
		Pre-school	School	Higher education institutions	TVET college	Other institutions		
Public transport	Train	Number	0	16	11	8	2	37
		Per cent	0,0	0,1	2,3	1,8	0,8	0,2
	Bus	Number	31	821	67	52	26	998
		Per cent	1,8	5,8	13,4	12,3	9,8	5,9
Taxi	Number	291	1 932	158	214	119	2 713	
	Per cent	16,7	13,7	31,5	50,4	44,0	15,9	
Private transport	Car driver	Number	34	195	121	14	18	382
		Per cent	1,9	1,4	24,1	3,4	6,7	2,2
	Car passenger	Number	360	1 922	65	26	16	2 388
		Per cent	20,7	13,6	12,9	6,1	5,8	14,0
NMT	Walking all the way	Number	975	8 891	68	104	83	10 121
		Per cent	56,0	63,0	13,6	24,6	30,8	59,4
	Bicycle	Number	0	12	1	2	0	16
		Per cent	0,0	0,1	0,3	0,4	0,1	0,1
Other	Number	50	319	9	5	5	388	
	Per cent	2,9	2,3	1,9	1,1	2,0	2,3	
Total	Number	1 741	14 108	500	424	271	17 044	
	Per cent	100,0	100,0	100,0	100,0	100,0	100,0	

Source: NHTS, 2020
 'Other' includes aircraft, scooter/motorcycle, tuk-tuk, etc.

Table 5 above shows that about 59,4% of learners walked all the way to educational institutions, followed by those who used taxi (15,9%) and those who travelled by car as a passenger (14,0%). The majority of learners who walked
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 (In-depth analysis of the National Household Travel Survey data), 2020

all the way were school learners (63,0%), followed by pre-school learners (56,0%). Only 13,6% of learners in higher educational institutions walked all the way.

Out of all the learners that used taxis to reach their educational institutions, the majority were found in TVET colleges (50,4%), followed by those who were in other institutions (44,0%). Around 20,7% of pre-school learners used a car as a passenger, while 24,1% of learners in higher educational institutions used a car as a driver.

Table 6: Main mode used to travel to educational institution by household income quintile, 2013 and 2020

Household income quintile	Main mode								Total
	Public transport			Private transport		Non-motorised transport			
	Train	Bus	Taxi	Car driver	Car passenger	Walking all the way	Bicycle	Other	
2013									
Lowest income quintile	0,6	3,9	8,9	0,3	3,4	82,6	0,1	0,3	100
Quintile 2	0,9	5,4	11,8	0,2	5,1	75,8	0,1	0,6	100
Quintile 3	1,6	6,8	20,7	0,9	9,9	59,2	0,1	0,8	100
Quintile 4	2,3	6,8	25,2	2,3	23,3	38,7	0,1	1,2	100
Highest income quintile	1,3	4,5	17,5	9,4	52,2	13,2	0,5	1,4	100
2020									
Lowest income quintile	0,1	5,8	18,4	4,2	20,6	47,6	0,2	3,1	100
Quintile 2	0,1	5,3	12,4	0,9	8,3	71,5	0,0	1,3	100
Quintile 3	0,3	5,5	14,2	0,5	8,0	69,8	0,0	1,7	100
Quintile 4	0,1	5,3	13,4	0,7	7,9	70,3	0,1	2,3	100
Highest income quintile	0,4	6,9	19,3	4,0	21,4	45,3	0,1	2,6	100

Source: NHTS, 2013 and 2020

'Other' includes aircraft, scooter/motorcycle, tuk-tuk, etc.

In 2013, over 80,0% of learners in the lowest income quintile walked all the way to their educational institutions; this percentage decreased by almost half in 2020, where the percentage of learners who walked all the way was 47,6%. The second most used mode of travel in 2020 for learners from households in the lowest income quintile was car as a passenger at 20,6%.

About 38,7% of learners from households in income quintile four walked all the way to their educational institutions in 2013. This percentage almost doubled in 2020, where 70,3% of learners in quintile four walked all the way to their educational institutions.

The main mode of transport used by learners in the highest income quintile was the use of a car as a passenger at 52,2%, followed by walking all the way at 13,2% in 2013. While in 2020, the main mode for learners in the same income quintile was walking all the way at 45,3%, followed by the use of a car as a passenger at 21,4%.

Table 7: Main mode used to travel to educational institutions by household income quintile, 2020

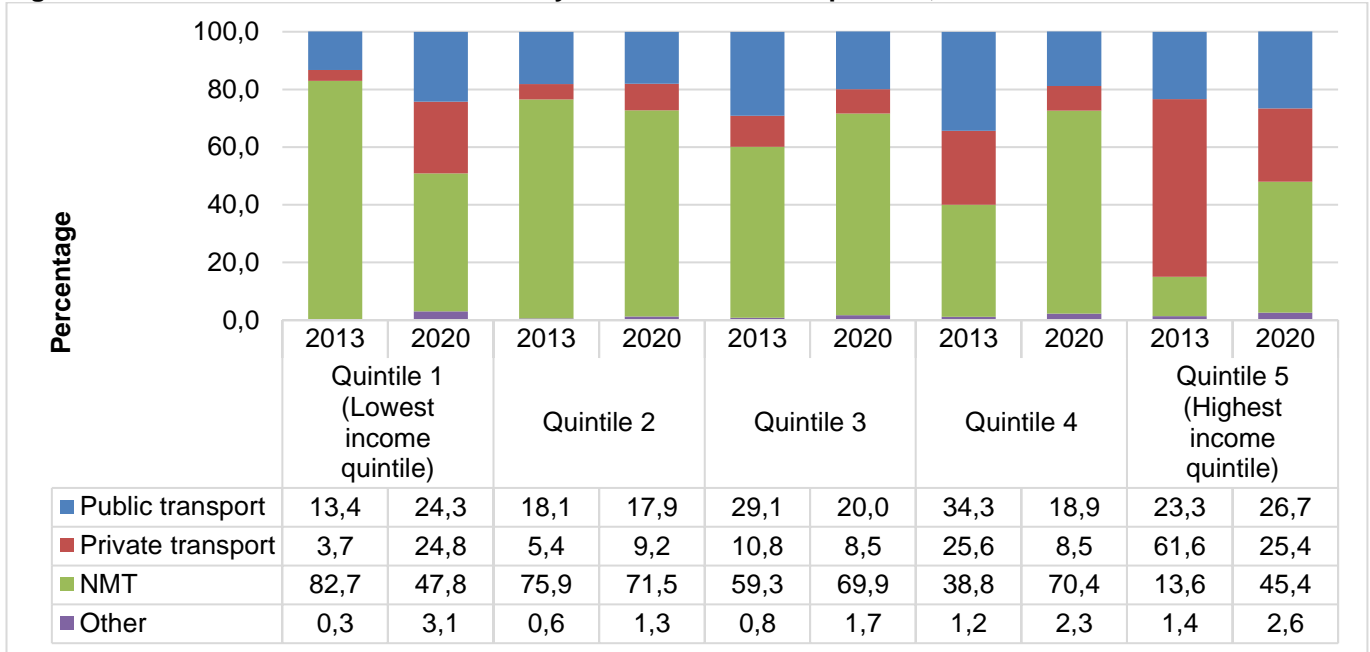
Household income quintile	Statistics ('000)	Main mode								Total
		Public transport			Private transport		Non-motorised transport			
		Train	Bus	Taxi	Car driver	Car passenger	Walking all the way	Bicycle	Other	
Lowest income quintile	Number	4	228	720	163	806	1 861	7	121	3 909
	Per cent	0,1	5,8	18,4	4,2	20,6	47,6	0,2	3,1	100,0
Quintile 2	Number	3	144	335	25	223	1 924	1	36	2 691
	Per cent	0,1	5,3	12,4	0,9	8,3	71,5	0,0	1,3	100,0
Quintile 3	Number	8	167	429	14	241	2 107	1	51	3 018
	Per cent	0,3	5,5	14,2	0,5	8,0	69,8	0,0	1,7	100,0
Quintile 4	Number	5	186	465	23	273	2 440	3	79	3 473
	Per cent	0,1	5,3	13,4	0,7	7,9	70,3	0,1	2,3	100,0
Highest income quintile	Number	18	274	764	157	846	1 789	3	101	3 952
	Per cent	0,4	6,9	19,3	4,0	21,4	45,3	0,1	2,6	100,0
Total	Number	37	998	2 713	382	2 388	10 121	16	388	17 044
	Per cent	0,2	5,9	15,9	2,2	14,0	59,4	0,1	2,3	100,0

Source: NHTS, 2020

'Other' includes aircraft, scooter/motorcycle, tuk-tuk, etc.

Table 7 shows that a high percentage of learners who walked all the way were from households in household income quintile two (71,5%), followed by those in household income quintile four (70,3%). The highest income quintile had the lowest percentage of learners who walked all the way to educational institutions (45,3%). Over two in ten learners from households within the highest income quintile (21,4%) and lowest income quintile (20,6%) indicated that they used a car as a passenger as their second mode of travel. In contrast, learners from households within income quintile two, quintile three and quintile four selected a taxi as their second main mode of travel.

Figure 8: Main mode of travel for learners by household income quintiles, 2013 and 2020

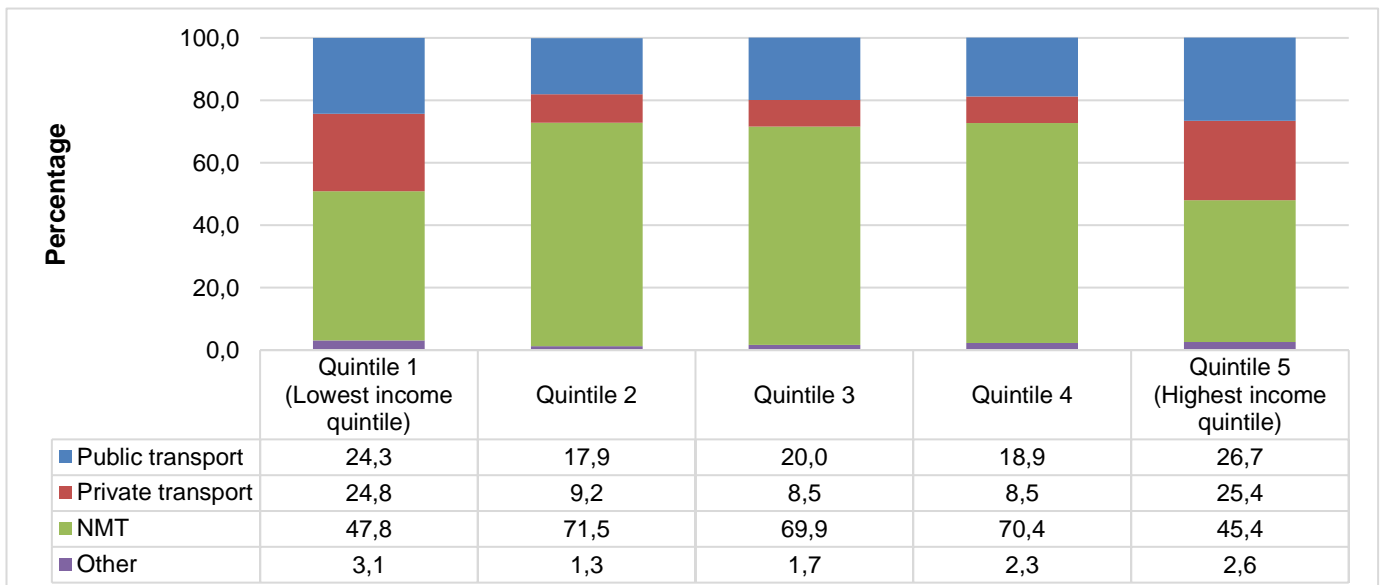


Source: NHTS, 2013 and 2020
 'Other' includes aircraft, scooter/motorcycle, tuk-tuk, etc.

In 2013, public transport was more likely to be used by learners from households in income quintile four (34,3%) followed by those in income quintile three (29,1%). In 2020, public transport was more likely to be used by learners from households in the highest income quintile (26,7%), followed by those in income quintile one (24,3%). There was an increase in private transport use for learners from households in the lowest income quintile and those in income quintile two between 2013 and 2020. Conversely, for income quintile three, four and the highest income quintile there was a decrease in private transport usage for learners between 2013 and 2020.

Interestingly, from 2013 to 2020, there was a decrease in NMT use among learners in the lowest income quintile and income quintile two. However, the percentage of learners in the higher income quintiles three, four, and highest income quintile increased.

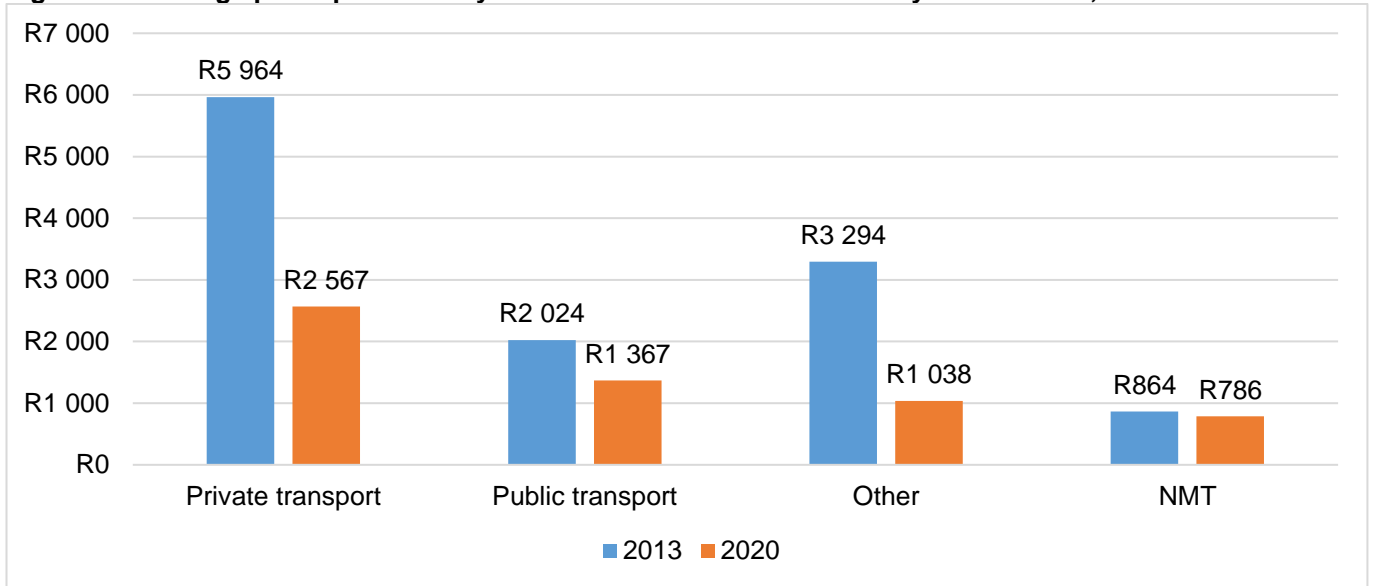
Figure 9: Main mode of travel for learners by household income quintiles, 2020



Source: NHTS, 2020
 'Other' includes aircraft, scooter/motorcycle, tuk-tuk, etc.

According to Figure 9, NMT was the main mode of travel used by learners across all household income quintiles. The second most used mode by learners from households in all the income quintiles was public transport. Over a quarter of the learners from the highest household income quintile used private transport (25,4%).

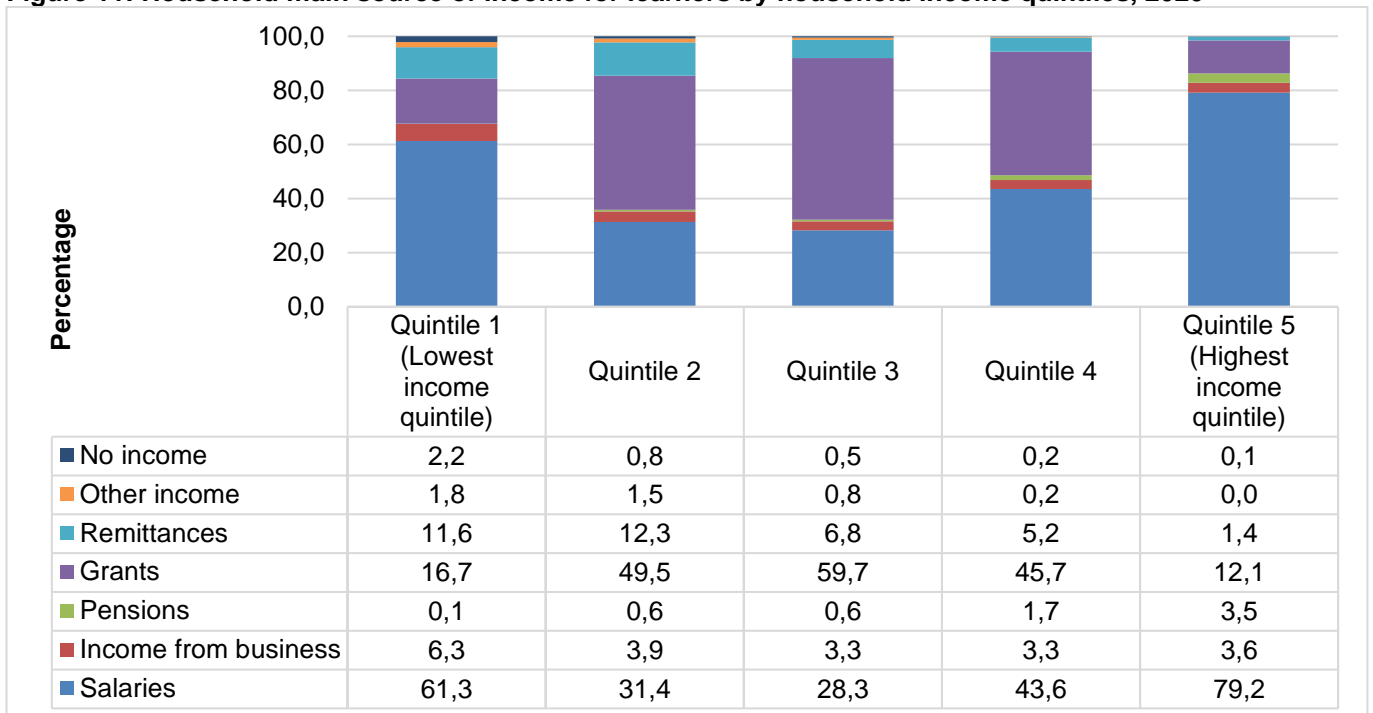
Figure 10: Average per capita monthly household income for learners by main modes, 2013 and 2020



Source: NHTS, 2013 and 2020
 'Other' includes aircraft, scooter/motorcycle, tuk-tuk, etc.

Figure 10 shows a decrease in the average per capita household income for all main modes of transport used by learners. The biggest decrease in the average per capita of the monthly household income from R5 964 in 2013 to R2 567 in 2020 was observed for learners who used private transport, followed by other modes of transport which decreased from R3 294 in 2013 to R1 038 in 2020. In addition, average per capita monthly household income for learners who used NMT decreased from R864 in 2013 to R786 in 2020.

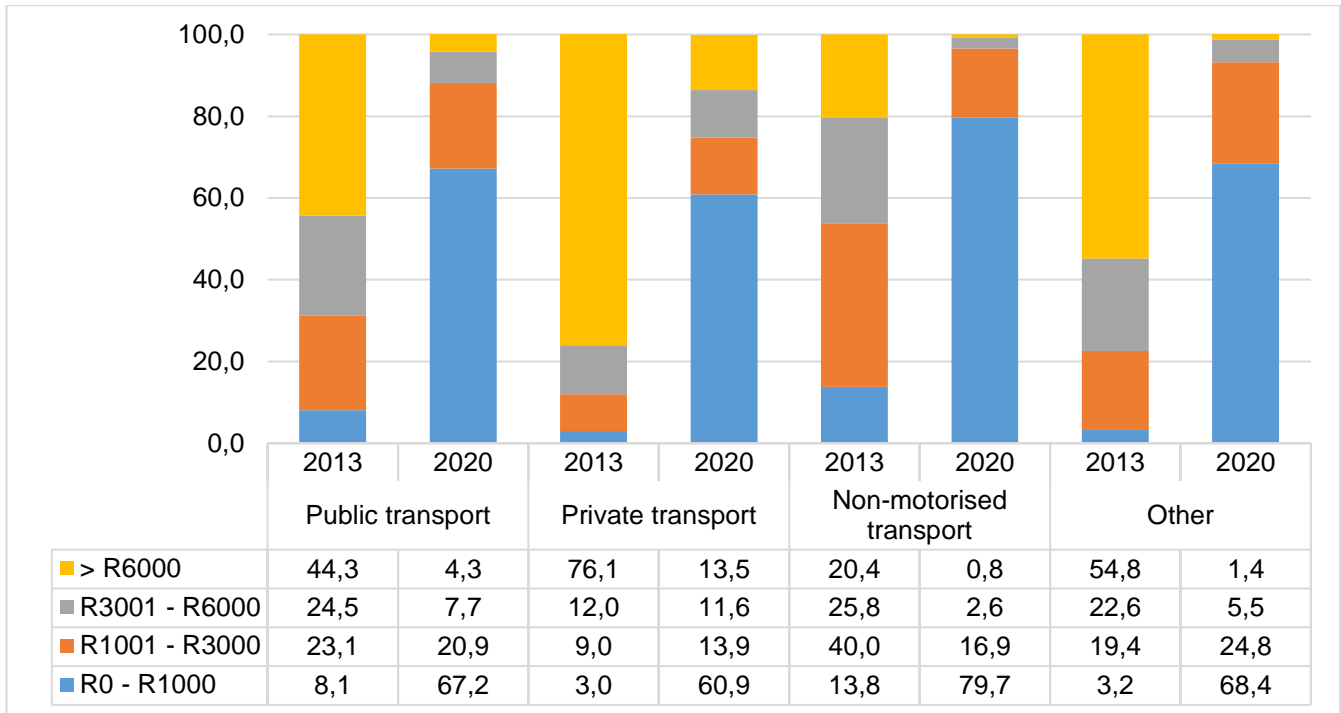
Figure 11: Household main source of income for learners by household income quintiles, 2020



Source: NHTS, 2020

Figure 11 shows household main source of income for learners from households in the lowest income quintile was mostly salaries at 61,3% followed by grants at 16,7% and remittances at 11,6%. For learners from households in income quintile two, three and four the main source of household income was mainly from grants, then followed by salaries. Those in the lowest income quintile were more likely to have no income at 2,2% compared to learners from households in other income quintiles.

Figure 12: Percentage of monthly household income per capita for learners by main modes of transport, 2013 and 2020

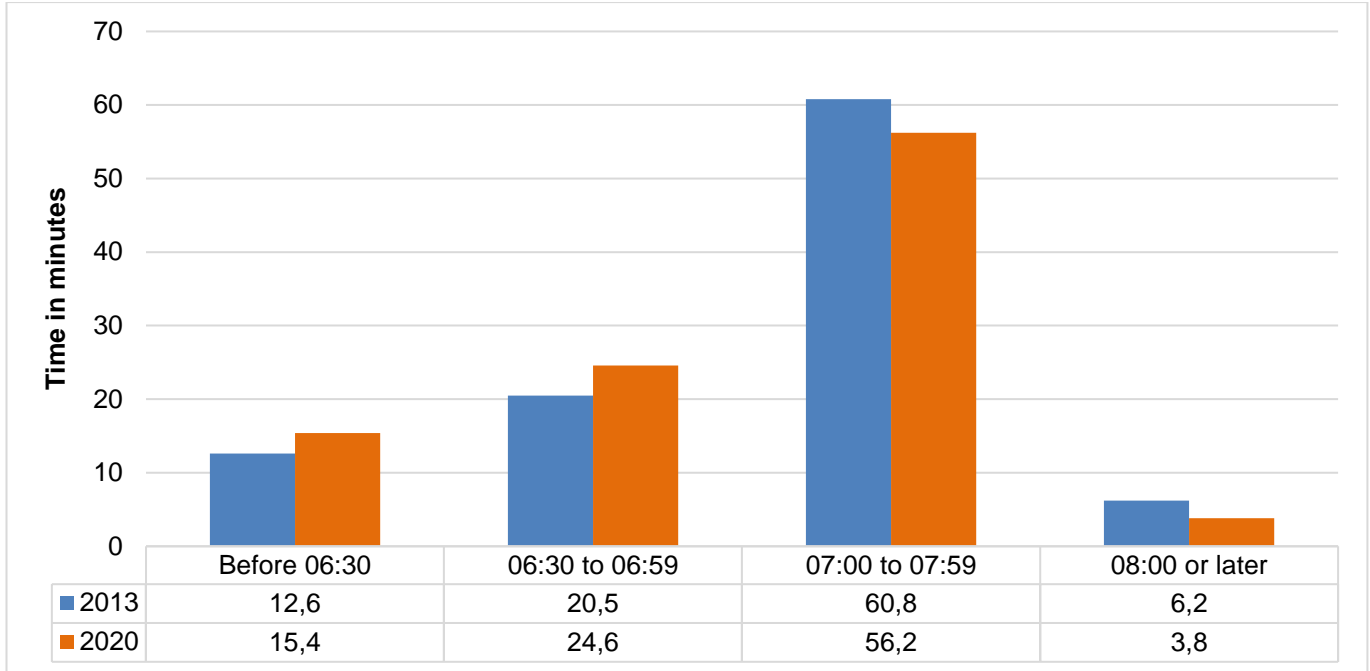


Source: NHTS, 2013 and 2020

'Other' includes aircraft, scooter/motorcycle, tuk-tuk, etc.

Figure 12 presents the percentage of monthly household income per capita for learners by main mode of transport in 2013 and 2020. In 2020, about eight out of ten learners who used NMT were from households that had an average income per capita of less than or equal to R1 000 per month (79,7%), whereas in 2013 it was only 13,8% of learners from households, with similar status.

Figure 13: Time learners leave their place of residence for attendance at educational institution, 2013 and 2020



Source: NHTS, 2013 and 2020

Generally, learners were more likely to leave their place of residence between 07:00 to 07:59 regardless of mode used both in 2013 and 2020. There was, however, a decrease in the percentage of learners who leave between 07:00 to 07:59 from 60,8% in 2013 to 56,2% in 2020. A decrease in percentage was also observed for learners who leave their residence by 08:00 or later. An increase, however, was observed in the percentage of learners who leave their residence before 06:30 (from 12,6% in 2013 to 15,4% in 2020) and those leaving between 06:30 to 06:59 (from 20,5% in 2013 to 24,6% in 2020).

Table 8: Time learners leave their place of residence for attendance at educational institution by main mode, 2020

Mode of travel		Number of persons who completed the question ('000)	Attendees' time of leaving for education institution 2020				Total
			Before 06:30	06:30 to 06:59	07:00 to 07:59	08:00 or later	
Public transport	Train	37	39,8	20,4	29,2	10,6	100,0
	Bus	998	35,5	30,6	31,2	2,8	100,0
	Taxi	2 713	26,3	29,1	38,2	6,5	100,0
Private transport	Car driver	382	13,4	20,8	51,8	14,0	100,0
	Car passenger	2 388	16,5	32,1	48,7	2,7	100,0
NMT	Walking all the way	10 121	9,8	21,1	66,1	3,0	100,0
	Bicycle	16	16,8	17,6	53,5	12,1	100,0
Other		388	28,5	27,9	39,6	4,0	100,0
RSA		17 044	15,4	24,6	56,2	3,8	100,0

Source: NHTS, 2020

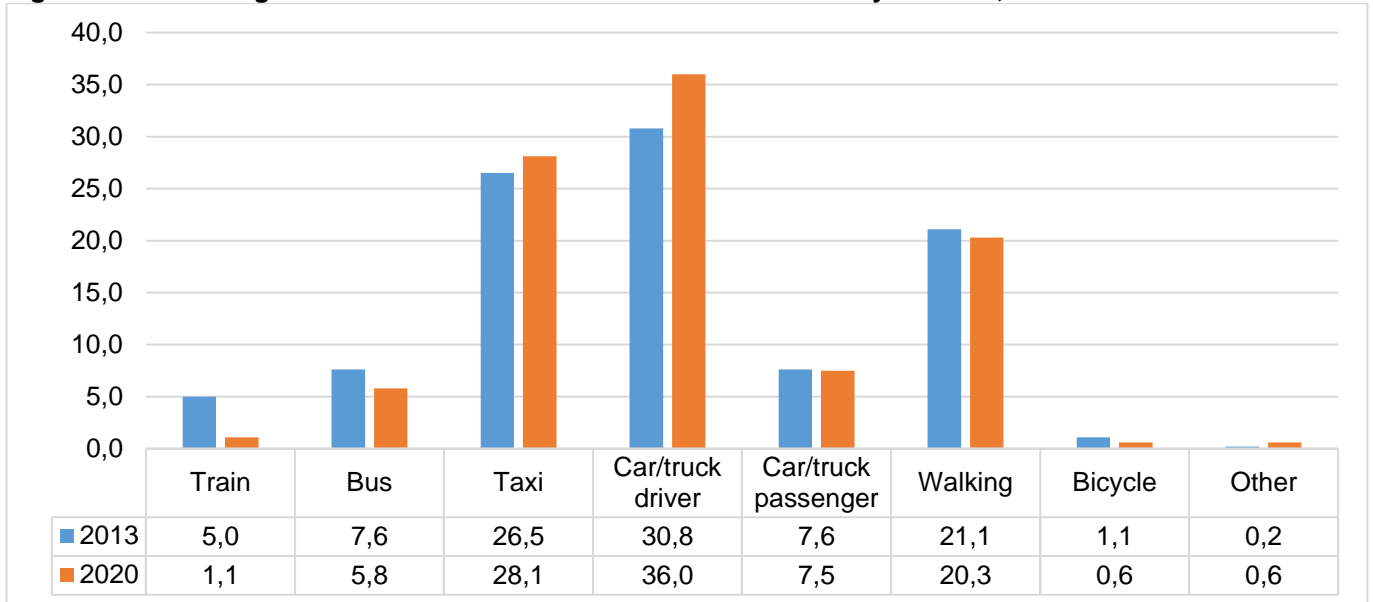
'Other' includes aircraft, scooter/motorcycle, tuk-tuk, etc.

Table 8 summarises the learners' time of leaving their place of residence for attendance at the educational institution by main mode of travel. Learners using a train and bus as a mode of transport were more likely to leave their place of residence before 06:30. While over 50,0% of those using a car as a driver, walking all the way and bicycle are more likely to leave between 07:00 to 07:59. Those using a car as a passenger were less likely to leave their

residence after 08:00 at 2,7%. This pattern was also observed in 2013 with the only exception of those less likely to leave their residence after 08:00, in 2013 it was learners who use buses that were less likely to leave after 08:00.

6.4 Main modes of travel used by workers

Figure 14: Percentage distribution of the main mode of travel used by workers, 2013 and 2020



Source: NHTS, 2013 and 2020

'Other' includes aircraft, scooter/motorcycle, tuk-tuk, etc.

According to Figure 14, the percentage of workers who used a car/truck as a driver and taxis increased to 36,0% and 28,1% in 2020, compared to 2013 (30,8% and 26,5% respectively). However, the percentage of workers who travelled by train decreased from 5,0% in 2013 to 1,1% in 2020, followed by those that used a bus 7,6% in 2013 to 5,8% in 2020. There was also a slight decline in the percentage of workers who walked all the way from 21,1% in 2013 to 20,3% in 2020.

Table 9: Main mode used to travel to work by work sector, 2020

Work sector	Statistics ('000)	Main mode 2020								Total
		Public transport			Private transport		NMT		Other	
		Train	Bus	Taxi	Car driver	Car passenger	Walking all the way	Bicycle		
Formal sector	Number	114	561	2 547	3 695	690	1 172	37	44	8 860
	Per cent	1,3	6,3	28,7	41,7	7,8	13,2	0,4	0,5	100,0
Informal sector	Number	18	91	635	483	189	833	18	12	2 277
	Per cent	0,8	4,0	27,9	21,2	8,3	36,6	0,8	0,5	100,0
Private household	Number	11	89	365	337	62	486	20	17	1 386
	Per cent	0,8	6,4	26,3	24,3	4,5	35,1	1,4	1,2	100,0
Do not Know	Number	0	6	26	49	5	12	0	0	99
	Per cent	0,0	6,5	26,6	49,6	4,7	12,1	0,3	0,1	100,0
Total	Number	143	747	3 574	4 564	945	2 502	75	72	12 623
	Per cent	1,1	5,9	28,3	36,2	7,5	19,8	0,6	0,6	100,0

Source: NHTS, 2020

'Other' includes aircraft, scooter/motorcycle, tuk-tuk, etc.

Out of a total of 12,6 million workers, the majority (4,6 million) of drove to work, followed by those who used a taxi (3,6 million) and those who walked all the way (2,5 million). Of workers who drove to work, the majority (3,7 million) were from the formal work sector, followed by workers in the informal sector (483 000). Almost a quarter of the workers across all work sectors used a taxi to get to their workplace (28,3%), while over 30,0% of workers who walked all the way to work were from the informal sector (36,6%) and private households (35,1%).

Table 10: Main mode used to travel to work by household income quintile, 2013 and 2020

Household income quintiles	Main mode								Total	
	Public transport			Private transport		NMT		Other		
	Train	Bus	Taxi	Car driver	Car passenger	Walking all the way	Bicycle			
2013										
Lowest income quintile	3,2	7,2	24,7	8,1	5,4	48,8	2,2	0,4	100,0	
Quintile 2	5,2	10,2	29,7	9,7	7,4	35,9	1,8	0,2	100,0	
Quintile 3	6,2	10,1	33,7	13,3	7,6	27,5	1,4	0,2	100,0	
Quintile 4	7,0	8,5	33,5	24,2	7,9	17,8	0,8	0,3	100,0	
Highest income quintile	2,6	3,8	13,1	65,4	8,0	6,5	0,5	0,1	100,0	
2020										
Lowest income quintile	1,2	4,5	25,0	47,8	7,0	13,1	0,6	0,8	100,0	
Quintile 2	1,0	5,5	27,2	22,6	6,1	36,4	0,9	0,3	100,0	
Quintile 3	1,1	6,2	31,4	15,0	6,6	38,1	1,0	0,6	100,0	
Quintile 4	1,9	8,1	37,2	14,6	7,8	29,1	0,8	0,5	100,0	
Highest income quintile	0,8	6,1	26,5	44,4	8,3	13,1	0,3	0,5	100,0	

Source: NHTS, 2013 and 2020

'Other' includes aircraft, scooter/motorcycle, tuk-tuk, etc.

Table 10 shows that workers from households in the lowest income quintile were more like to walk in 2013 at 48,8% followed by those who used a taxi at 24,7%. However, in 2020, workers in the same income quintile were more likely to use a car as a driver at 47,8% followed by those who used a taxi at 25,0%. Similarly, in 2013, workers from households in income quintile three, mostly used a taxi, followed by walking all the way, while in 2020 it was walking all the way followed by taxi. Over 60,0% of workers from households in the highest income quintile used a car as a driver (65,4%) as main mode of transport to work followed by taxi at 13,1%, the same pattern was observed in 2020.

However, there was a decrease in the percentage of workers who used a car as a driver from 2013 to 2020, and an increase in the percentage of workers for those who used a taxi to get to their work place.

Table 11: Main mode used to travel to work by household income quintile, 2020

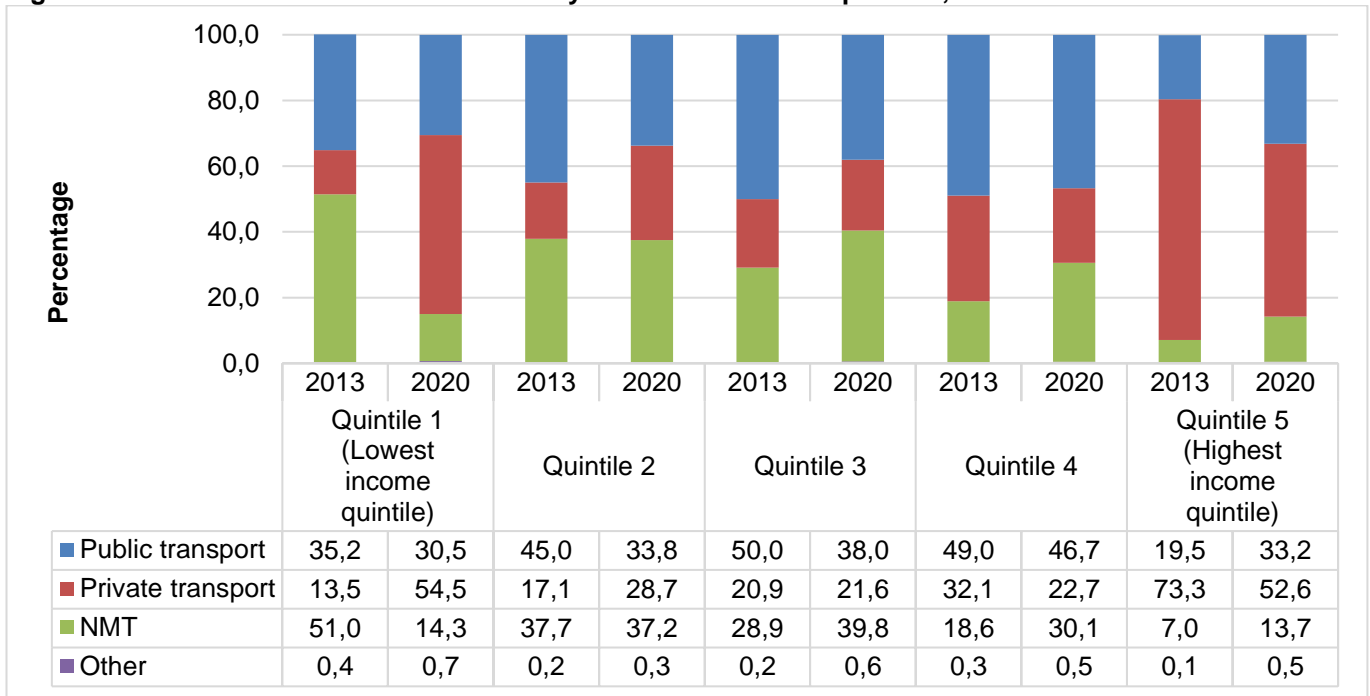
Household income quintiles	Statistics ('000)	Main mode 2020								Total
		Public transport			Private transport		NMT			
		Train	Bus	Taxi	Car driver	Car passenger	Walking all the way	Bicycle	Other	
Lowest income quintile	Number	45	169	939	1 795	262	490	23	29	3 751
	Per cent	1,2	4,5	25,0	47,8	7,0	13,1	0,6	0,8	100,0
Quintile 2	Number	9	51	253	210	57	340	8	3	932
	Per cent	1,0	5,5	27,2	22,6	6,1	36,4	0,9	0,3	100,0
Quintile 3	Number	13	77	392	187	82	475	13	8	1 247
	Per cent	1,1	6,2	31,4	15,0	6,6	38,1	1,0	0,6	100,0
Quintile 4	Number	39	162	749	293	156	586	17	10	2 012
	Per cent	1,9	8,1	37,2	14,6	7,8	29,1	0,8	0,5	100,0
Highest income quintile	Number	36	288	1 241	2 079	388	613	13	23	4 682
	Per cent	0,8	6,1	26,5	44,4	8,3	13,1	0,3	0,5	100,0
Total	Number	143	747	3 574	4 564	945	2 502	75	72	12 623
	Per cent	1,1	5,9	28,3	36,2	7,5	19,8	0,6	0,6	100,0

Source: NHTS, 2020

'Other' includes aircraft, scooter/motorcycle, tuk-tuk, etc.

Table 11 summarises the main mode used to travel to work by household income quintile. A high percentage of workers who drove to work were found in households in the lowest income quintile (47,8%), followed by those in the highest income quintile (44,4%). Over 35,0% of workers who walked all the way were from households within income quintile three (38,1%) and income quintile two (36,4%). Of all the workers that used a taxi, a majority were from households within income quintile 4 (37,2%), followed by those within income quintile 3 (31,4%).

Figure 15: Main mode of travel for workers by household income quintiles, 2013 and 2020



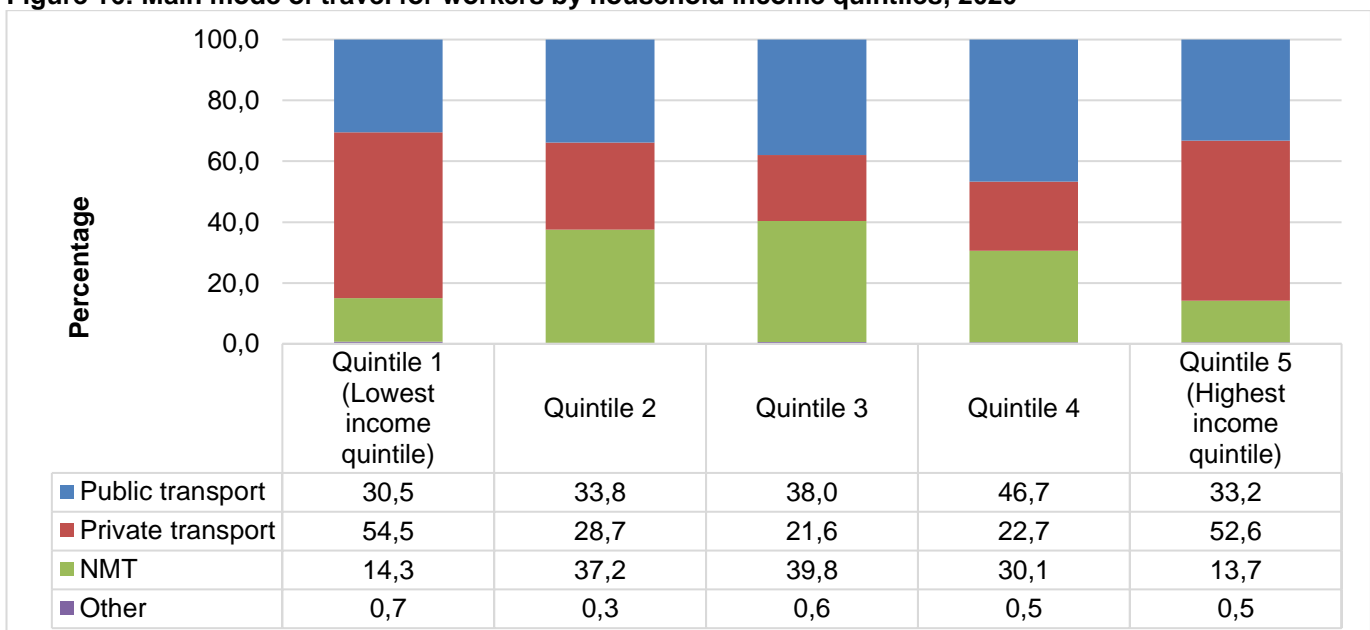
Source: NHTS, 2013 and 2020

'Other' includes aircraft, scooter/motorcycle, tuk-tuk, etc.

Figure 15 presents the percentage distribution of the main mode of transport used for workers by household income quintiles for 2013 and 2020. Generally, private transport seems to be more prominent among workers from low household income quintiles (quintiles one, two and three), where an increase in the percentage was observed between 2013 and 2020. Adversely, there was a decrease in private transport use for workers within household income quintile four and the highest income quintile from 2013 to 2020.

NMT was mostly used by workers from households in income quintiles three, four and the highest income quintile, the figure shows an increase in percentages for workers using NMT from 2013 to 2020 in these income quintiles. Whereas for workers from households in the lowest income quintile and income two, there was a percentage decrease between 2013 and 2020.

Figure 16: Main mode of travel for workers by household income quintiles, 2020

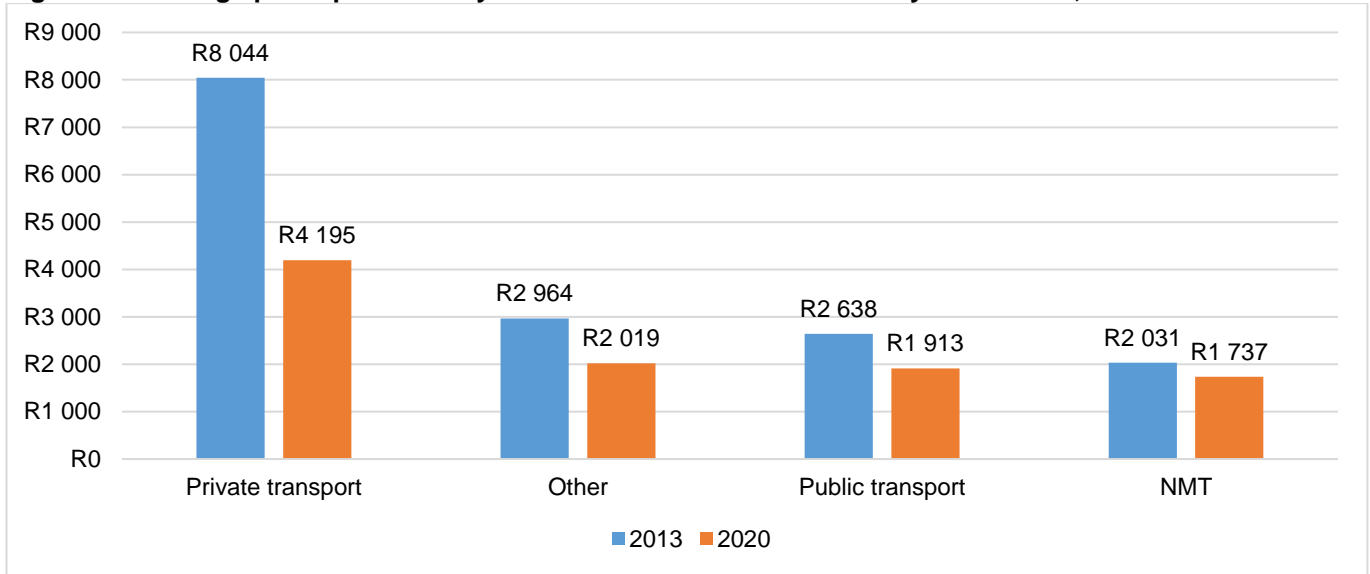


Source: NHTS, 2020

'Other' includes aircraft, scooter/motorcycle, tuk-tuk, etc.

Figure 16 illustrates that workers from households in the lowest income quintile (54,5%) and the highest income quintile (52,6%) were more likely to use private transport as their main mode of travel to their workplaces. On the contrary, workers from households within income quintile four (46,7%) indicated that public transport was their main mode of travel, while those within household income quintile three (39,8%) and household income quintile two (37,2%) selected NMT as their main mode of travel.

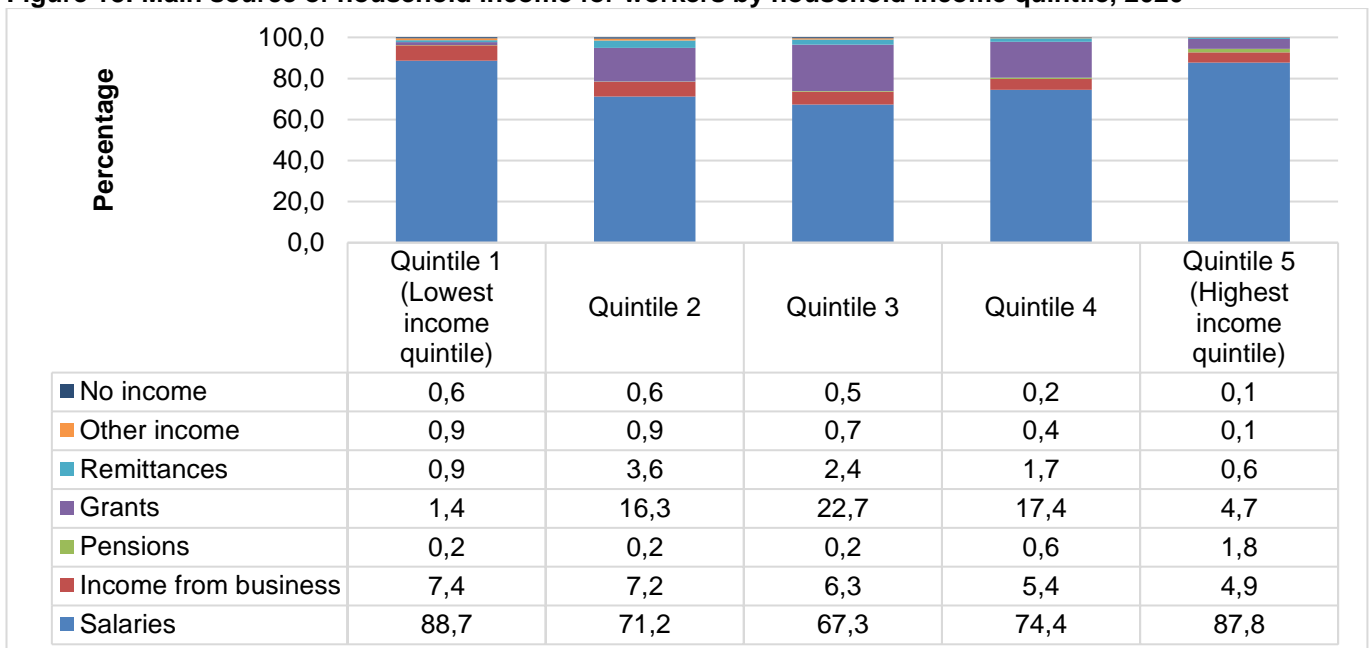
Figure 17: Average per capita monthly household income for workers by main mode, 2013 and 2020



Source: NHTS, 2013 and 2020
 'Other' includes aircraft, scooter/motorcycle, tuk-tuk, etc.

Figure 17 gives an illustration of the average household per capita income for workers by main mode. There was a decrease in the average monthly household per capita income for workers across all modes of transport in the year 2020 compared to 2013. A large decrease was observed among workers who used private transport from R8 044 in 2013 to R4 195 in 2020, followed by those who used other modes of travel from R2 964 to R2 019 in 2013 and 2020, respectively. Additionally, the average per capita monthly household income for households that used NMT decreased from R2 031 in 2013 to R1 737 in 2020.

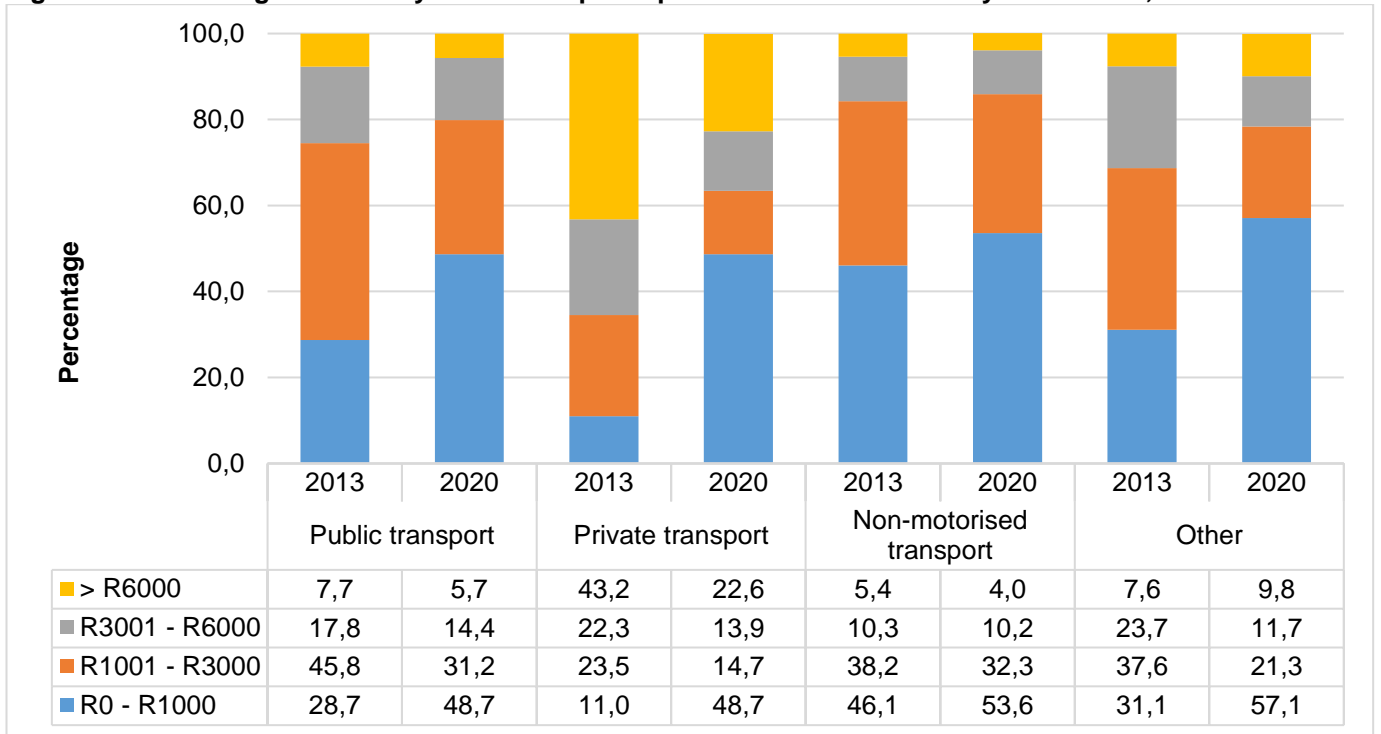
Figure 18: Main source of household income for workers by household income quintile, 2020



Source: NHTS, 2020

Figure 18 summarises main source of household income for workers by household income quintile. Workers were more likely to be from households where the main source of household income was salaries, with all the percentages for all the income quintiles above 60% for this category. Those in income quintile three reported grants as the second source of household income, similar to those in income quintile two and income quintile four.

Figure 19: Percentage of monthly household per capita income for workers by main mode, 2013 and 2020

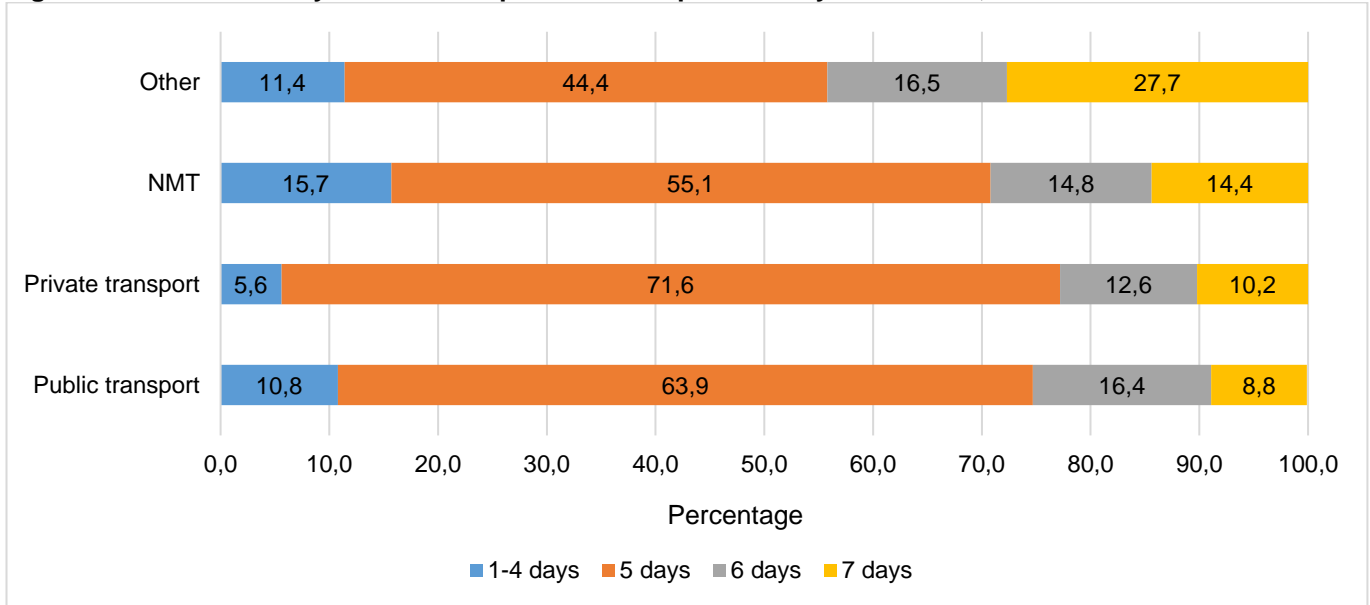


Source: NHTS, 2013 and 2020

'Other' includes aircraft, scooter/motorcycle, tuk-tuk, etc.

Figure 19 presents the percentage of monthly household per capita income for workers by main mode of travel for 2013 and 2022. For households with an average monthly household income per capita of R1 000 or less, there was an increase in percentage for workers using all the modes of transport to work, with the highest percentage being for those using private transport. It is noteworthy that those from households with the highest monthly income per capita (more than R6 000) had a decrease in the percentage of those using private transport from 43,2% in 2013 to 22,6% in 2020.

Figure 20: Number of days travelled to place of work per week by main mode, 2020

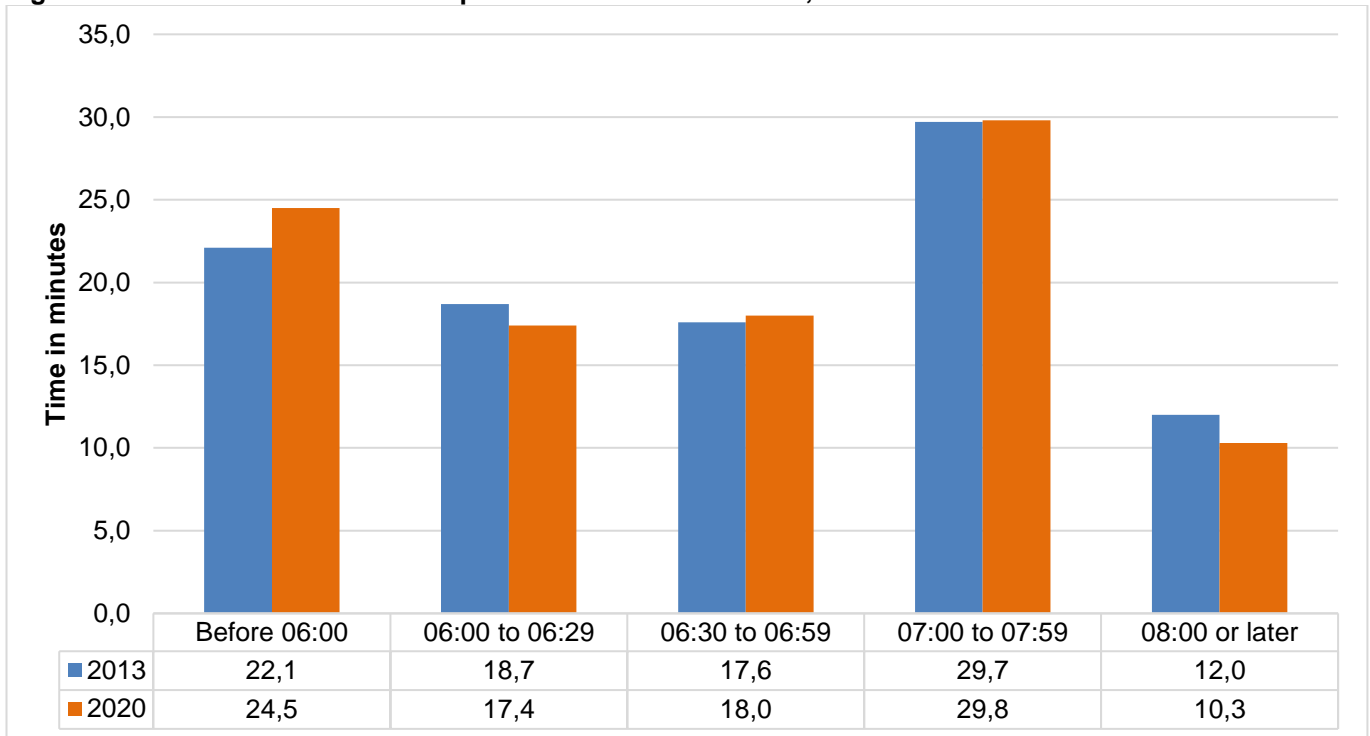


Source: NHTS, 2020

'Other' includes aircraft, scooter/motorcycle, tuk-tuk, etc.

Figure 20 depicts the number of days travelled to place of work per week by main mode. Most workers indicated that they travelled five days per week to the place of work. A high percentage of workers who travelled five days per week to a place of work used private transport (71,6%), followed by those that used public transport (63,9%) and NMT at 55,1%. The majority (15,7%) of workers who travel 1-4 days to work used NMT as a main mode of travel.

Figure 21: Time workers leave their place of residence for work, 2013 and 2020



Source: NHTS, 2013 and 2020

Workers are likely to leave their place of residence between 07:00 to 07:59 regardless of mode used both in 2013 and 2020. These are followed by those who leave the place of residence before 06:00 at 22,1% in 2013 and 24,5% in 2020, with more workers leaving at this time in 2020 compared to those in 2013. There was a percentage decrease for workers leaving their place of residence between 06:00 to 06:29 and those leaving at 08:00 or later from 2013 to 2020 as shown in Figure 21 above.

Table 12: Time workers leave their place of residence for work by main mode, 2020

Mode of travel		Number of workers who completed the question ('000)	Time workers leave 2020 (percentage of workers within the mode)					Total
			Before 06:00	06:00 to 06:29	06:30 to 06:59	07:00 to 07:59	08:00 or later	
Public transport	Train	151	54,3	15,3	9,4	7,8	13,2	100,0
	Bus	777	55,9	19,4	11,1	10,0	3,6	100,0
	Taxi	3 753	30,5	20,8	14,9	22,6	11,1	100,0
Private transport	Car/truck driver	4 810	18,2	17,4	19,3	35,4	9,7	100,0
	Car/truck passenger	997	26,1	19,2	18,7	29,6	6,3	100,0
NMT	Walking all the way	2 704	15,5	11,7	22,5	37,0	13,2	100,0
	Bicycle	83	21,2	16,0	18,5	34,7	9,7	100,0
Other		76	40,9	9,1	12,9	21,1	16,0	100,0
Total		13 350	24,5	17,4	18	29,8	10,3	100,0

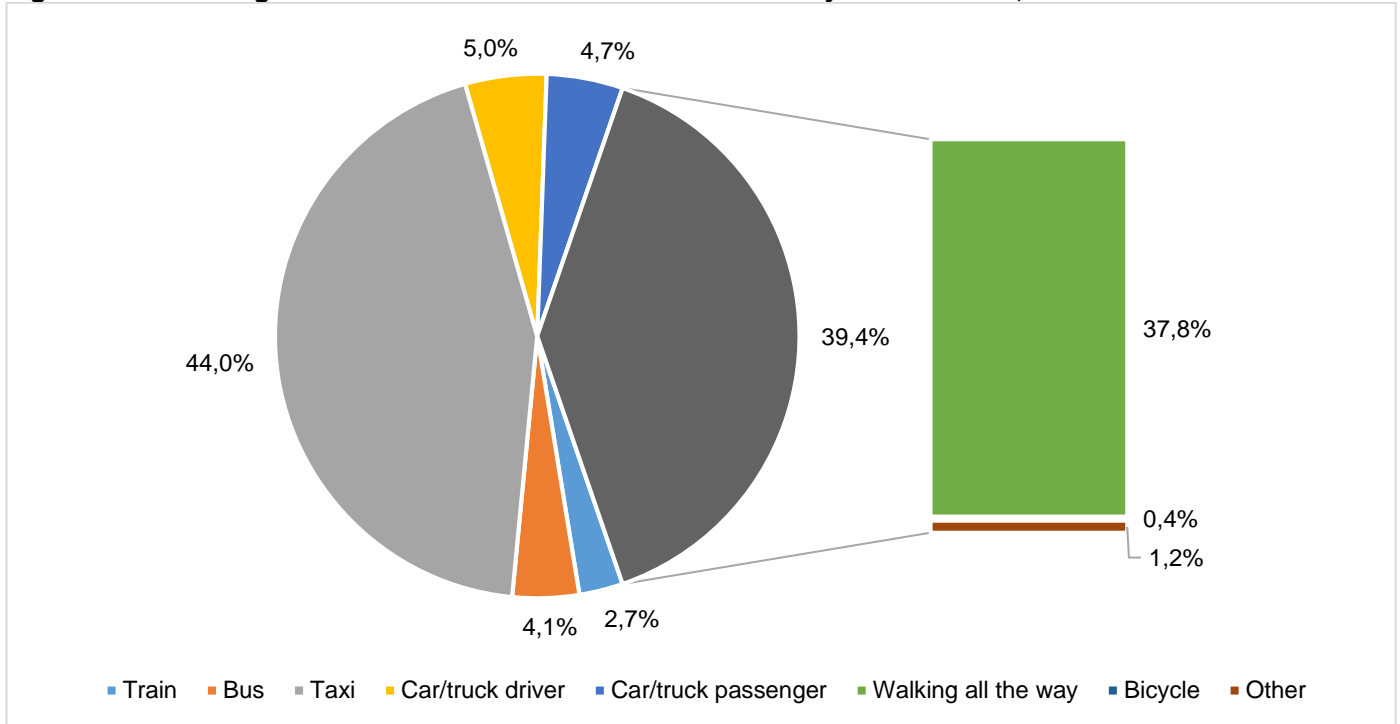
Source: NHTS, 2020

'Other' includes aircraft, scooter/motorcycle, tuk-tuk, etc.

Table 12 shows the time workers leave for work by main mode of travel. Over two in ten workers left for work between 07:00 and 07:59 (29,8%), followed by those who left for work before 06:00 (24,5%). About 10,3% of workers left for work at 08:00 or later. Approximately 37,0% of workers who left between 07:00 and 07:59 walked all the way, followed by those that used a car/truck as a driver (35,4%) and those that used a bicycle (34,7%). However, a majority of workers who left before 06:00 used buses (55,9%) and trains (54,3%).

6.5 Main modes of travel used by work seekers

Figure 22: Percentage distribution of main mode of travel used by work seekers, 2020



Source: NHTS, 2020
 'Other' includes aircraft, scooter/motorcycle, tuk-tuk, etc.

About 44,0% of work seekers used taxi as main mode of transport to reach their destination. Walking all the way contributed the highest percentage (37,8%) to the category 'non-motorised transport', followed by bicycles (0,4%). Other modes used by work seekers are the use of a car/truck as a driver (5,0%) followed by those who were passengers in a car/truck (4,7%).

Table 13: Main mode used to travel looking for work by geographic location, 2020

Geographic Location	Statistics ('000)	Main mode 2020								Total
		Public transport			Private transport		NMT		Other	
		Train	Bus	Taxi	Car driver	Car passenger	Walking all the way	Bicycle		
Metro	Number	50	12	389	34	23	229	1	13	750
	Per cent	6,6	1,6	51,8	4,5	3,1	30,5	0,1	1,8	100,0
Non-Metro	Number	1	68	461	64	68	502	7	10	1 179
	Percent	0,1	5,7	39,1	5,4	5,7	42,5	0,6	0,8	100,0
Total	Number	51	80	849	97	91	730	8	23	1 930
	Per cent	2,7	4,1	44,0	5,0	4,7	37,8	0,4	1,2	100,0

Source: NHTS, 2020
 'Other' includes aircraft, scooter/motorcycle, tuk-tuk, etc.

About 1,9 million of unemployed individuals travelled in the week prior the survey looking for a job or trying to start a business. Of those who travelled, 849 000 which is 44,0% used a taxi, followed by those who walked all the way (730 000). The use of bicycles carried the least proportion of work seekers at 0,4%. However, in non-metros the mode with the lowest percentage for work seekers was trains at 0,1%.

Table 14: Main mode of transport used to look for work by household income quintile, 2020

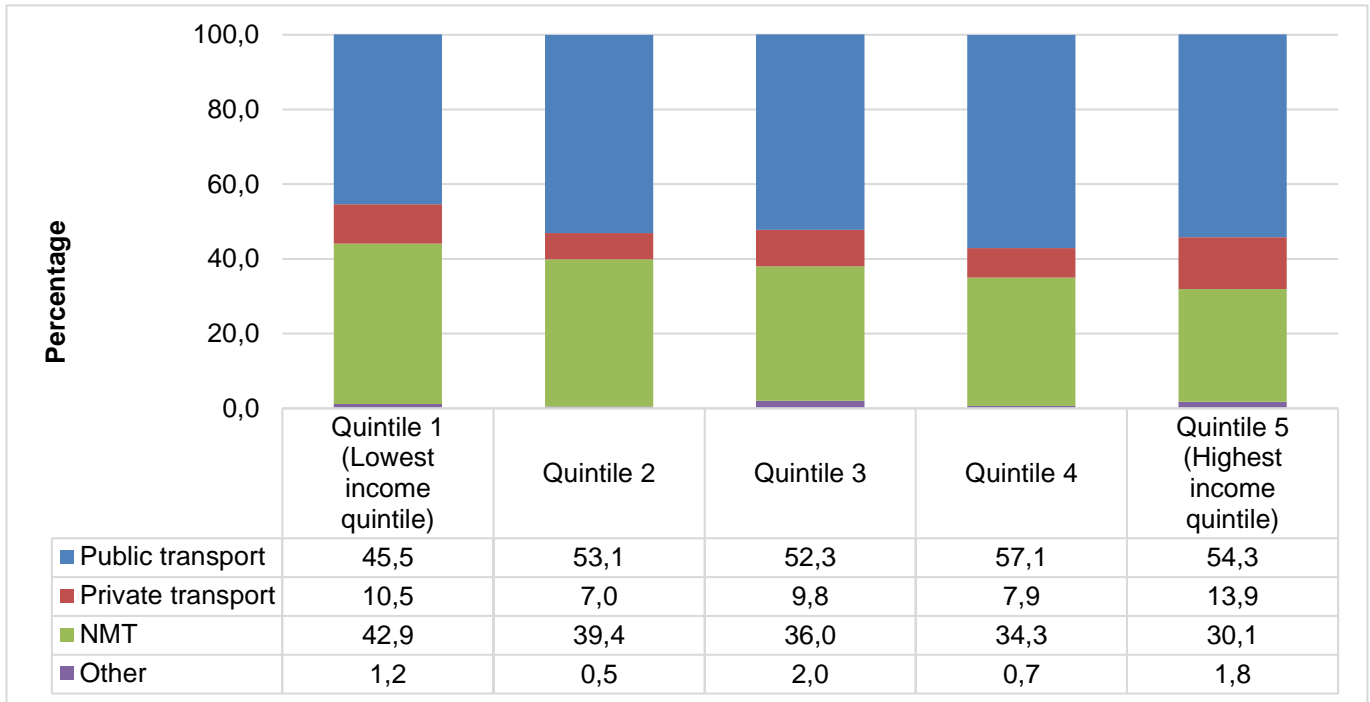
Household income quintiles	Statistics ('000)	Main mode 2020								Total
		Public transport			Private transport		NMT		Other	
		Train	Bus	Taxi	Car driver	Car passenger	Walking all the way	Bicycle		
Lowest income quintile	Number	18	27	292	35	42	313	5	9	741
	Per cent	2,4	3,7	39,4	4,8	5,7	42,3	0,6	1,2	100,0
Quintile 2	Number	4	17	164	12	12	136	1	2	347
	Per cent	1,2	4,8	47,2	3,5	3,5	39,2	0,2	0,5	100,0
Quintile 3	Number	12	15	130	14	16	107	1	6	300
	Per cent	3,9	5,0	43,4	4,6	5,2	35,5	0,4	2,0	100,0
Quintile 4	Number	8	14	148	16	8	101	1	2	298
	Per cent	2,7	4,8	49,6	5,3	2,7	34,0	0,3	0,7	100,0
Highest income quintile	Number	9	7	116	20	13	73	0	4	244
	Per cent	3,8	2,9	47,6	8,4	5,5	30,1	0,0	1,8	100,0
Total	Number	51	80	849	97	91	730	8	23	1 930
	Per cent	2,7	4,1	44,0	5,0	4,7	37,8	0,4	1,2	100,0

Source: NHTS, 2020

'Other' includes aircraft, scooter/motorcycle, tuk-tuk, etc.

Work seekers from households in the lowest income quintile were more likely to walk all the way (42,3%), followed by those who used taxis (39,4%) and cars as passengers (5,7%). Conversely, workers from households in the highest income quintile mentioned using taxi as their main mode of travel (47,6%), followed by walking all the way (30,1%) and using a car as a driver (8,4%). Travelling by bicycle to look for work was more prevalent amongst work seekers from households in the lowest income quintile households.

Figure 23: Main mode of travel used for work seekers by household income quintiles, 2020



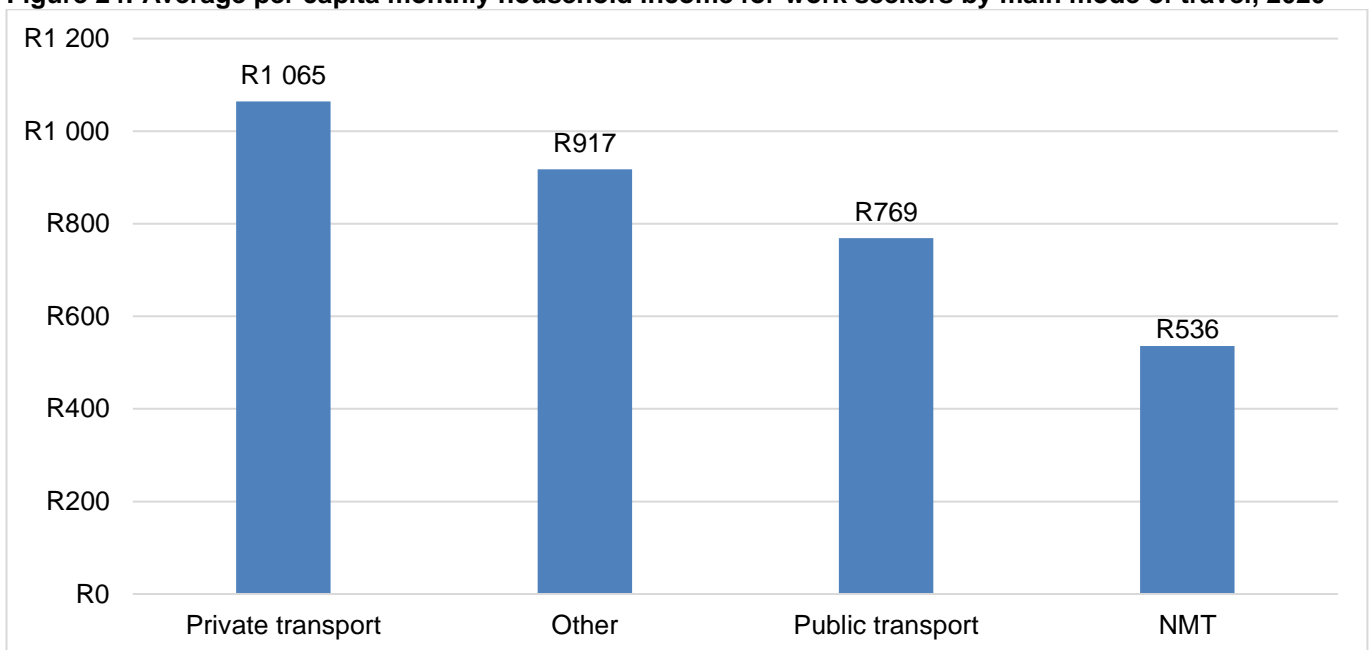
Source: NHTS, 2020

'Other' includes aircraft, scooter/motorcycle, tuk-tuk, etc.

Figure 23 provides information on the main mode of travel used by work seekers and the household income quintile. Public transport was the most commonly used mode of travel by work seekers from all the household income quintiles, followed by NMT then private transport.

NMT displayed a decreasing trend as the income quintiles moves from lowest to highest, whereas private and public transport showed an increasing trend as income quintiles increase.

Figure 24: Average per capita monthly household income for work seekers by main mode of travel, 2020



Source: NHTS, 2020

'Other' includes aircraft, scooter/motorcycle, tuk-tuk, etc.

Figure 24 shows the average per capita monthly household income for work seekers by main mode. Work seekers who used private transport reported the highest average monthly per capita income (R1 065), followed by those who used other modes of transport (R917) and public transport (R769). Work seekers who used NMT reported the lowest average monthly household per capita income (R536), this is almost half the monthly household per capita income reported by those who used private transport.

Table 15: Time work seekers leave to look for work by main mode of travel, 2020

Mode of travel		Statistics ('000)	Time work seekers leave to seek work (percentage within the mode of travel)					Total
			Before 06:00	06:00 to 06:29	06:30 to 06:59	07:00 to 07:59	08:00 or later	
Public transport	Train	51	40,0	22,3	3,8	16,6	17,4	100,0
	Bus	80	42,1	21,6	5,2	9,6	21,5	100,0
	Taxi	849	11,2	28,5	5,8	24,9	29,5	100,0
Private transport	Car/truck driver	97	8,0	21,8	4,7	22,6	43,0	100,0
	Car/truck passenger	91	14,5	28,7	9,5	24,4	23,0	100,0
NMT	Walking all the way	730	11,5	24,5	7,2	28,5	28,3	100,0
	Bicycle	8	4,0	38,8	8,3	28,4	20,5	100,0
Other		23	27,2	30,0	1,3	23,3	18,2	100,0
Total		1 930	14,0	26,3	6,3	25,2	28,6	100,0

Source: NHTS, 2020

'Other' includes aircraft, scooter/motorcycle, tuk-tuk, etc.

Most work seekers left their place of residence at 08:00 or later in the morning (28,6%), as seen in Table 15 above, followed by those who left between 06:00 and 06:29 (26,3%). Approximately a quarter of work seekers left home between 07:00 and 07:59 (25,2%) and only 6,3% of work seekers left between 06:30 and 06:59 in the morning.

Among the work seekers who used public transport, those who used bus and train left before 06:00 at 42,1% and 40,0% respectively. Those who used taxi (29,5%) left their residences at 08:00 or later. While among those who use NMT, the majority of those who walked all the way left home between 07:00 to 07:59 in the morning (28,5%), closely followed by those who left between 08:00 or later (28,3%). Those who used bicycles left between 06:00 to 06:29 (38,8%).

6.6 Summary

This section explored the main modes of travel used by households, learners, workers and work seekers to access public services and facilities, and the time they usually leave their place of residence to reach their various destinations. Moreover, the section focused on placing NMT within the context of transport in general.

The analyses show that out of a total of 17,3 million households that travelled using various modes of transport across the country, 61,8% of these households used taxi to reach their destination, followed by 18,9% that used car as a driver and 9,4% that used bus. A low percentage (3,4%) of households used NMT to reach their destinations.

NMT was the main mode of travel used by learners across all household income quintiles. The highest percentage of learners who used NMT were from households in income quintile two (71,5%), followed by those in income quintile four (70,3%). Over 20,0% of learners from the lowest household income quintile and highest household income quintile used private and public transport, while less than 10,0% of learners from the remaining household income quintiles used private transport.

About 4,5 million workers travelled to work by car as driver, followed by the 3,5 million who travelled using taxi and the 2,5 million workers who walked all the way to work. A large majority of workers who drove to work were from the private sector (3,6 million). Of those who walked all the way, 36,6% were working in the informal sector, while 35,1% were working for private households. The majority of workers (40,9%) across all modes of travel left their residences before 06:00 a.m. to travel to work.

Using a taxi and walking all the way accounted for the most proportion of work seekers. About 849 000 individuals in search of work used taxi to get to their destinations, while 730 000 walked all the way. Those who travelled in search of work using bicycles were more likely to be found in non-metro areas at 0,6%.



Section:

Introduction

Main mode of travel at a glance

Non-motorised transport explored in greater detail

Modelling non-motorised transport

Conclusions

Reference and Annexure



7. Non-motorised transport explored in greater detail

7.1 Introduction

Non-motorised Transport (NMT) is identified, both globally and locally, as a solution to mitigate some challenges faced by the transport system in the country. Benefits associated with an investment in NMT infrastructure and its governance include improved public health, reduced air pollution, lower cost, increased mobility, improved safety and increased community cohesion (DoT 2018).

Despite the many advantages and opportunities presented by the use of NMT, it remains a low priority in planning and policy formulation and implementation (Mokitimi and Vanderschuren 2017). Moreover, the lack of its promotion as an advantageous alternative has also left NMT stigmatised as a mode for those who are poor and not having any other choice but to use it.

Nevertheless, exploring NMT and its benefits has been on the agenda of the South African government. Various initiatives such as the green transport initiative (2018–2050) recognise NMT as one of the key modes of travel to help with moving the country to cleaner ways of travel.

This section focuses on the use of NMT, it aims to profile the users of NMT in terms of their household composition, the main source of income, income quintile and the time they usually leave their place of residence.

Non-motorised transport consists of categories such as walking all the way, bicycles and animal-drawn transport. The findings at household level will not be disaggregated by the specific categories as the proportions for bicycles and animal-drawn transport were not enough to give reliable estimates. Tables showing disaggregated numbers for specific categories can be found in the annexures for further reference.

7.2 Profile of households that used non-motorised transport

Table 16: Households that used non-motorised transport by geographic location, 2013 and 2020

Geographic location	2013		2020	
	Number ('000)	Per cent	Number ('000)	Per cent
Metro	70	21,9	160	27,4
Non-metro	249	78,1	426	72,6
Total	319	100,0	586	100,0

Source: NHTS, 2013 and 2020

The table above shows the profile of households that used NMT by geographic location in 2013 and 2020. A total of 586 000 households in 2020 used NMT in South Africa. This is an increased number looking at the total number in 2013 (319 000) of households which used NMT as their mode of transport across all the geographic locations.

In both years (2013 and 2020) households in non-metro areas were more likely to use NMT as their mode of transport (78,1% in 2013 and 72,6,1% in 2020) than in metro areas.

Table 17: Travel time used to access services and facilities for households using non-motorised transport, 2013 and 2020

Travel time (per cent of households within facility category)	Food or grocery shops	Other shops	Religious institution	Medical service	Post office	Welfare office	Police station	Municipal office	Tribal authority	Financial services/banks	Traditional healer	Home Affairs	Library
2013													
Up to 30 minutes	86,8	96,3	89,0	83,7	86,4	78,0	82,9	84,9	82,3	85,2	83,6	-	-
31–60 minutes	11,0	2,9	8,9	13,6	12,2	13,6	14,7	13,3	13,8	12,8	13,4	-	-
More than 60 minutes	2,2	0,8	2,1	2,7	1,5	8,5	2,3	1,8	3,9	2,0	3,1	-	-
Total	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	-	-
2020													
Up to 30 minutes	71,2	80,6	68,3	72,1	76,0	74,4	78,8	78,7	49,8	87,0	-	77,2	84,0
Between 31 and 60 minutes	20,3	11,7	23,0	19,4	18,2	18,7	15,2	15,5	36,5	11,3	-	16,0	12,7
More than 60 minutes	8,5	7,8	8,7	8,5	5,8	6,9	6,0	5,7	13,8	1,7	-	6,8	3,2
Total	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	-	100,0	100,0

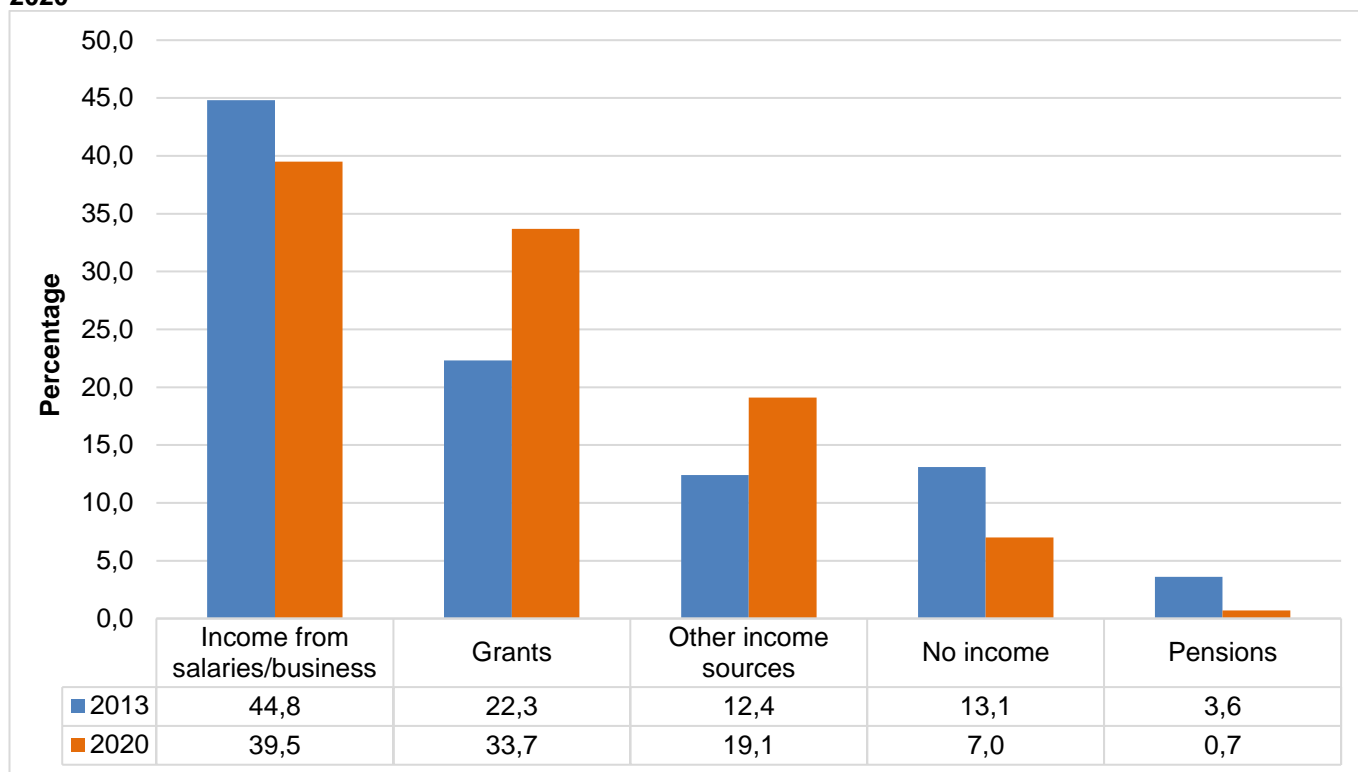
Source: NHTS, 2013 and 2020

- Categories not available in the year of collection

Table 17 presents travel time used by households to access services and facilities using NMT in 2013 and 2020. In both years (2013 and 2020) it mainly took up to 30 minutes to access services and facilities for households using NMT, followed by households that took between 31 to 60 minutes then more than 60 minutes. In 2013 the percentages for those taking between 31 to 60 minutes were below 20,0% for all the services and facilities, however in 2020 access to food or grocery shop and tribal authority percentages were both above 20,0% at 20,3% and 36,5% respectively.

There seems to be a slight percentage increase in 2020 for households taking more than 60 minutes to access services and facilities using NMT, with those going to tribal authority (13,8%) more likely to take more than 60 minutes than any other service or facility.

Figure 25: Households that used non-motorised transport by main source of household income, 2013 and 2020

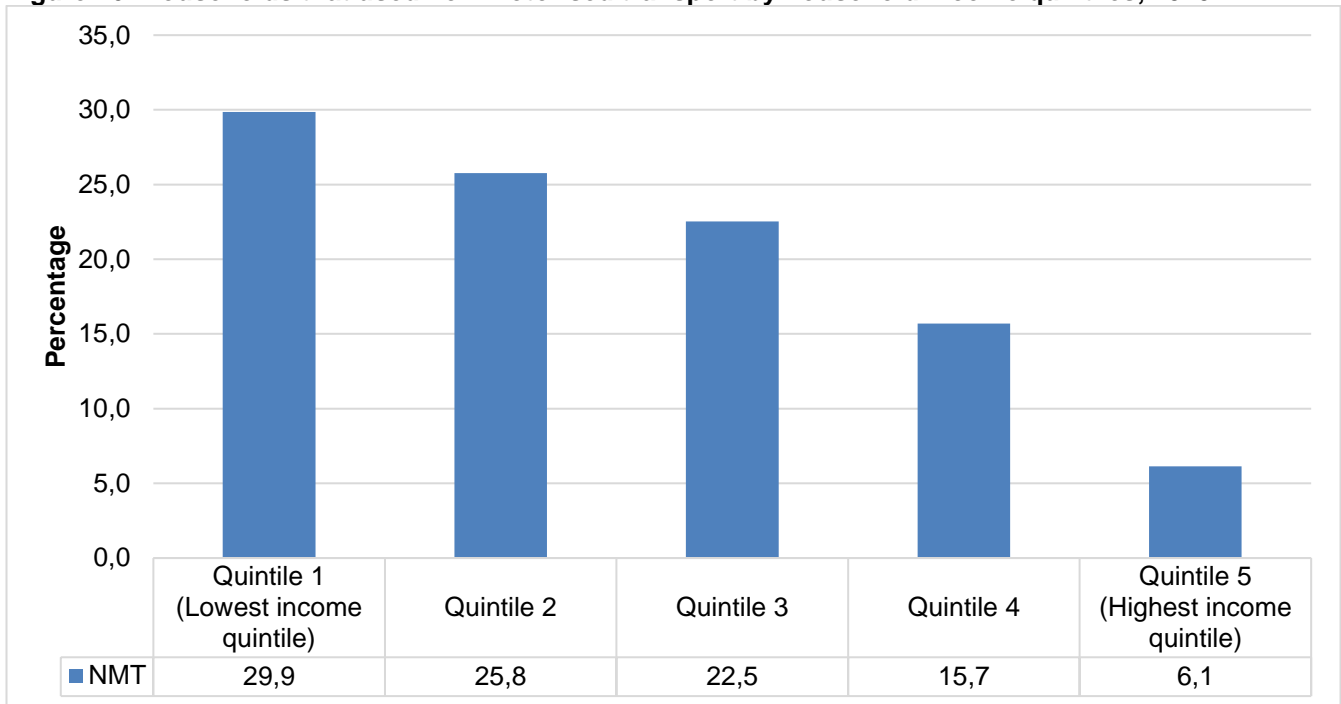


Source: NHTS, 2013 and 2020

Looking at the distribution of main source of income for households using NMT in 2013 and 2020, Figure 25 above shows that income from salaries/businesses were the major source of income for both years at 44,8% and 39,5% respectively. Grants were the second source of income for both years with 22,3% in 2013 and 33,7% in 2020, the third source was no income in 2013 and other income sources in 2020. However, for both years, pensions were the least source of income for households using NMT.

There was a percentage increase for grants as a source of income in 2020 compared to 2013 for households using NMT, this was also observed for other sources of income. The other sources (salary/business, no income, pensions) had a decrease in percentages from 2013 to 2020.

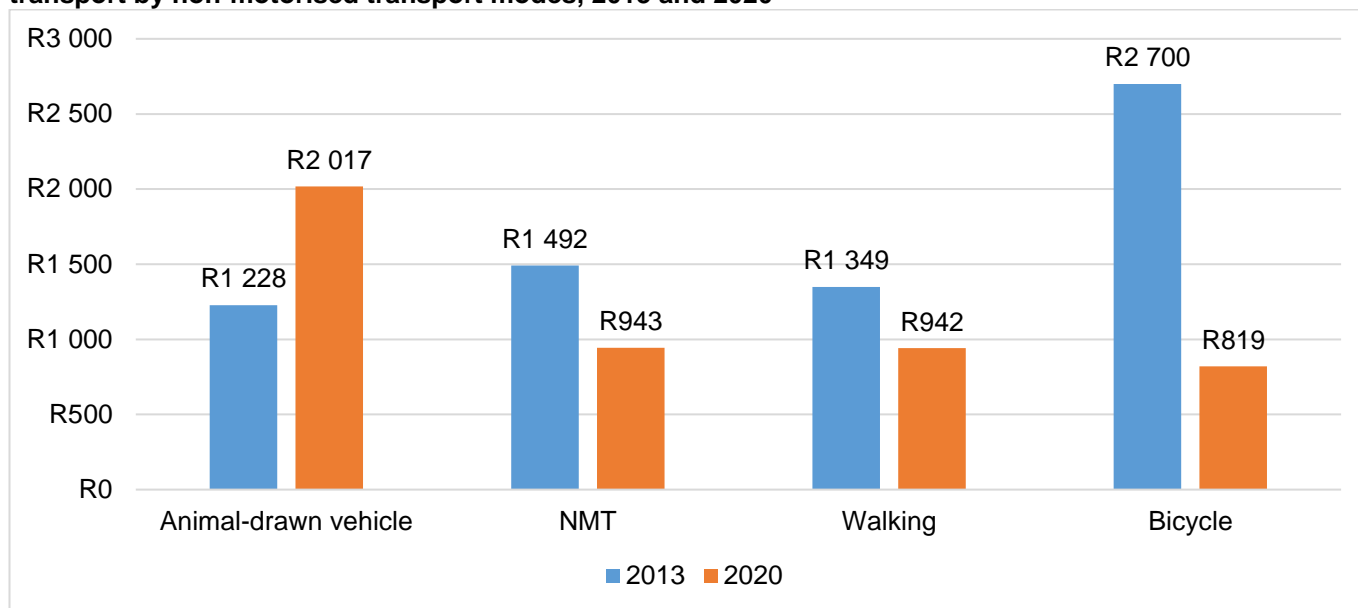
Figure 26: Households that used non-motorised transport by household income quintiles, 2020



Source: NHTS, 2020

In Figure 26 above, it is observed that the highest proportion of households that used NMT as a mode of transport were from households within income quintile one (29,9%), followed by those within income quintile two (25,8%) and income quintile three (22,5%). The highest income quintile had the least percentage of households using NMT at 6,1% and income quintile four at 15,7%. The figure shows that the higher the income quintile, the more usage of NMT decreased for households.

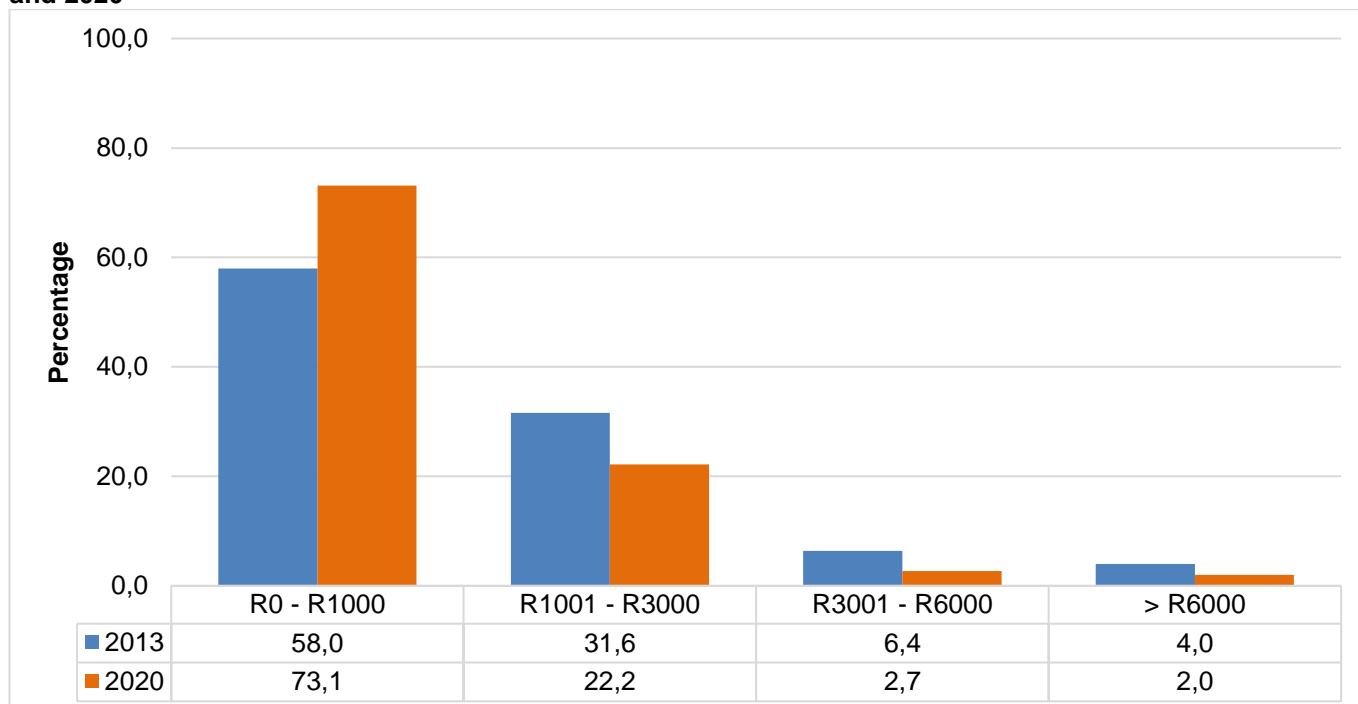
Figure 27: Average per capita monthly household income for households that used non-motorised transport by non-motorised transport modes, 2013 and 2020



Source: NHTS, 2013 and 2020
 Bicycle and animal-drawn transport estimates to be used with caution

According to Figure 27 above, the average per capita household income for households using NMT was lower in 2020 compared to 2013, with the exception of households that used animal-drawn transport, where the average per capita household income was R2 017 in 2020 compared to 2013 where it was R1 228.

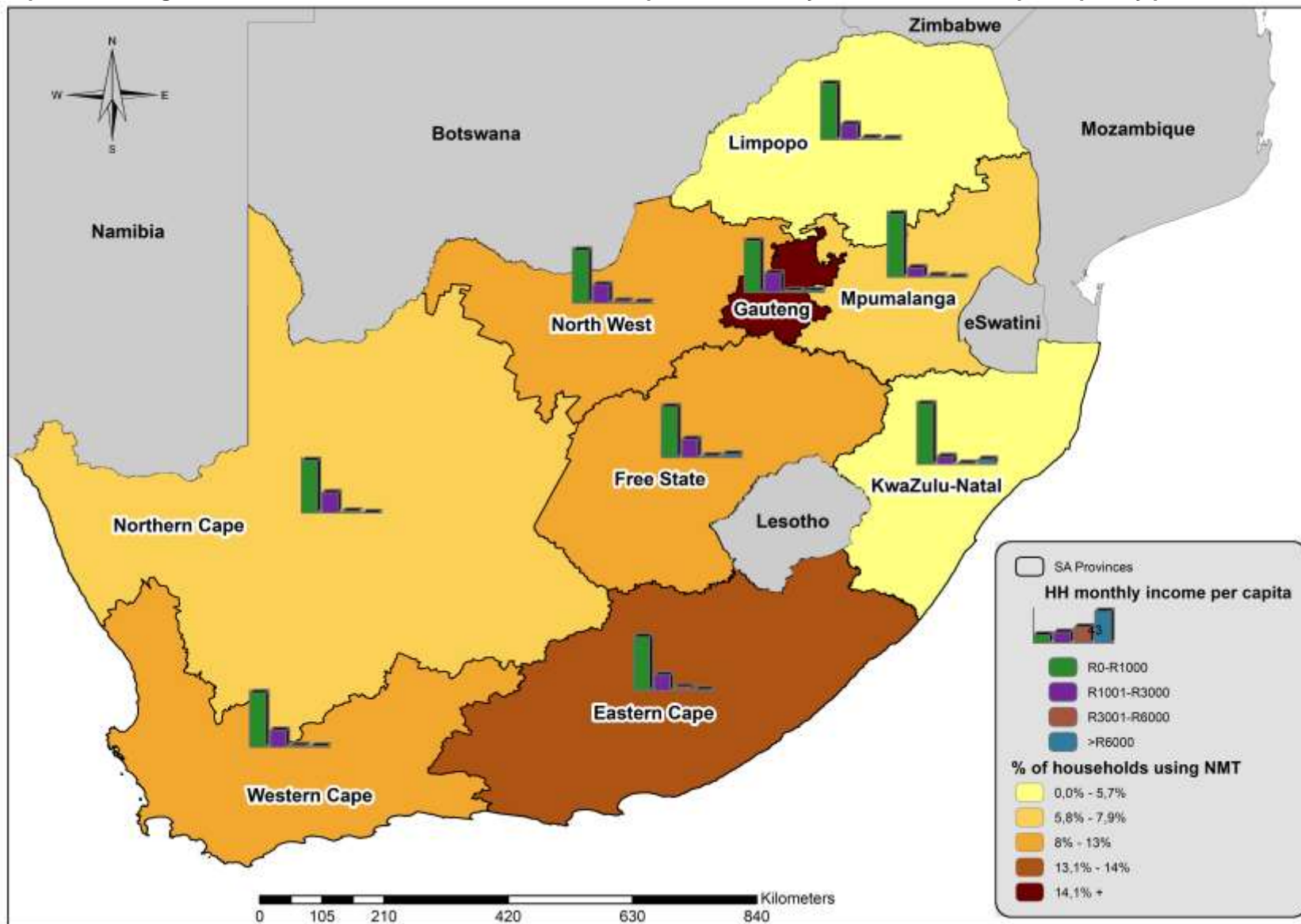
Figure 28: Percentage of non-motorised transport modes by monthly household income per capita, 2013 and 2020



Source: NHTS, 2013 and 2020

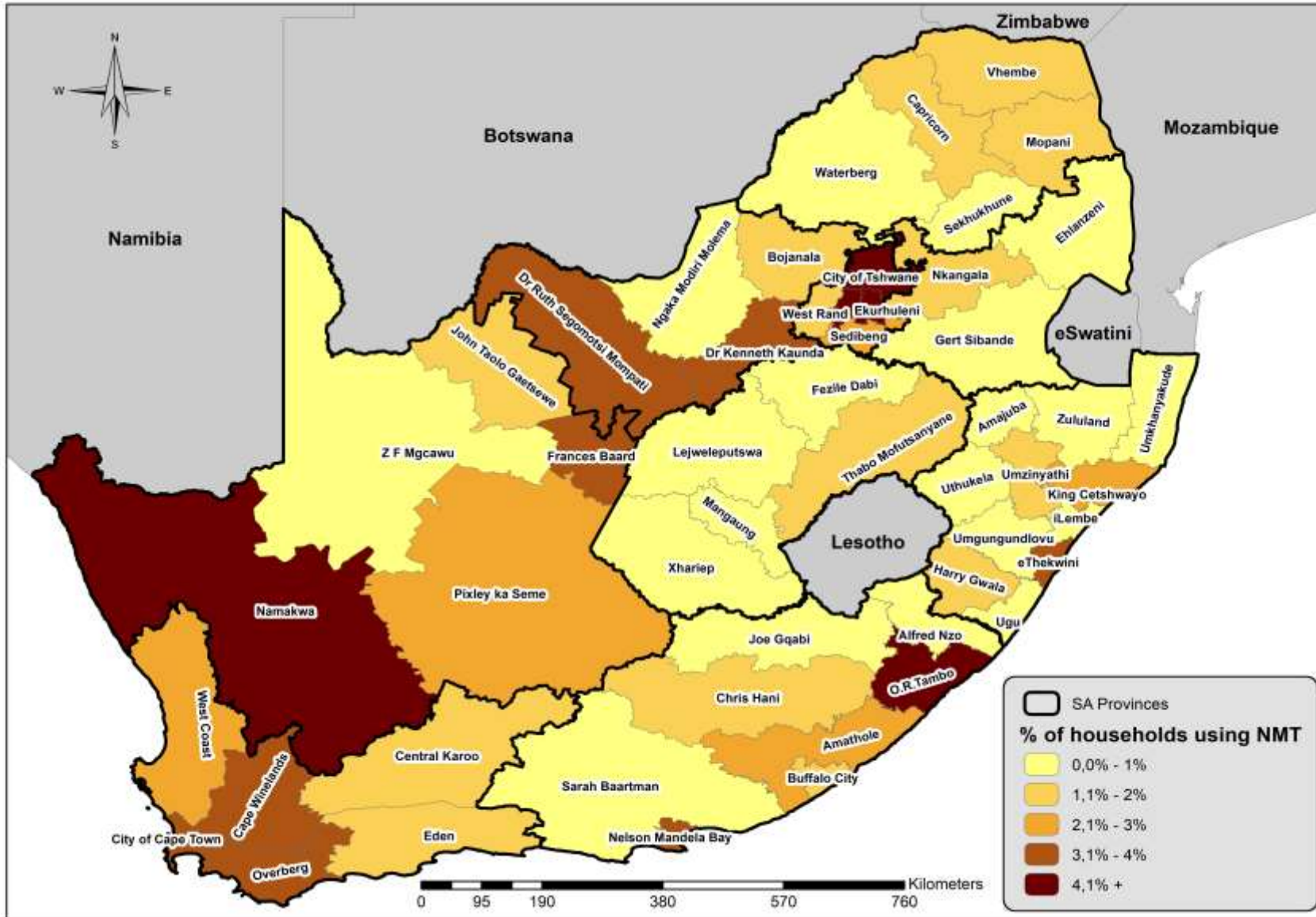
Figure 28 presents percentage distribution of households using NMT by monthly income per capita categories in 2013 and 2020. The figure shows that the majority of households that used NMT in 2013 and 2020 had an income per capita of between R0 – R1 000 at 58,0% in 2013 and 73,1% in 2020, followed by those in between R1 001 – R3 000 at 31,6% in 2013 and 22,2% in 2020. The figure further shows that there was a percentage increase for those households between R0 – R1 000 from 2013 to 2020 and a decrease for households in all other groups.

Map 1: Percentage of households that used non-motorised transport and monthly household income per capita by province, 2020



Source: NHTS, 2020

Map 2: Percentage of households that used non-motorised transport by district municipalities, 2020



Source: NHTS, 2020

Map 1 shows that across all provinces, households that used NMT were most likely to earn a monthly household income per capita between R0 to R1 000. KwaZulu-Natal had the highest proportion of households that had a monthly household income per capita of more than R6 000 using NMT.

The percentage of households that used NMT by district municipality is presented in Map 2; the darker the colour, the higher the use of NMT. City of Tshwane, Ekurhuleni, Namakwa and O.R. Tambo had the highest percentage of households that used NMT.

7.3 Profile of learners who used non-motorised transport

Table 18: Total number of learners who used non-motorised transport by geographic location, 2013 and 2020

Mode of travel	Statistics ('000)	Geographic location		
		Metro	Non metro	RSA
2013				
Walking all the way	Number	2 646	8 404	11 050
	Per cent	99,7	99,8	99,8
Bicycle	Number	8	14	22
	Per cent	0,3	0,2	0,2
Total	Number	2 654	8 418	11 072
	Per cent	100,0	100,0	100,0
2020				
Walking all the way	Number	2 979	7 141	10 121
	Per cent	99,9	99,8	99,8
Bicycle	Number	4	12	16
	Per cent	0,1	0,2	0,2
Total	Number	2 983	7 153	10 136
	Per cent	100,0	100,0	100,0

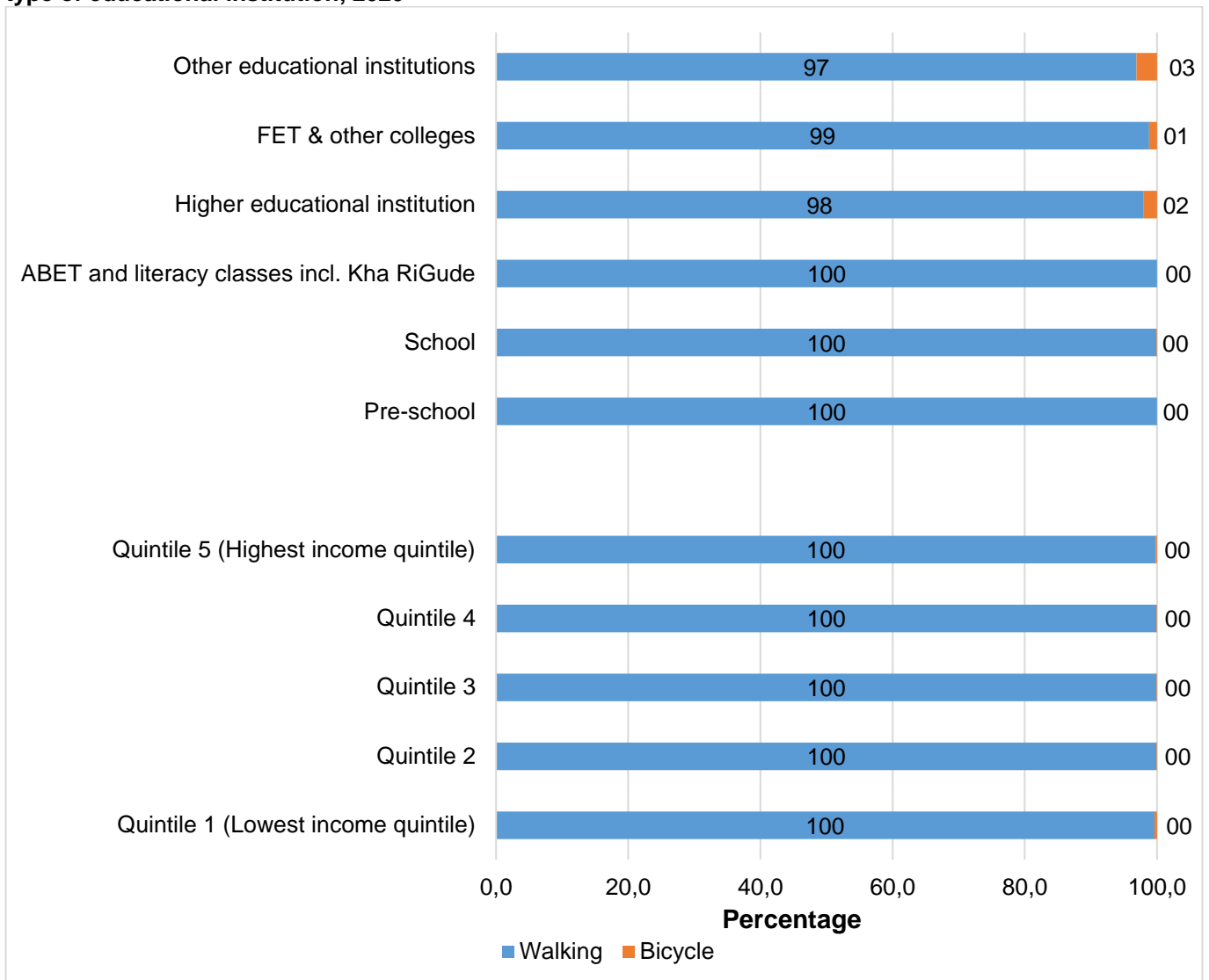
Source: NHTS, 2013 and 2020

Bicycle estimates to be used with caution

Table 18 above shows the profile of learners who used NMT by geographic location in 2013 and 2020. In 2013 there was a total of 11,1 million of learners who used NMT to get to their educational institutions, 8,4 million resided in non metro areas. In 2020, 10,1 million learners used NMT to get to their educational institutions and 7,2 million were in non metro areas. Overall, there was a decrease in the number of learners in the country who used NMT in 2020 compared to 2013. However, in metro areas there was an increase in the number of students who used NMT.

Bicycles are another form of NMT that learners used to get to their educational institutions, in 2013 there were approximately 22 000 learners using bicycles whereas in 2020 there were approximately 16 000 learners using bicycles. Proportions for bicycles were not enough to give reliable estimates, therefore their estimates should be used with caution.

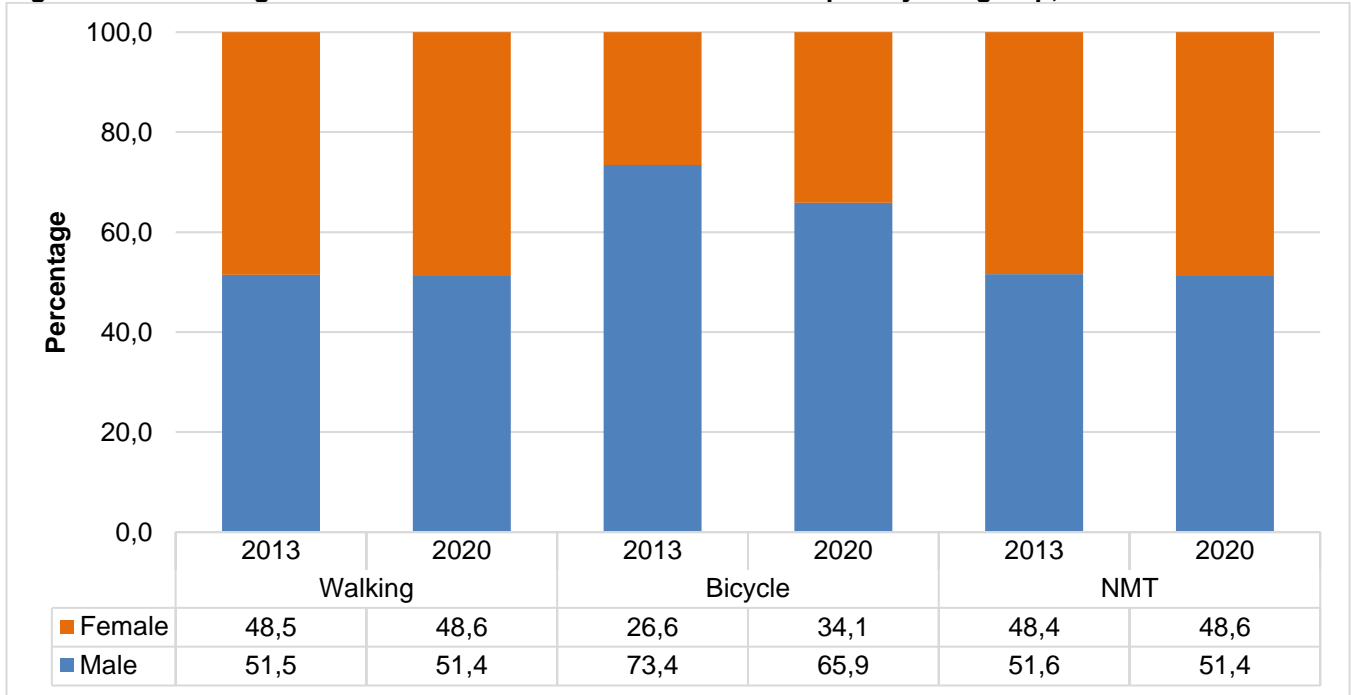
Figure 29: Percentage of learners who used non-motorised transport by household income quintiles and type of educational institution, 2020



Source: NHTS, 2020
 Bicycle estimates to be used with caution

The figure above shows that higher proportions of learners walked all the way and percentages were above 96,0% for both household income quintiles and type of educational institution. The highest proportion of learners using bicycles was other educational institutions at 3,1%, followed by higher educational institution (2,1%). This pattern was also observed in the NHTS 2013

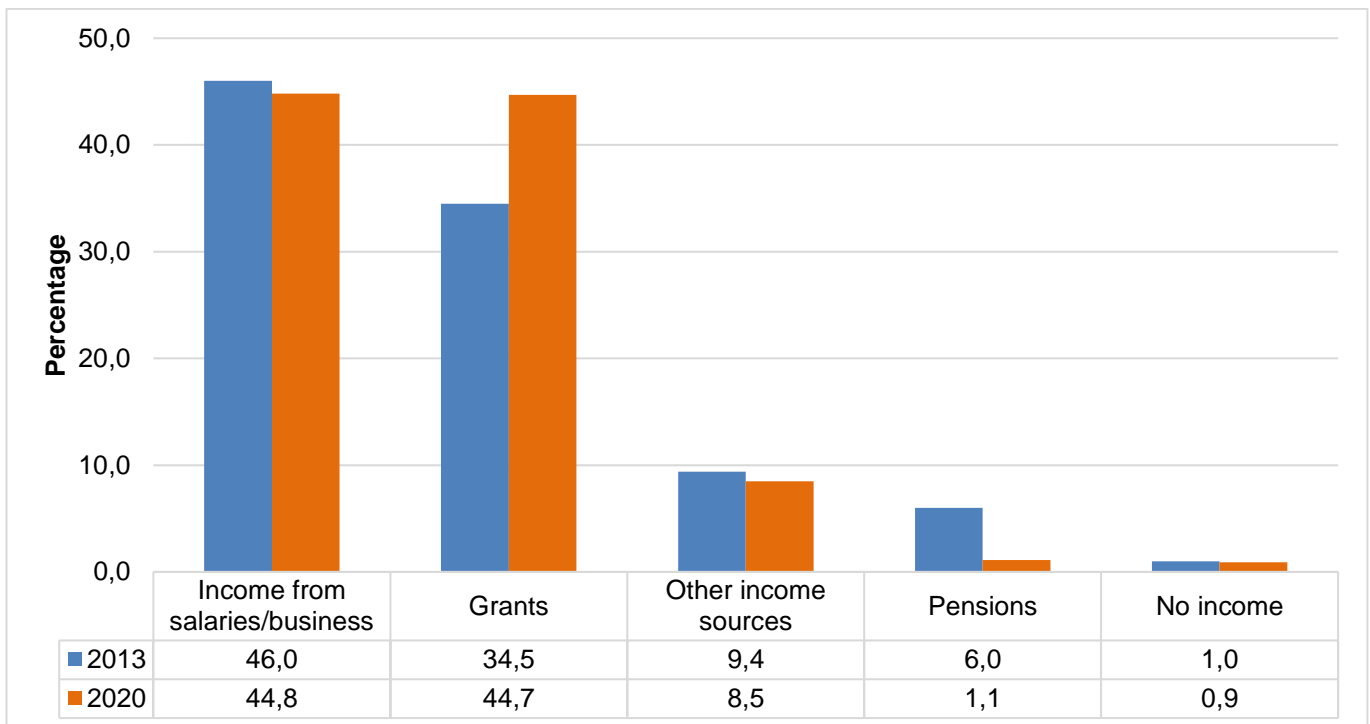
Figure 30: Percentage of learners who used non-motorised transport by sex group, 2020



Source: NHTS, 2013 and 2020
 Bicycle estimates to be used with caution

Figure 30 shows that male learners were more likely to use NMT than female learners for both 2013 and 2020. Similarly, male learners were more likely to use bicycles than female learners for both years.

Figure 31: Main source of household income for learners who used non-motorised transport, 2013 and 2020

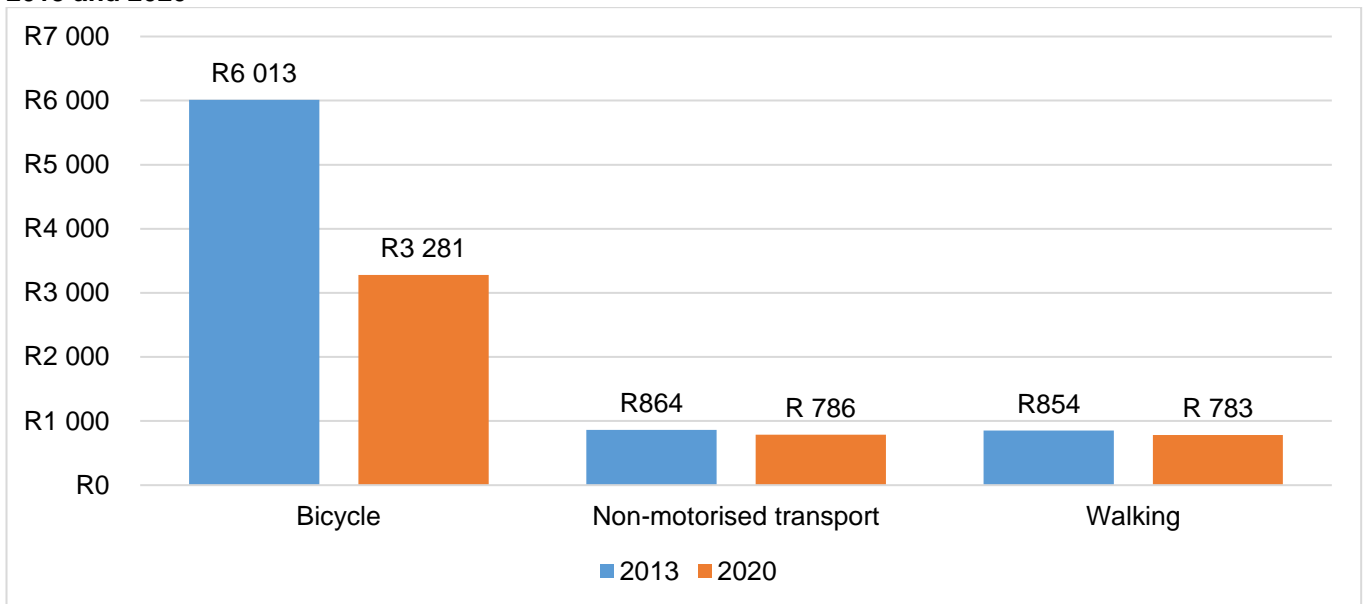


Source: NHTS, 2013 and 2020

Figure 31 shows that income from salaries/businesses were the major source of income in 2013 at 46,0%, followed by grants at 34,5% then other income sources at 9,4%. In 2020 the main household income sources for learners using NMT were income from salaries/businesses, closely followed by grants. However, for both years no income was mentioned the least for households with learners who used NMT.

There was a percentage increase for grants as source of income in 2020 compared to 2013, the rest of the income sources saw a percentage decrease.

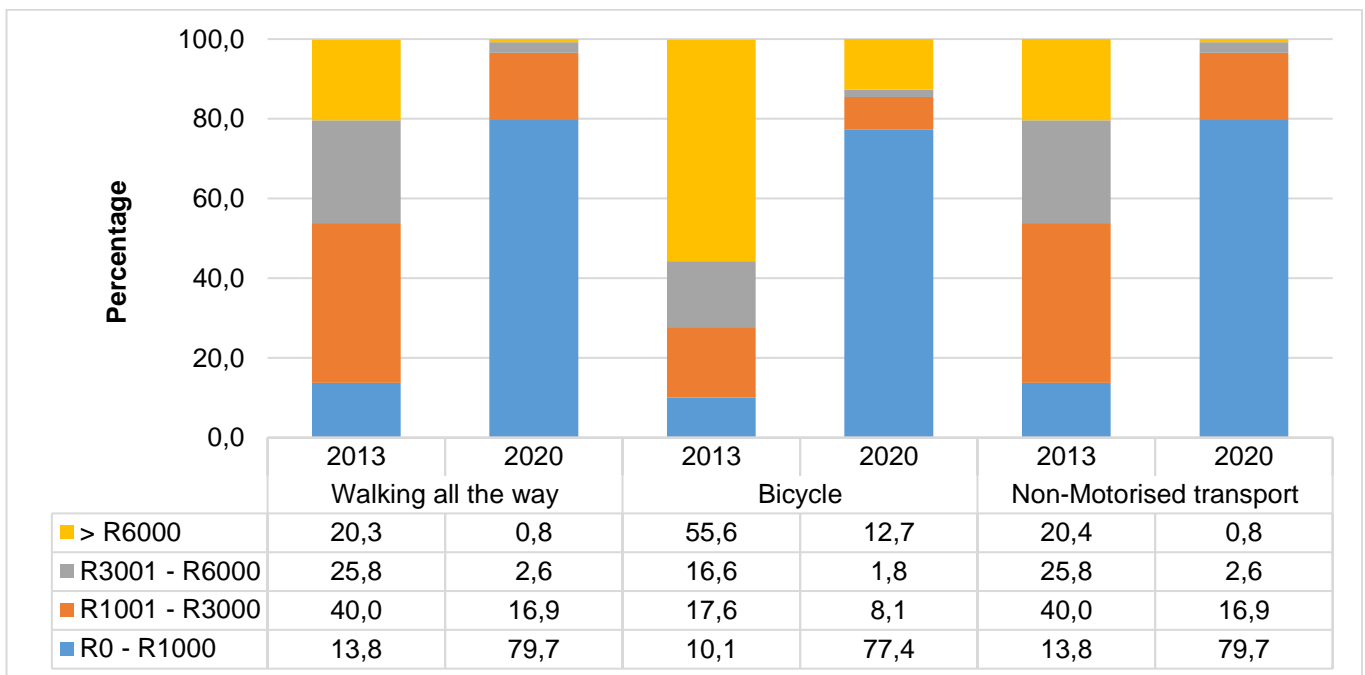
Figure 32: Average per capita monthly household income for learners who used non-motorised transport, 2013 and 2020



Source: NHTS, 2013 and 2020
Bicycle estimates to be used with caution

The figure above shows that 2020 had lower proportions of average per capita household income for learners who use NMT modes in comparison to 2013. In 2020 learners using bicycles came from households with the highest average monthly income per capita of R3 281 than those who walked, with R783.

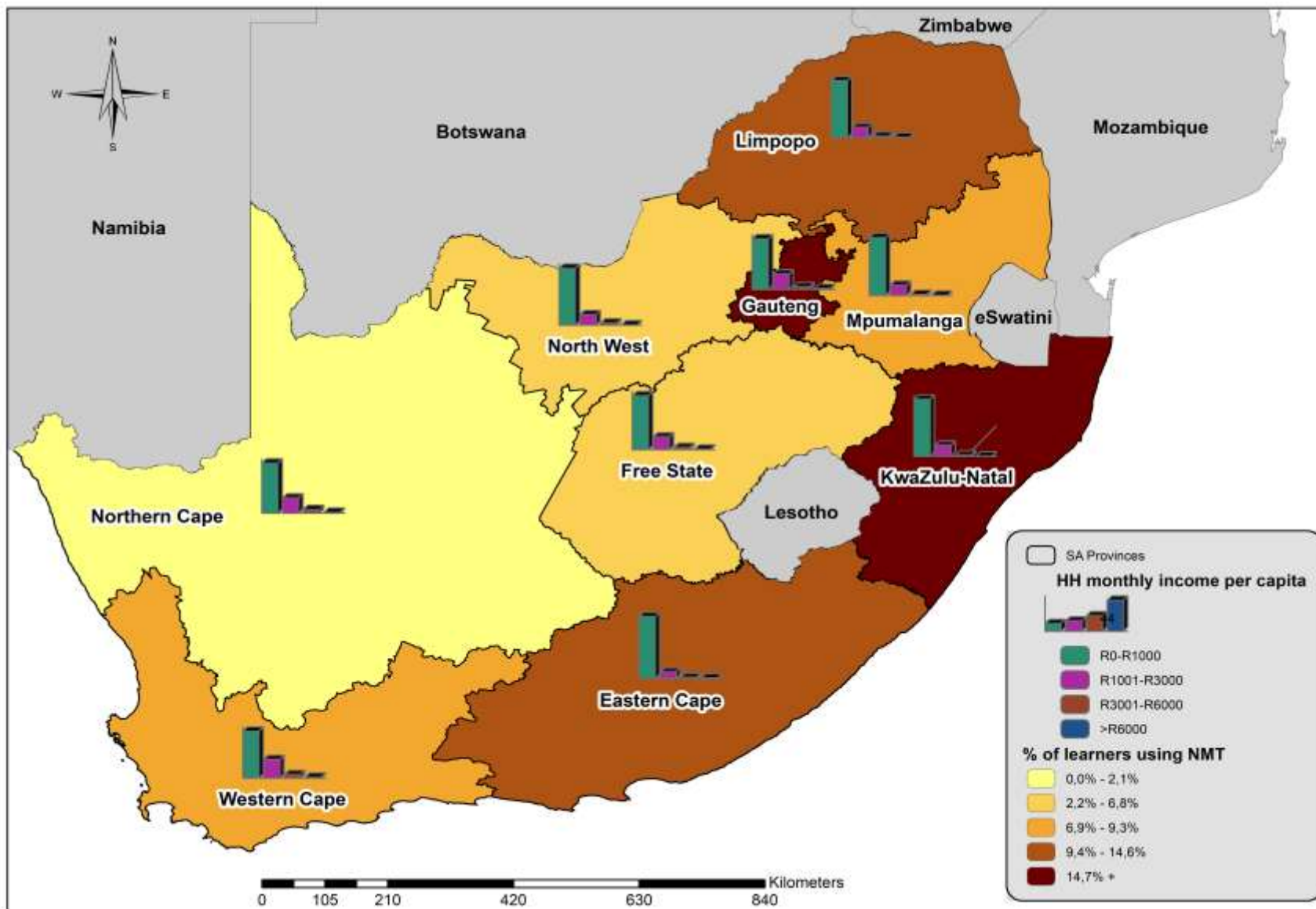
Figure 33: Percentage distribution of monthly household income per capita for learners who used non-motorised transport by type of non-motorised transport modes, 2013 and 2020



Source: NHTS, 2013 and 2020
Bicycle estimates to be used with caution

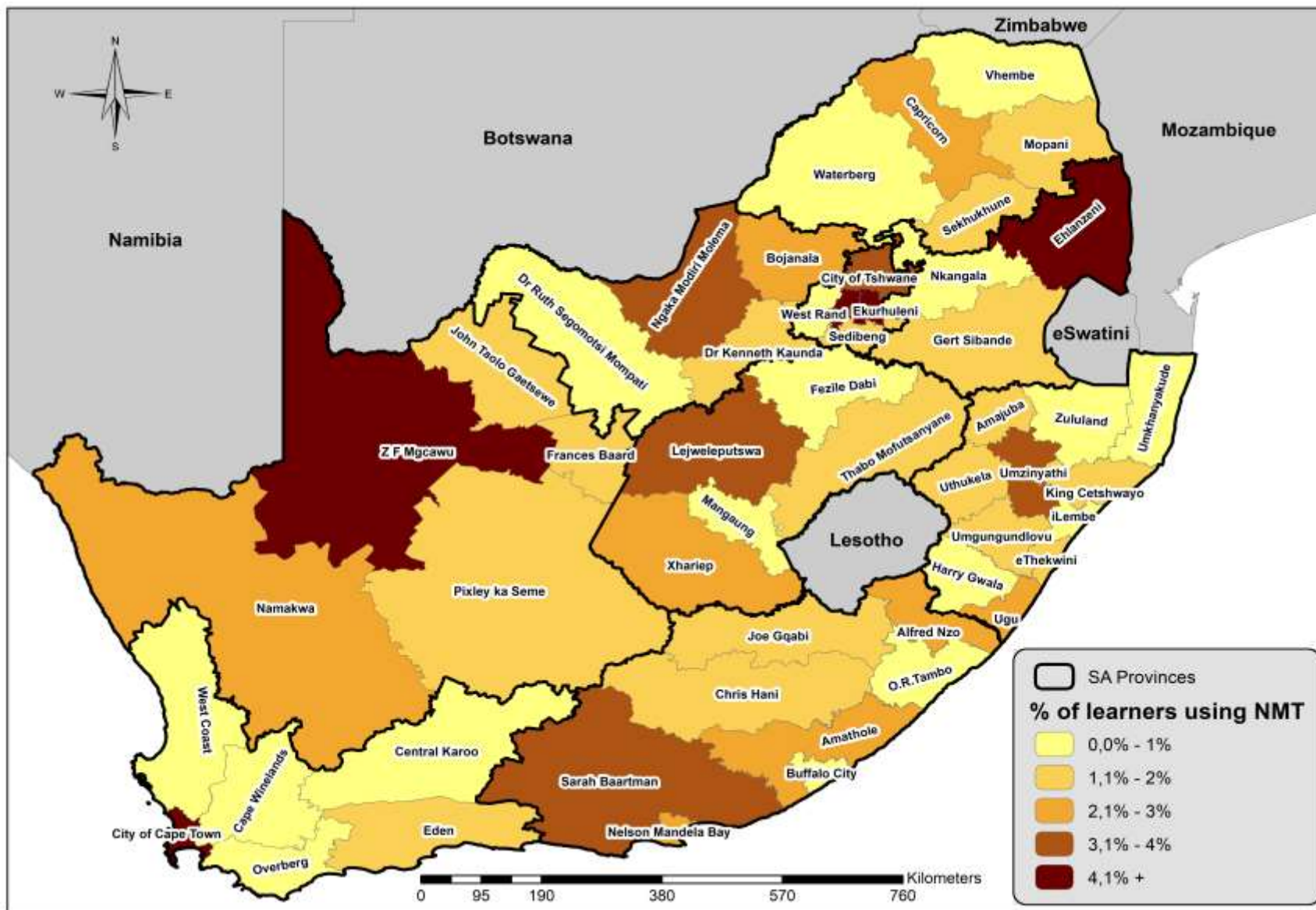
Figure 33 compares the percentage distribution of learners who use NMT by their household monthly per capita income for 2013 and 2020. In 2020 NMT was more prevalent for learners whose household per capita income is the lowest R0 to R1 000 at 79,7%, contrary to 2013 where NMT was more popular for learners from households with average per capita income of between R1 001 to R3 000 at 40,0%.

Map 3: Percentage of learners who used non-motorised transport and monthly per capita household income by province, 2020



Source: NHTS, 2020

Map 4: Percentage of learners who used non-motorised transport by district municipalities, 2020

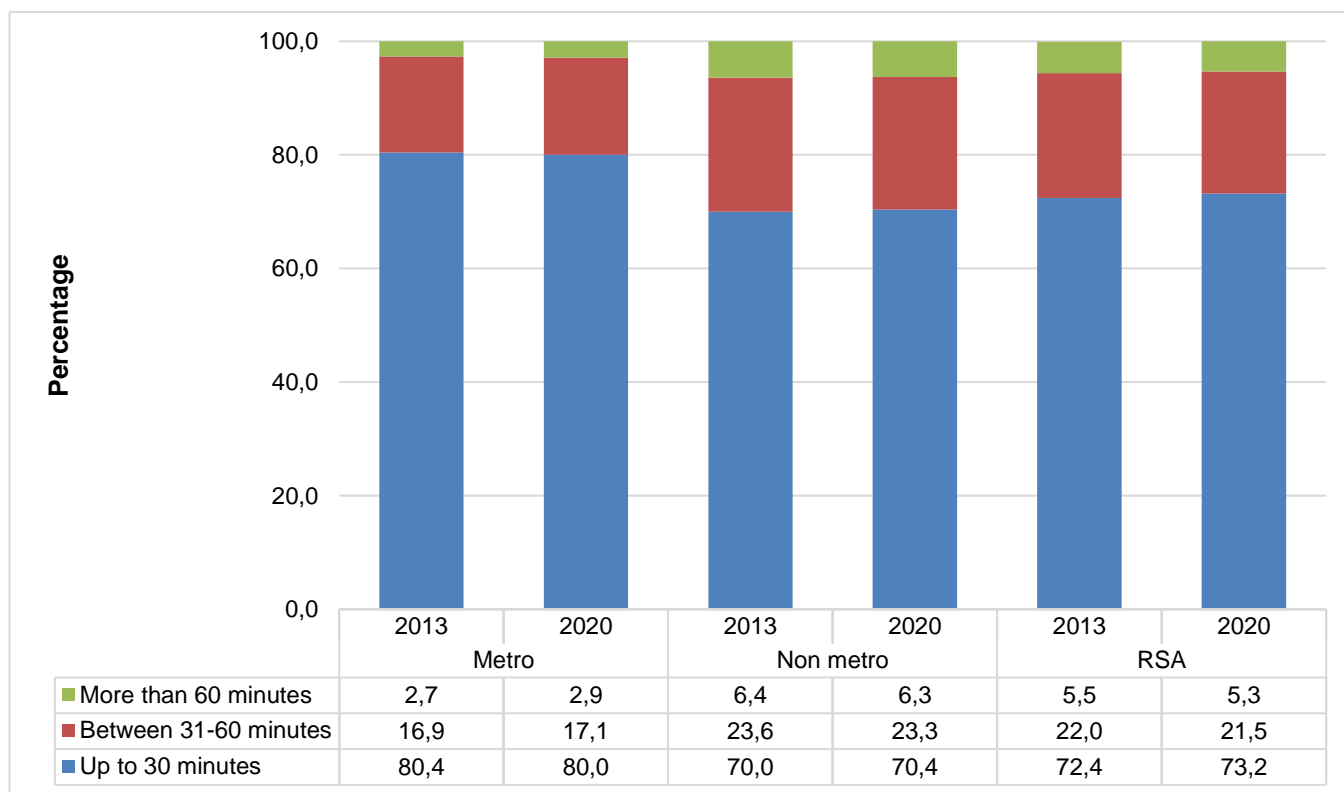


Source: NHTS, 2020

Map 3 shows that learners who used NMT were most likely to reside in households with a monthly household income per capita between R0 to R1 000. Learners who were from households that had a monthly per capita household income between R1 001 to R3 000 were most likely to come from Gauteng, Northern Cape and Western Cape.

The percentage of learners who used NMT by district municipality is presented in Map 4. ZF Mgcawu, City of Cape Town, Ekurhuleni and Ehlanzeni had the highest percentage of learners who used NMT (coloured in dark brown).

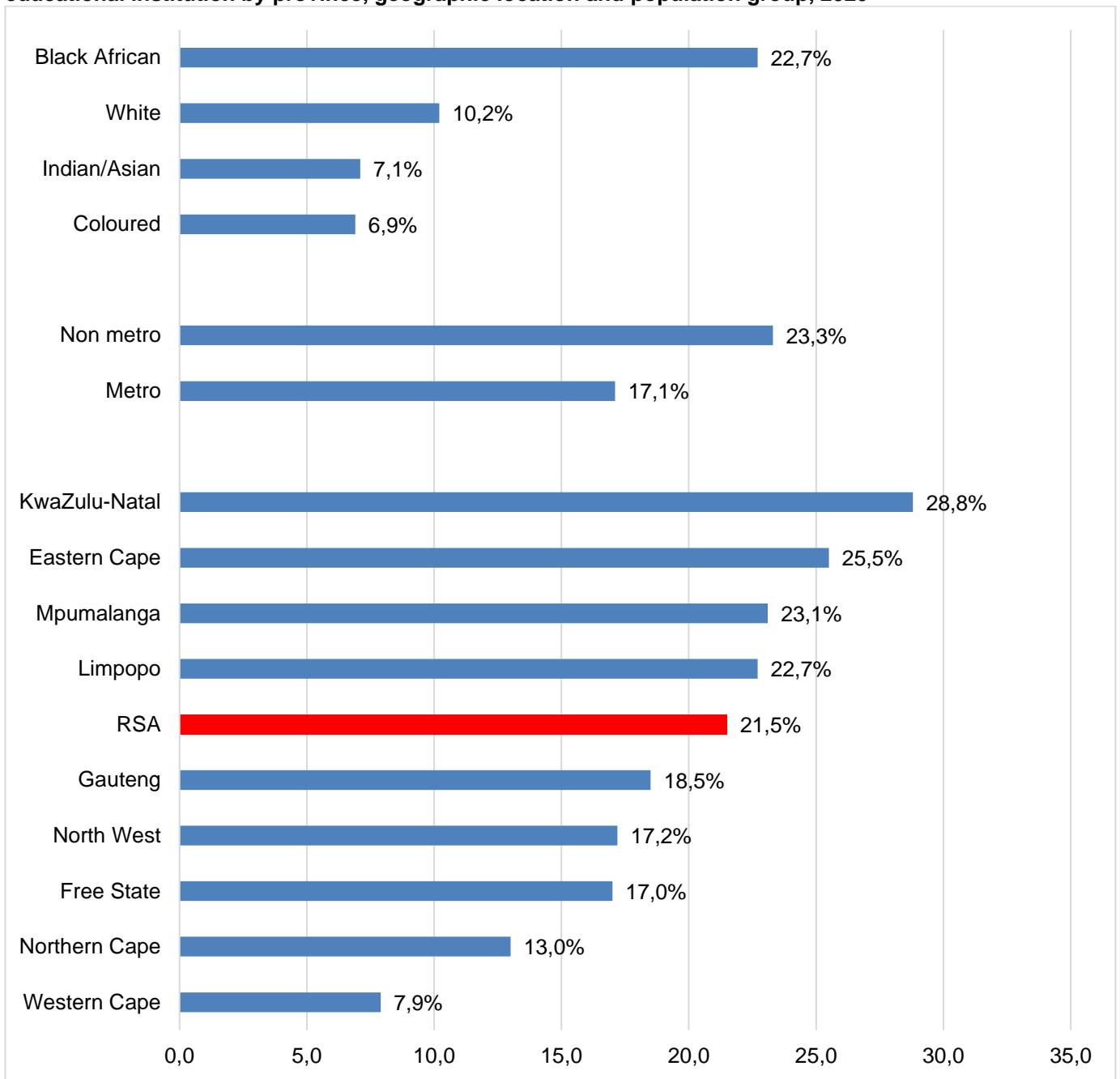
Figure 34: Total time travelled to the educational institutions for learners walking all the way by geographic location, 2013 and 2020



Source: NHTS, 2013 and 2020

Across all geographic locations most learners who walked all the way to their educational institutions took up to 30 minutes to get to their educational institutions in both 2013 and 2020, followed by those taking between 31–60 minutes then lastly those taking more than 60 minutes. In metro areas learners who walked up to 30 minutes to get to their educational institutions were over 80,0%, whereas in non metro areas the percentages were just above 70,0%. The figure shows that those in non metro areas walked a little longer than their metro peers as the percentages for those travelling between 31–60 and those travelling more than 60 minutes were a little higher for those in non metro areas.

Figure 35: Percentage of learners who walked all the way for between 31 and 60 minutes to get to their educational institution by province, geographic location and population group, 2020



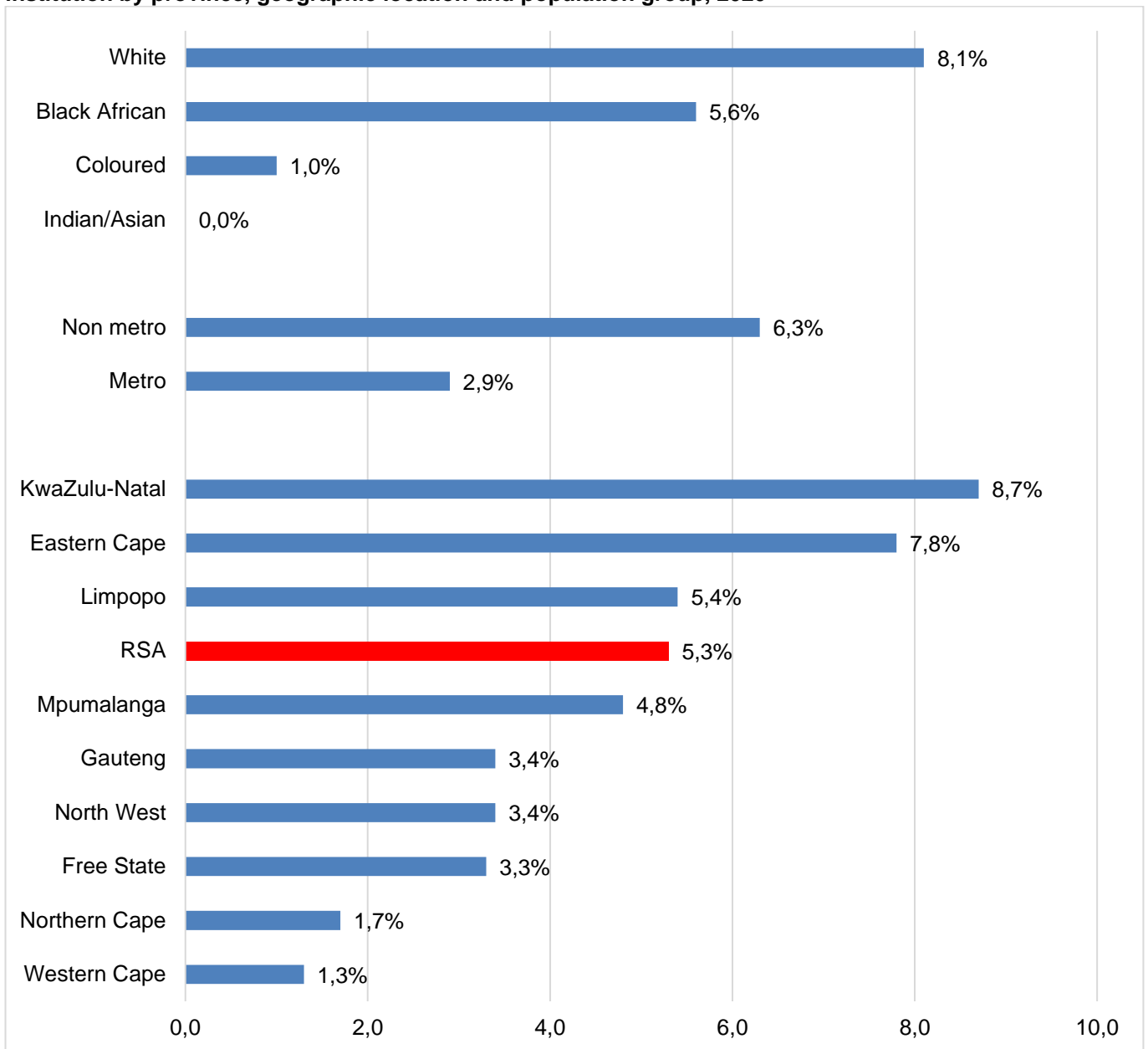
Source: NHTS, 2020

Figure 35 shows the demographic and geographic locations of learners who travelled between 31–60 minutes to their educational institutions. The figure shows that black Africans were more likely to walk to educational institutions than any other race at 22,7%, followed by whites at 10,2%. Walking between 31-60 minutes was predominant for learners non metro areas (23,3%).

KwaZulu-Natal recorded the highest percentage of learners who walked between 31–60 minutes to their educational institution at 28,8%, followed by Eastern Cape and Mpumalanga with 25,5% and 23,1% respectively. Overall, the ratio of learners who walked all the way for between 31–60 minutes in South Africa was 21,5%.

In 2013 the province that contributed the most for learners walking between 31–60 minutes to their educational institutions was North West (31,2%, Northern Cape (23,0%) and Eastern Cape (23,0%), with an overall of 22,0% of learners walking between 31–60 minutes.

Figure 36: Percentage of learners who walked all the way for more than 60 minutes to get to their educational institution by province, geographic location and population group, 2020



Source: NHTS, 2020

The figure above shows the percentages of learners who walked more than 60 minutes to get to their educational institutions. White learners were more likely to walk for more than 60 minutes at 8,1% followed by black African learners with 5,6% and coloured learners with 1,0%. Learners in non metro areas walked more 60 minutes with 6,3%.

KwaZulu-Natal had the highest ratio of learners who walked more than 60 minutes to their educational institutions with 8,7%, followed by Eastern Cape with 7,8 % and Limpopo with 5,4%. Generally, in South Africa there were about 5,3% of learners who walked for more than 60 minutes to their educational institutions.

In 2013 the pattern for provinces that contributed the most for learners walking more than 60 minutes to get to their educational institutions was the same as that in 2020, with KwaZulu-Natal being the highest at 9,9%, followed by Eastern Cape at 6,5%. The only difference was Limpopo province as it was below the national average in 2013 at 5,0% but in 2020 it is also above the national average at 5,4%.

7.4 Profile of workers who used non-motorised transport

Table 19: Distribution of workers who used non-motorised transport by sex group, 2013 and 2020

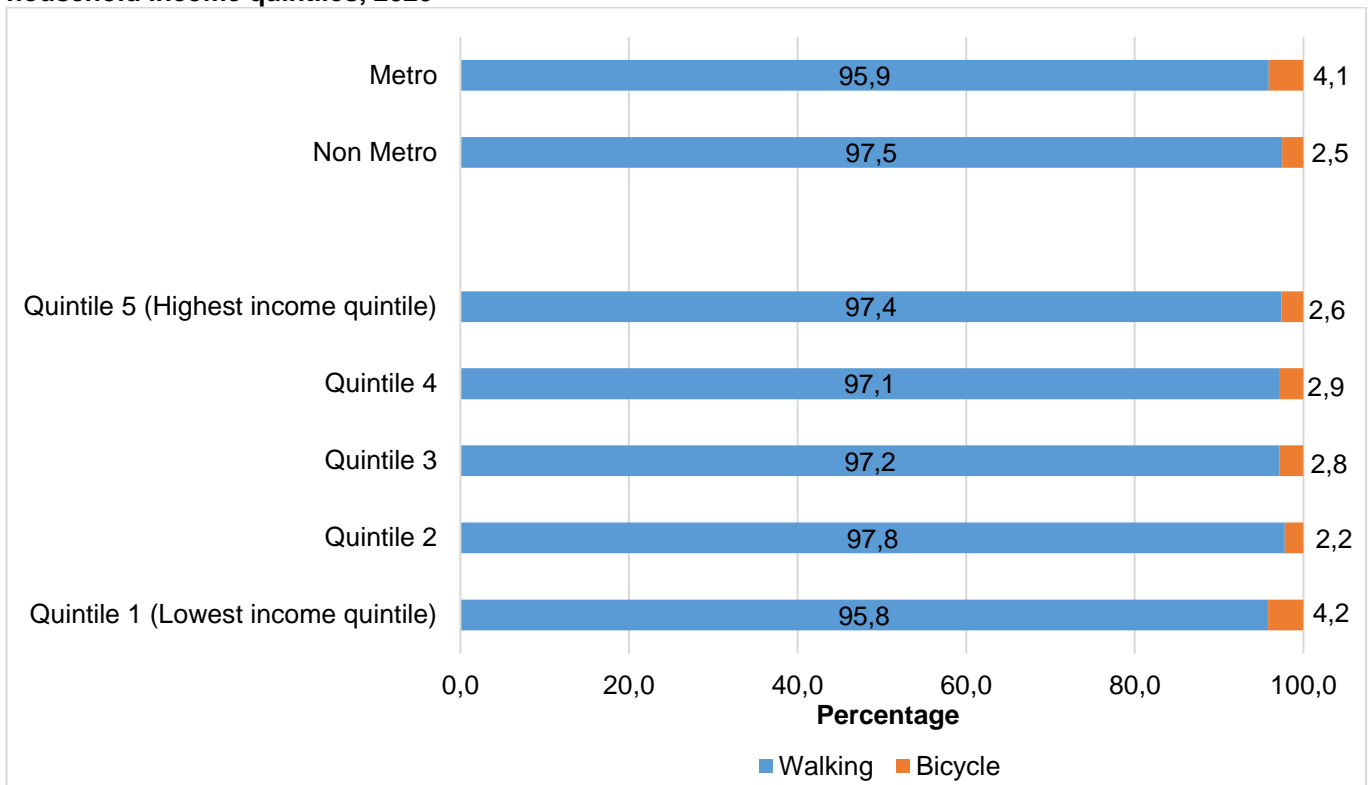
Sex	Statistics ('000)	Non-motorised transport		
		Walking all the way	Bicycle	NMT
2013				
Male	Number	1 653	134	1 787
	Per cent	56,5	90,1	58,1
Female	Number	1 272	15	1 287
	Per cent	43,5	9,9	41,9
Total	Number	2 925	149	3 074
	Per cent	100,0	100,0	100,0
2020				
Male	Number	1 510	74	1 586
	Per cent	55,8	89,2	56,9
Female	Number	1 194	9	1 203
	Per cent	44,2	10,8	43,1
Total	Number	2 704	83	2 788
	Per cent	100,0	100,0	100,0

Source: NHTS, 2013 and 2020
 Bicycle estimates to be used with caution

Table 19 above, shows that the majority of workers walked all the way to their place of work in both 2013 and 2020 (at 2 925 and 2 704 respectively) than those workers who used bicycles at 149 in 2013 and 83 in 2020. Male workers were more likely to use NMT than female workers in both the years for all the NMT modes.

Generally, the table shows a decrease in numbers for workers using NMT from 2013 to 2020, in the overall total and in both the modes displayed in the table.

Figure 37: Percentage of workers who used non-motorised transport by geographic location and per capita household income quintiles, 2020



Source: NHTS, 2020
 Bicycle estimates to be used with caution

Workers who walked all they way were largely found in non metro areas 97,5% compare to workers in metro areas with 95,9%. Quintile two had the highest percentage of workers walking all the way at 97,8%, followed by quintile five (97,4%), quintile three (97,2%), quintile four (97,1%) and lastly quintile one (95,8%).

Bicycles were more likely to be used by workers in metro areas at 4,1% compared to those in metro areas 2,5%. The income quintile with the least percentage of workers using bicycles was income quintile two at 2,2%.

Table 20: Percentage of workers who used non-motorised transport by work sector and monthly per capita household income, 2020

Indicator 2020	Walking all the way	Bicycle	NMT
Work sector			
Formal	46,8	49,0	46,9
Informal	33,3	23,8	33,0
Private household	19,4	26,8	19,6
Do not know	0,5	0,4	0,5
Monthly per capita household income			
R0 – 1 000	53,6	51,3	53,6
R1 001 – 3 000	32,2	34,8	32,3
R3 001 – 6 000	10,2	7,2	10,2
>R6 000	3,9	6,7	4,0
Total	100,0	100,0	100,0

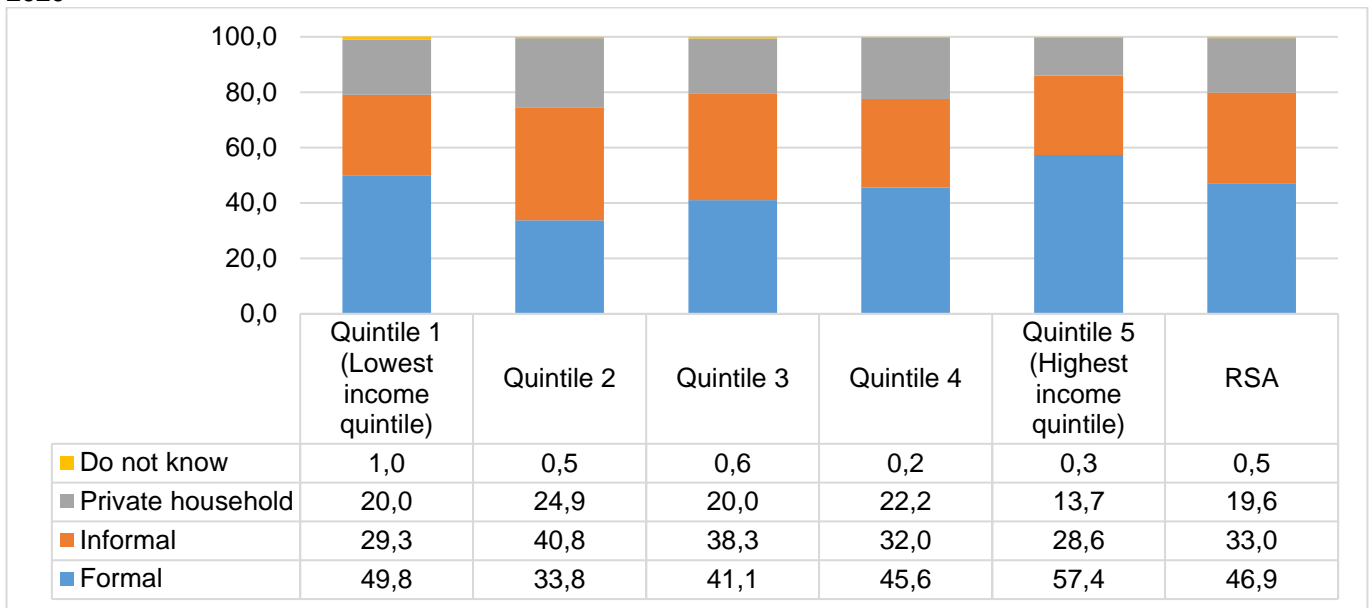
Source: NHTS, 2020

Bicycle estimates to be used with caution

The table above shows the percentage of workers who use NMT by work sector and monthly household income per capita. Majority of workers who walked all the way to their work place were from the formal work sector at 46,8%, followed by informal at 33,3% then private households at 19,4%. For workers using bicycles to get to their work place, 49,0% were from the formal work sector at 49,0% followed by private households at 26,8% and informal at 23,8%.

It is observed that the percentage of workers who used non-motorised transport is higher for lower monthly per capita household incomes. Across South Africa, workers with average household income per capita of between R0 to R1 000 contributed 53,6% of those using NMT, followed by those between income R 1 001 to R 3 000 (32,3%), R 3 001 to 6 000 (10,2%) and lastly greater than R6 000 at 4,0%.

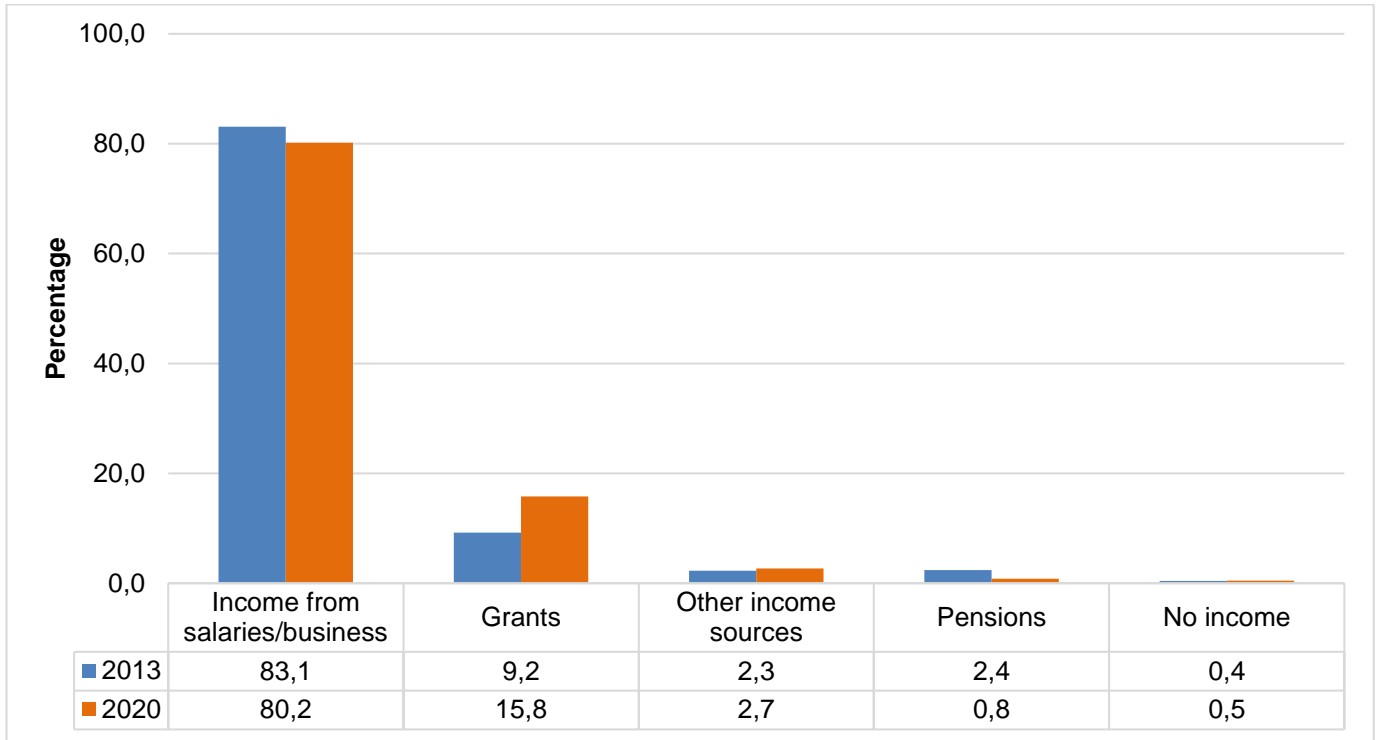
Figure 38: Percentage of workers who used non-motorised transport by work sector and income quintiles, 2020



Source: NHTS, 2020

The figure above shows the percentage distribution of workers who used NMT by sector and income quintiles. There was a similar pattern in almost all the income quintiles for workers using NMT, where formal sector had the highest percentage of workers using NMT, followed by informal and private households. Income quintile two was the only exception where the informal sector had the highest percentage (40,8%) of workers using NMT, followed by those in the formal sector at 33,8% and private households at 24,9%.

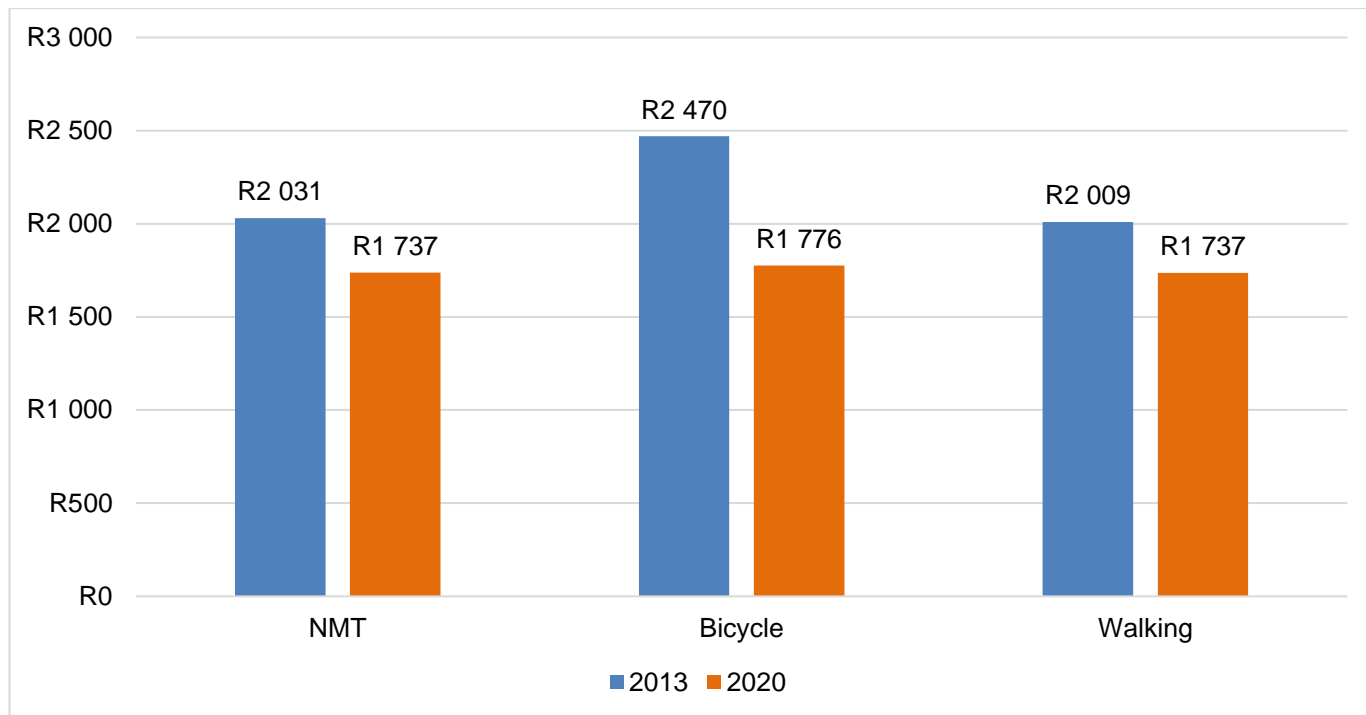
Figure 39: Percentage of workers who used non-motorised transport by main source of household income, 2013 and 2020



Source: NHTS, 2013 and 2020

Looking at main source of household income for workers who used NMT to get to their work place in 2013 and 2020. Figure 39 above shows that the trend was almost similar for both years, where income from salaries/businesses at 83,1% in 2013 and 80,2% in 2020, were the main household income source, followed by grants at 9,2% in 2013 and 15,8% in 2020. The third main source of income in 2013 was pensions at 2,4%, this changed in 2020 where the third main source of income was other income sources at 2,7%.

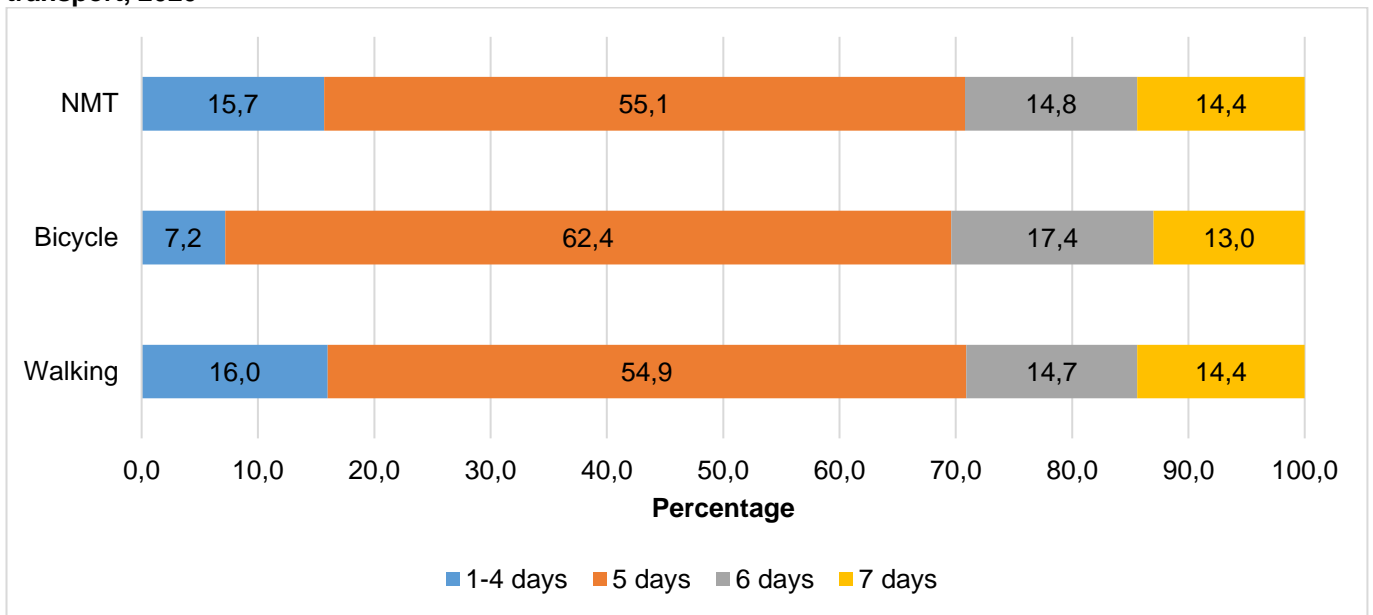
Figure 40: Average per capita monthly household income for workers who used non-motorised transport by non-motorised transport modes, 2013 and 2020



Source: NHTS, 2013 and 2020
 Bicycle estimates to be used with caution

Figure 40 shows that 2020 had lower proportions of average per capita monthly household income for all NMT modes than 2013. In 2020 average household monthly per capita income for workers using different modes of NMT did not vary a lot (around R1 700).

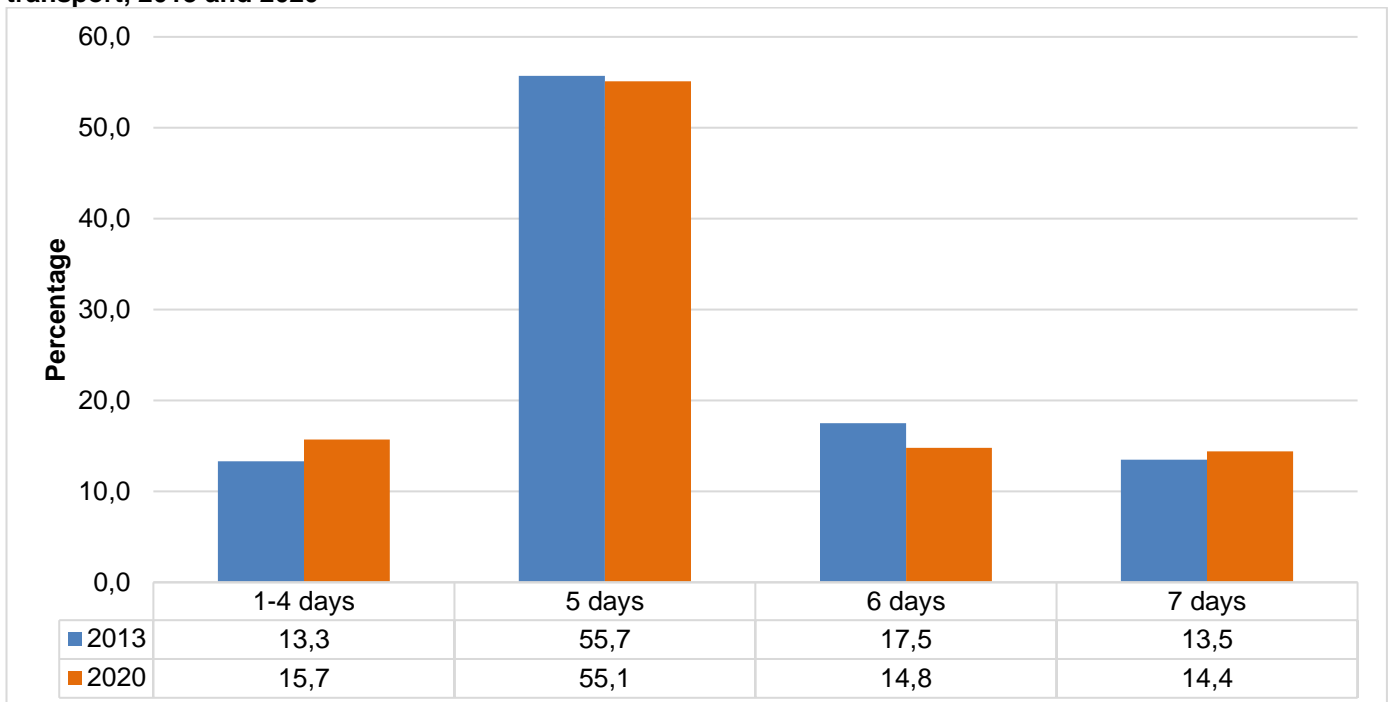
Figure 41: Number of days travelled to place of work per week for workers who used non-motorised transport, 2020



Source: NHTS, 2020
 Bicycle estimates to be used with caution

Figure 41 presents the number of days travelled to work by workers using NMT in 2020. Overall, workers using NMT travelled five days to work at 55,1% in 2020, followed by those travelling between 1–4 days at 15,7%. This pattern is similar for those who walk all the way to their work place but slightly difference for workers using bicycles. Workers who use bicycles travelled five days to their work place then followed by those who travelled six days to their work place.

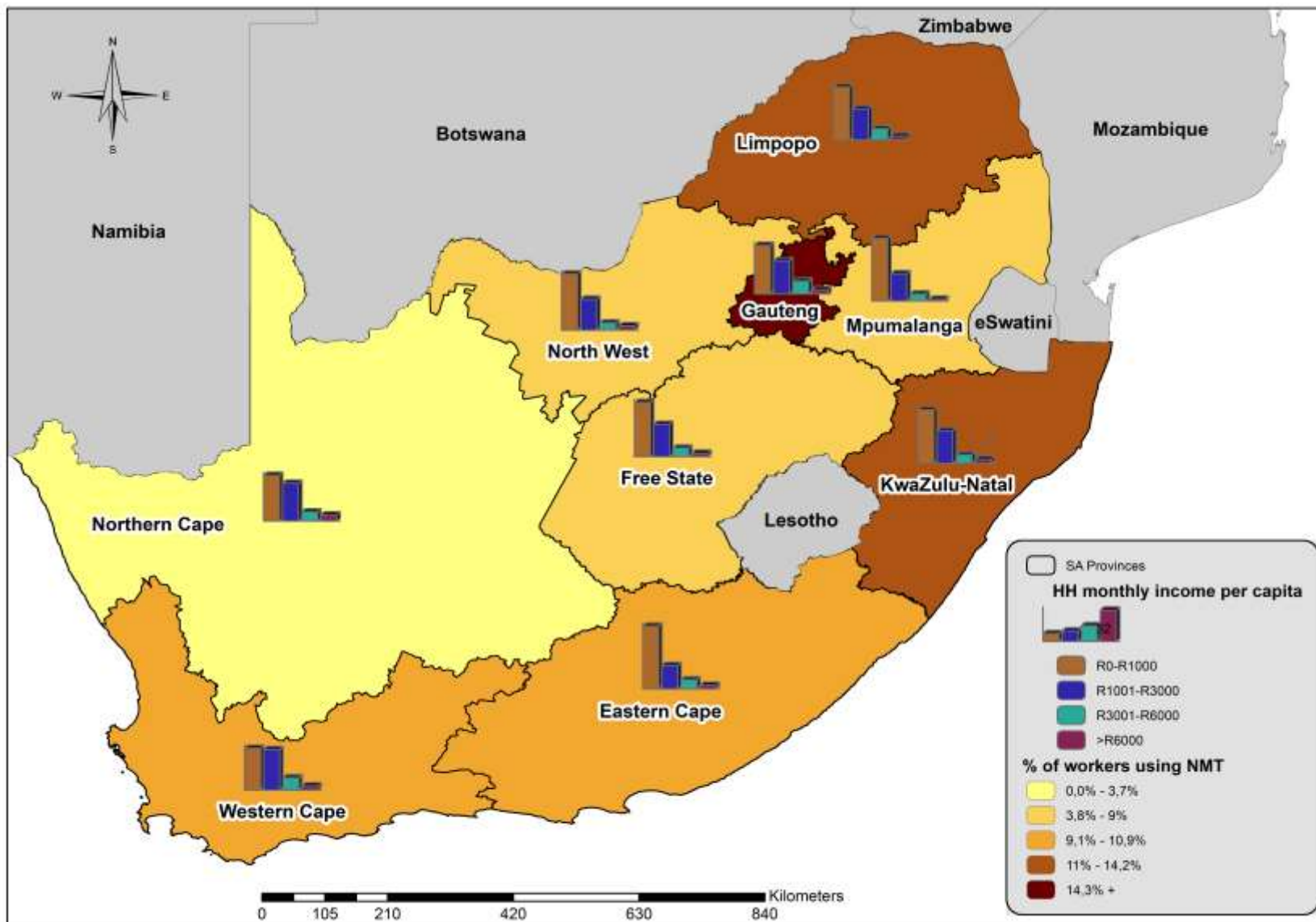
Figure 42: Number of days travelled to place of work per week for workers who used non-motorised transport, 2013 and 2020



Source: NHTS, 2020

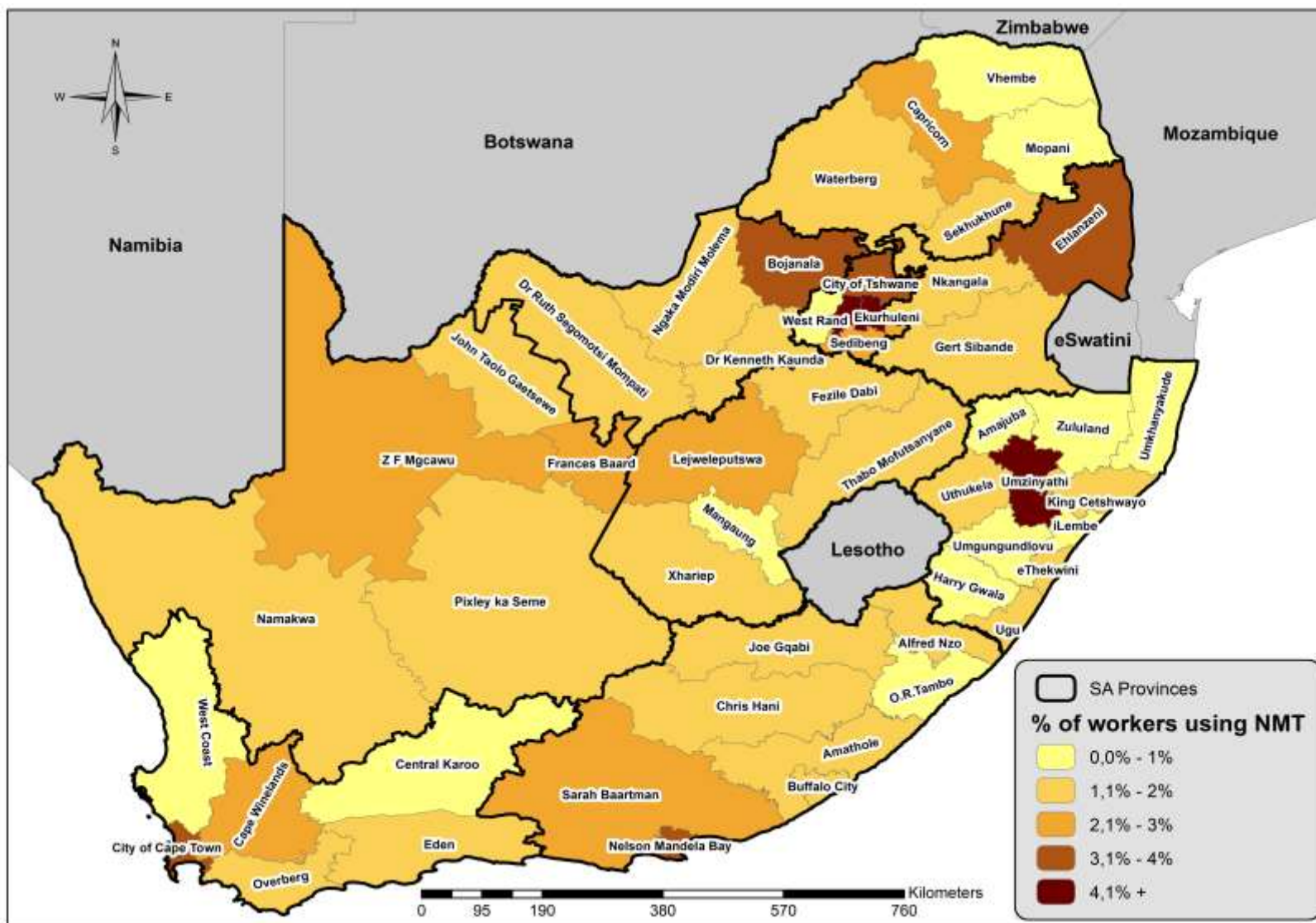
Workers using NMT to their workplace travelled five days in a week to get to their workplace, this was the same for both 2013 and 2020 as shown in the figure above. In 2020 these were followed by those travelling 1–4 days to get to their work place then six days, in 2013 they were followed by those travelling six days and seven days. There is a percentage increase.

Map 5: Percentage of workers who used non-motorised transport and monthly per capita household income by province, 2020



Source: NHTS, 2020

Map 6: Percentage of workers who used non-motorised transport by district municipalities, 2020



Source: NHTS, 2020

Map 5 shows that workers who used NMT were most likely to reside in households earning a monthly household income per capita between R0 to R1 000. Workers from households that had a monthly per capita household income greater than R6 000 were most likely to come from Northern Cape.

The percentage of workers who used NMT by district municipality is presented in Map 6. Umzinyathi and Ekurhuleni had the highest percentage (greater than 4,1%) of workers who used NMT (coloured in dark brown).

Table 21: Total time travelled by workers who used non-motorised transport by geographic location, 2020

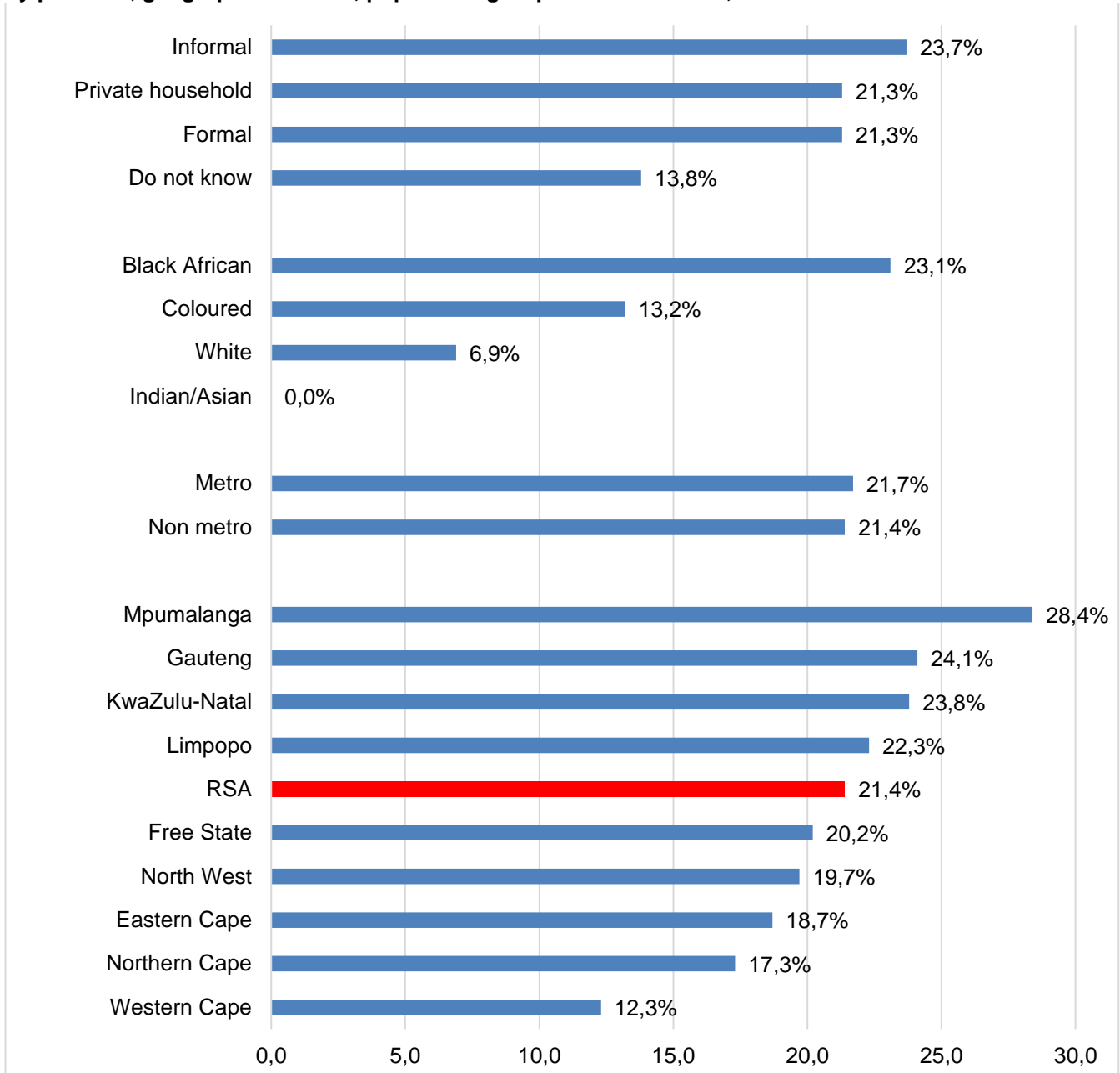
Mode and time travelled in minutes	Statistics ('000)	Geographic location 2020		RSA
		Metro	Non metro	
Walking all the way				
Mean (minutes)		33	30	31
Up to 30 minutes	Number	484	1 389	1 873
	Per cent	66,1	70,5	69,3
Between 31–60	Number	159	421	579
	Per cent	21,7	21,4	21,4
More than 60 minutes	Number	89	161	250
	Per cent	12,2	8,2	9,3
Total	Number	731	1 971	2 703
	Per cent	100,0	100,0	100,0
Bicycle				
Mean (minutes)		49	40	44
Up to 30 minutes	Number	10	30	40
	Per cent	33,0	57,8	48,4
Between 31–60	Number	13	14	26
	Per cent	40,3	26,7	31,8
More than 60 minutes	Number	8	8	16
	Per cent	26,7	15,6	19,8
Total	Number	31	51	83
	Per cent	100,0	100,0	100,0

Source: NHTS, 2020

Bicycle estimates to be used with caution

Across all geographic locations it is observed that the average travel time for workers walking all the way to their workplace was 31 minutes, while for those riding a bicycle it was 44 minutes. Most workers (69,3%) walk up to 30 minutes to get to their workplace, followed by those who take between 31 to 60 minutes (21,4%) and those taking more than 60 minutes (9,3%). A similar pattern is observed for those workers using bicycles, with the exception of workers in metro areas where the highest ratio of workers is for those riding between 31 to 60 minutes (40,3%) followed by those taking up to 30 minutes (33,0%) to get to work.

Figure 43: Percentage of workers who walked all the way for between 31 and 60 minutes to their workplace by province, geographic location, population group and work sector, 2020



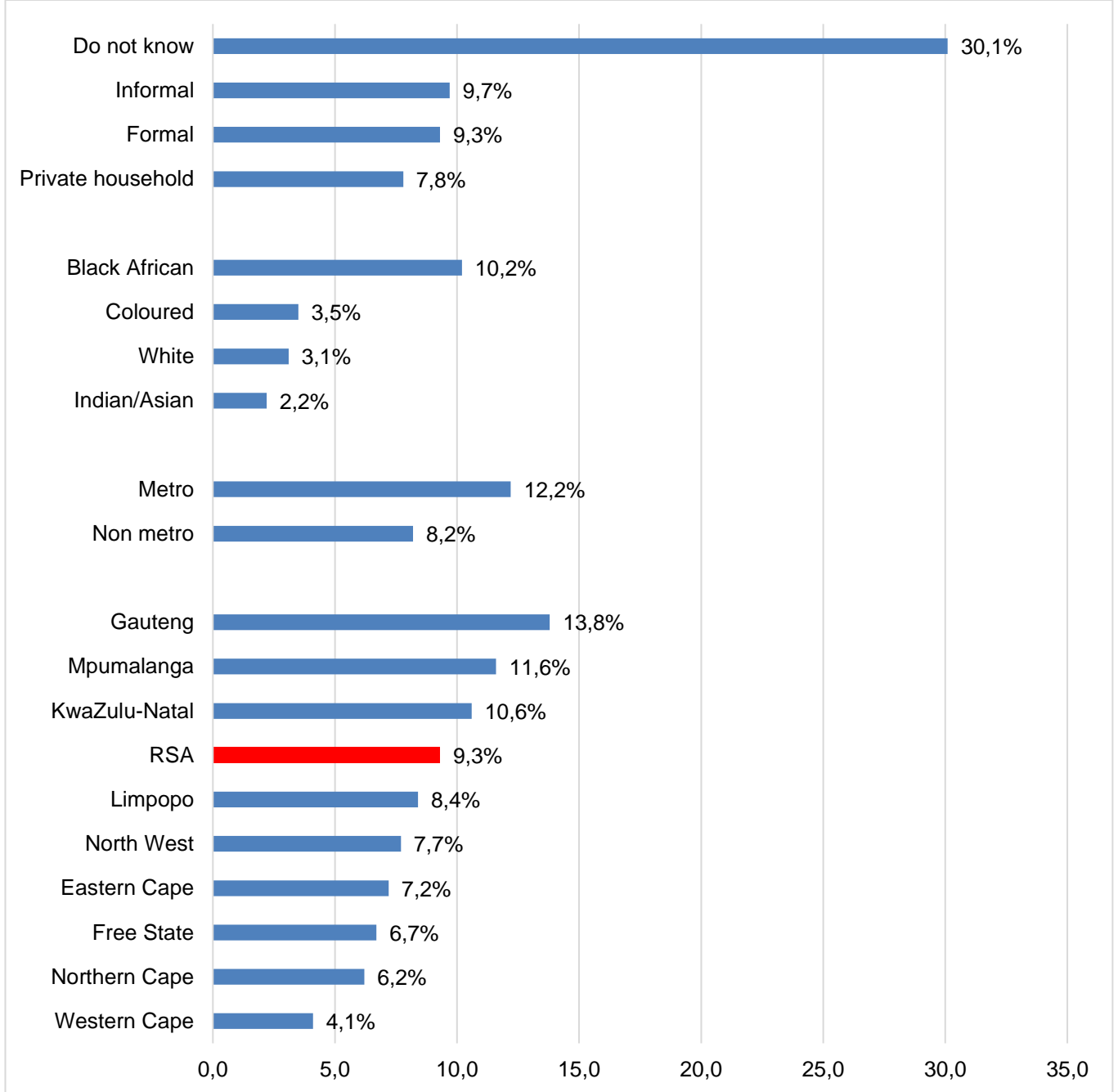
Source: NHTS, 2020

Workers from the informal sector were more likely to walk between 31 and 60 minutes at 23,7% followed by those in formal and private household sector with both at 21,3%. Black Africans had the highest percentage of those who walked between 31 to 60 minutes than any other race at 23,1%, followed by coloureds with 13,2%. Walking was pre-eminent amongst workers in metro areas (21,7%).

Mpumalanga recorded the highest percentage of workers who walked between 31 to 60 minutes to their workplace with 28,4%, followed by Gauteng and KwaZulu-Natal with 24,1% and 23,8% respectively. Overall, the proportion of workers who walked all the way to their workplace for between 31 and 60 minutes in South Africa was 21,4%.

In 2013 Mpumalanga (27,3%) was still the province that contributed the highest for workers travelling between 31 and 60 minutes using NMT, followed by KwaZulu-Natal and Eastern Cape with both at 26,3%. Gauteng had a percentage of 21,9% of workers travelling between 30 to 60 minutes to get to the work place using NMT.

Figure 44: Percentage of workers who used non-motorised transport and walked all the way for more than 60 minutes to their workplace by province, geographic location, population group and work sector, 2020



Source: NHTS, 2020

The figure above shows the percentages of workers who walked all the way to their workplace for more than 60 minutes to their workplace. Workers coming from the informal sector were more likely to walk for 60 minutes and more at 9,7%, followed by workers from the formal sector at 9,3%. The black African population group were more likely to walk more than 60 minutes with a percentage of 10,2% followed by coloureds at 3,5% and whites at 3,1%. Workers in metros areas had the highest percentage of those who walked more than 60 minutes at 12,2% compared to workers in non metro areas at 8,2%.

Gauteng had the highest proportion of workers walking more than 60 minutes at 13,8%, followed by Mpumalanga at 11,6% and KwaZulu-Natal at 10,6%. Generally, in South Africa, there is an average of 9,3% of workers walking for more than 60 minutes to get to their workplace.

Even though the order for the top three provinces which contributed the highest percentages for workers walking more than 60 minutes to get to their workplace changed in 2020, they were still the top three in 2013 were KwaZulu-Natal was the highest at 10,8% followed by Mpumalanga at 10,7% then Gauteng at 9,8%.

7.5 Profile of work seekers who used non-motorised transport

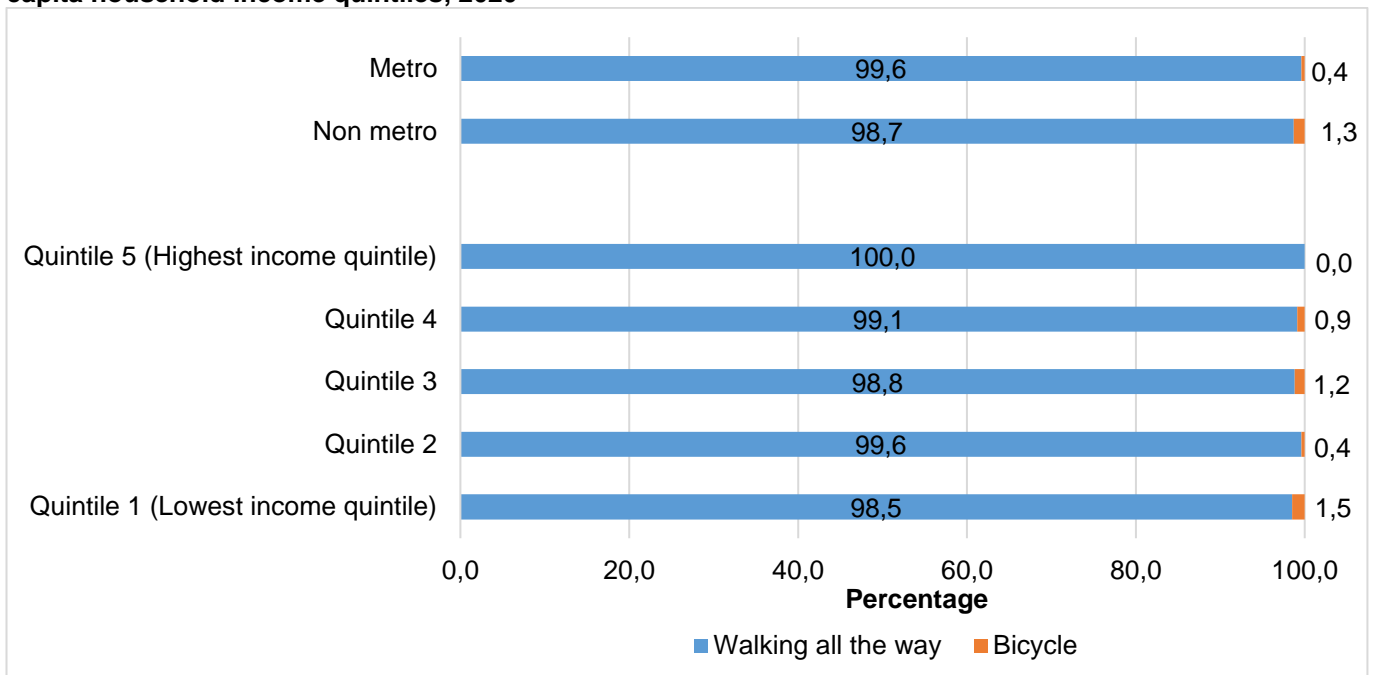
Table 22: Distribution of work seekers who used non-motorised transport by sex group, 2020

Sex	Statistics ('000)	Non-motorised transport		
		Walking all the way	Bicycle	NMT
Male	Number	457	6	463
	Per cent	62,6	76,5	62,8
Female	Number	273	2	275
	Per cent	37,4	23,5	37,2
Total	Number	730	8	738
	Per cent	100,0	100,0	100,0

Source: NHTS, 2020
Bicycle estimates to be used with caution

Looking at the proportion of work seekers who used NMT by sex in 2020. The table above shows that male work seekers at 62,8% were more likely to use NMT than females at 37,2%. 62,6% of male work seekers walked all the way while 37,4% of females walked all the way. Male work seekers were more likely to ride a bicycle at 76,5%, while 23,5% of female work seekers rode a bicycle to their destinations.

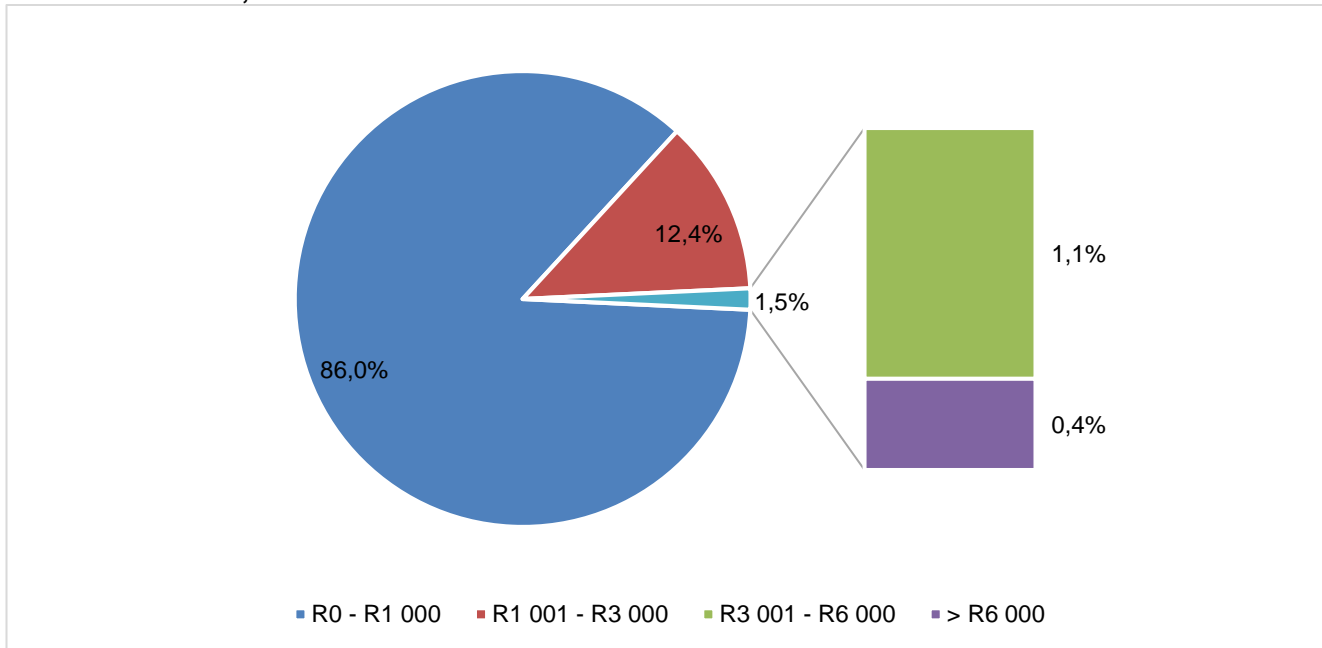
Figure 45: Percentage of work seekers who used non-motorised transport by geographic location and per capita household income quintiles, 2020



Source: NHTS, 2020
Bicycle estimates to be used with caution

Figure 45 above presents the percentage of work seekers who used NMT by geographic location and household income quintiles. Work seekers in metro areas were more likely to walk all the way at 99,6% compared to work seekers in non metro areas. Work seekers in different household income quintiles (above 90,0%) were more likely to walk than ride a bicycle to their different destinations. On the other hand, those in the highest income quintile are more likely to use a bicycle than any other income quintiles.

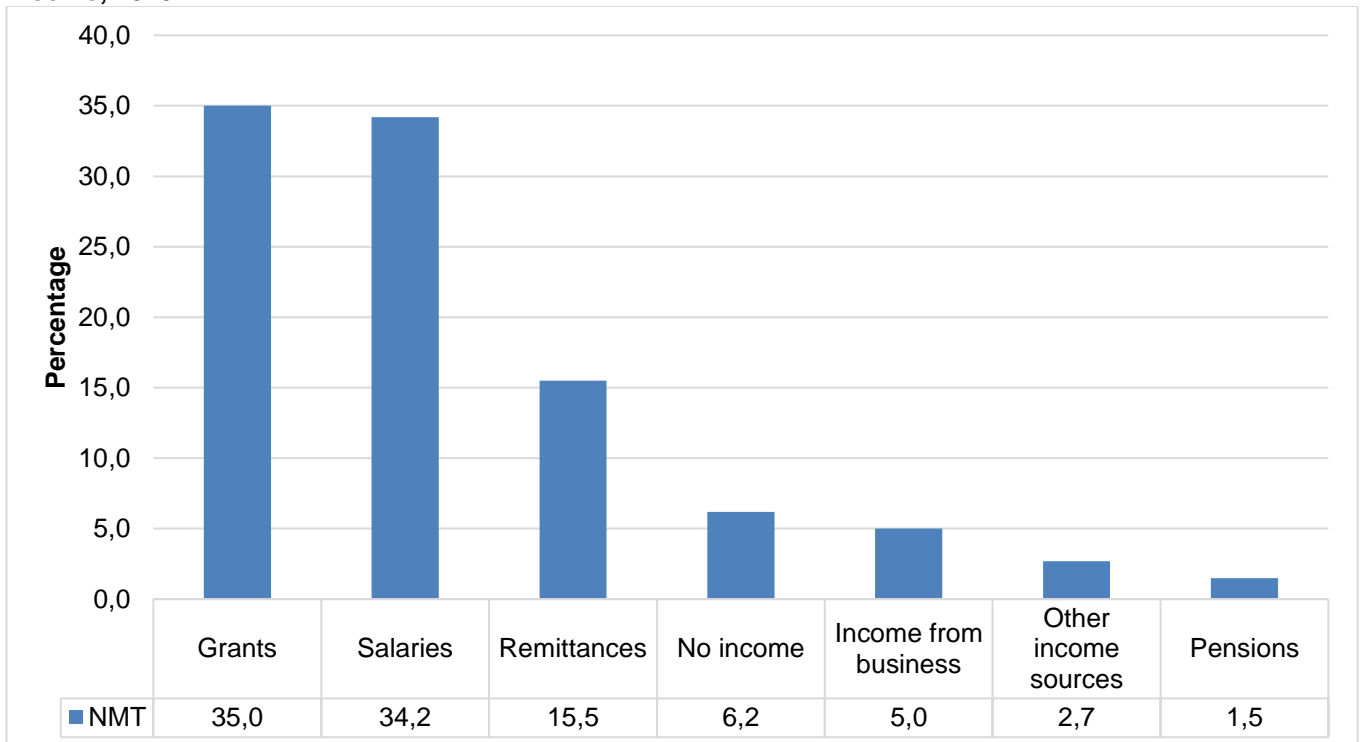
Figure 46: Percentage of work seekers who used non-motorised transport by average monthly per capita household income, 2020



Source: NHTS, 2020

Figure 46 above presents the average monthly per capita household income for work seekers using NMT in 2020. Work seekers from households in the lowest average group R0 – R1 000 were more likely to use NMT (86,0%), followed by those in R1 001 – R3 000 at 12,4%. Work seekers from households with incomes from R3 000 and above make up 1,5% of those using NMT.

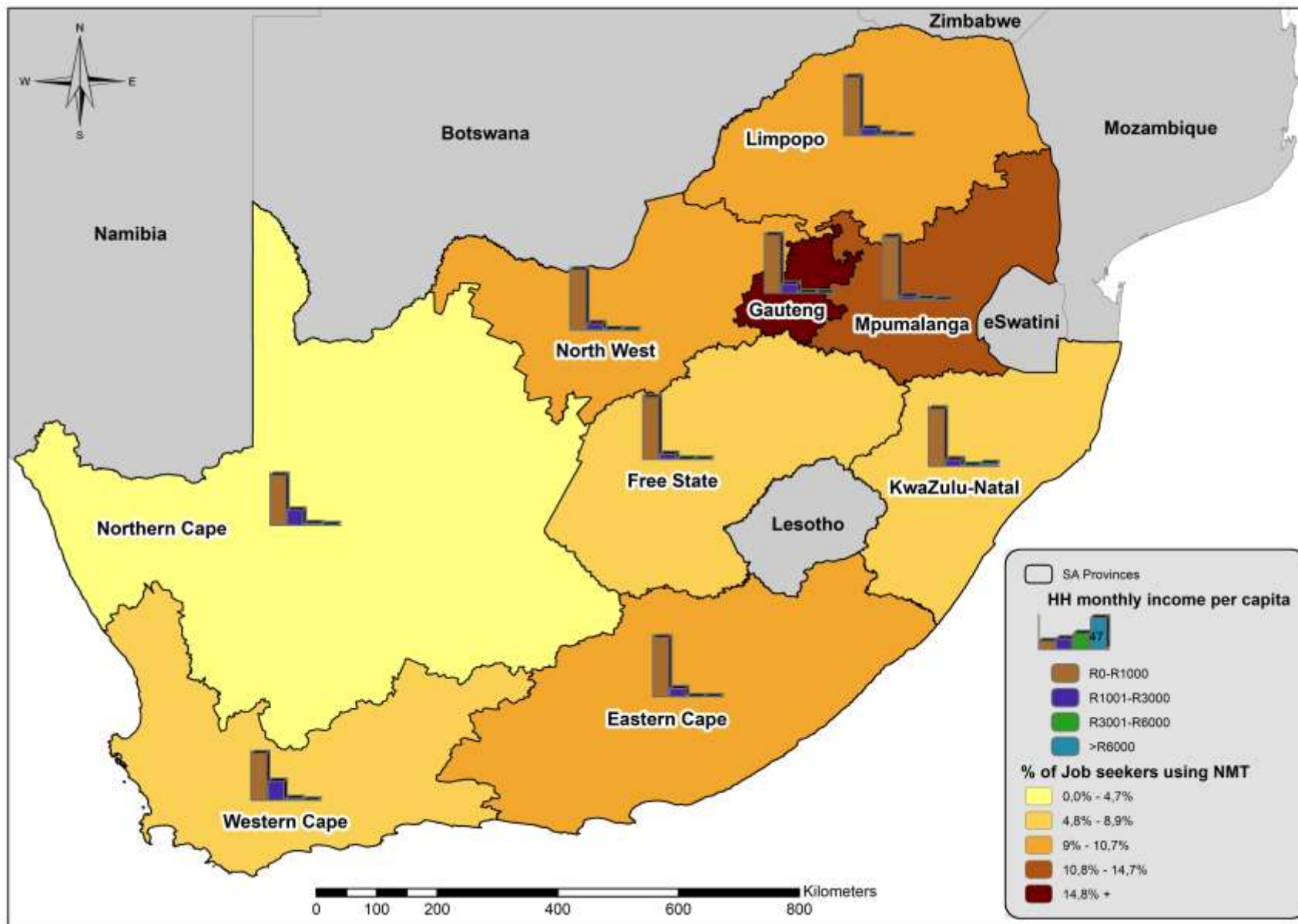
Figure 47: Distribution of work seekers who used non-motorised transport by main source of household income, 2020



Source: NHTS, 2020

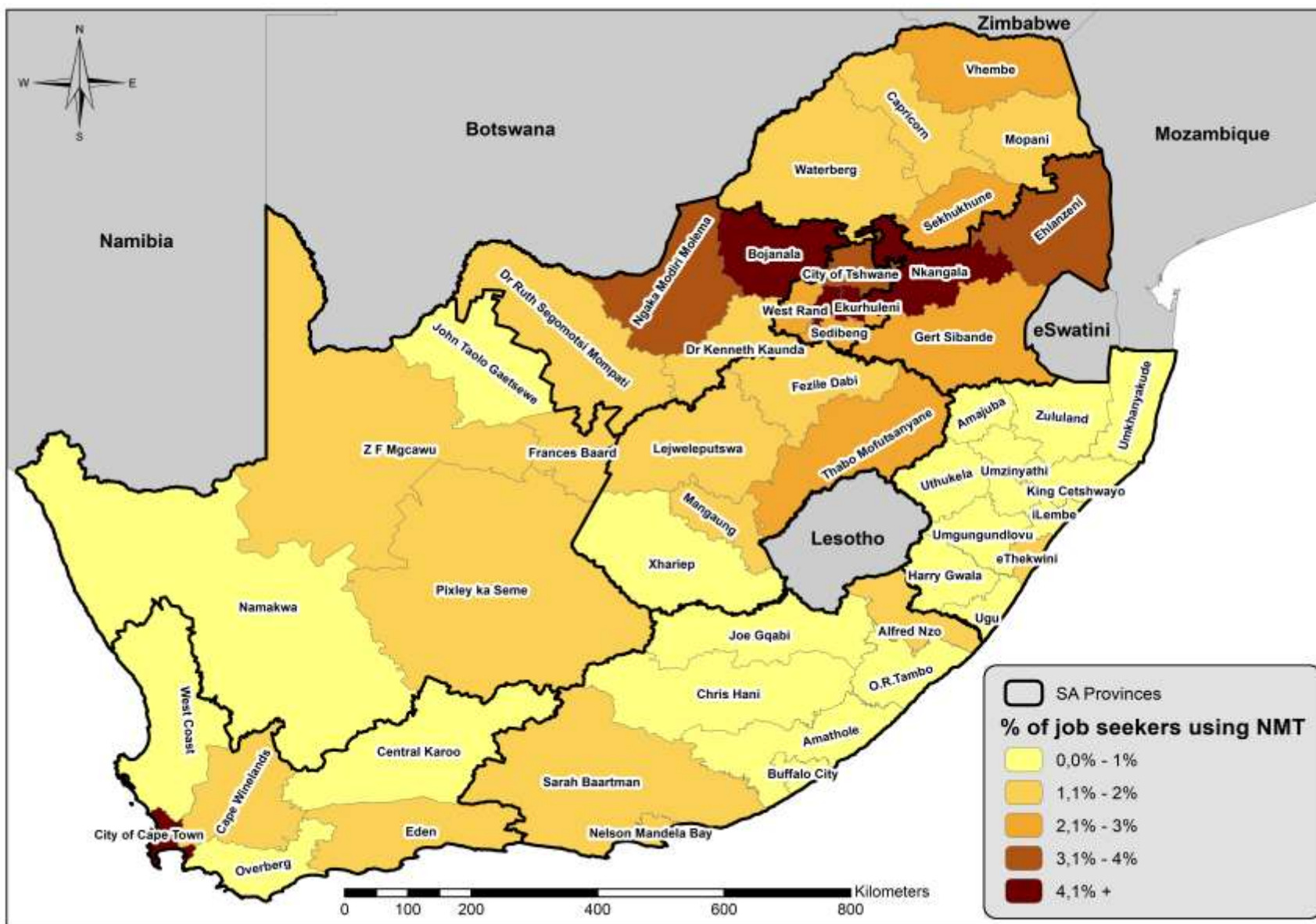
The highest percentage of work seekers who used NMT to get to their destination were from households where the main source of income was grants (35,0%), followed by salaries (34,2%) and remittances at 15,5%. Pensions (1,5%) were the least to be mentioned as a main source of income for households were work seekers used NMT to get to their destinations.

Map 7: Percentage of work seekers who used non-motorised transport and monthly per capita household income by province, 2020



Source: NHTS, 2020

Map 8: Percentage of work seekers who used non-motorised transport by district municipalities, 2020



Source: NHTS, 2020

Map 7 presents the percentage of work seekers who used NMT and monthly per capita household income by province. The darkest colours on the map represent the highest use of NMT while the lightest colours represent the lowest use of NMT. The map shows that Gauteng had the highest percentage of workers who used NMT. On the other hand, work seekers in Northern Cape were the least likely to use NMT in the country, followed by Western Cape, Free State and KwaZulu-Natal. Provincially, work seekers who used NMT were most likely to reside in households that had between R0 and R1 000 monthly per capita household income (represented in brown). In contrast, workers from households that had a monthly per capita household income of between R1 001 and R3 000 were more likely to reside in Western Cape and Northern Cape (highlighted in blue).

Map 8 illustrates the percentage of work seekers who used NMT by district municipalities. Bojanala, Nkangala, Ekurhuleni and City of Johannesburg, were the districts with the highest proportion of work seekers who used NMT. Almost all districts in KwaZulu-Natal had the lowest proportion of NMT users except for eThekweni district municipality. The northern part of the country showed to have more work seekers using NMT, while the southern part had the lowest proportions. Only City of Cape Town had the highest proportion of NMT users throughout the southern part of the country.

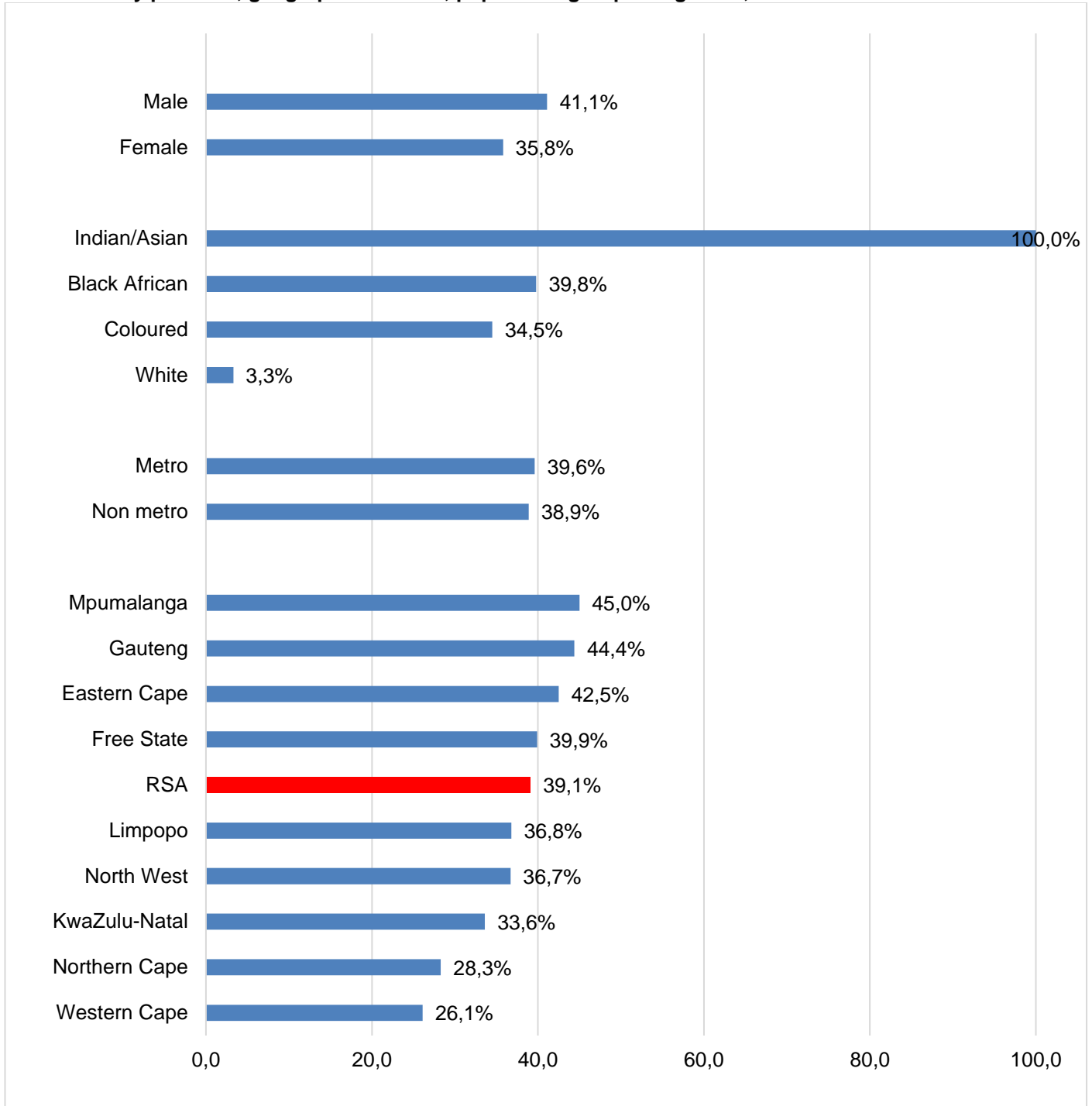
Table 23: Total time travelled by work seekers who walked all the way by geographic location, 2020

Mode and time travelled in minutes	Statistics ('000)	Geographic location 2020		RSA
		Metro	Non metro	
Walking all the way				
Mean (minutes)		64	59	60
Up to 30 minutes	Number	72	188	260
	Per cent	31,6	37,5	35,6
Between 31 – 60 minutes	Number	91	195	285
	Per cent	39,6	38,9	39,1
More than 60 minutes	Number	66	119	185
	Per cent	28,8	23,7	25,3
Total	Number	229	501	730
	Per cent	100,0	100,0	100,0

Source: NHTS, 2020

Average travel time for work seekers who walked all the way to seek employment or start a business in 2020 was 60 minutes, as shown in Table 23. Work seekers who walk all the way tend to travel between 31 to 60 minutes (39,1%) to reach their destinations followed by those who took up to 30 minutes at 35,6% then more than 60 minutes at 25,3%. This pattern was followed in all the geographic locations, with work seekers in metro areas slightly more likely to walk more than 60 minutes at 28,8%.

Figure 48: Percentage of work seekers who walked all the way for between 31 and 60 minutes to their destination by province, geographic location, population group and gender, 2020

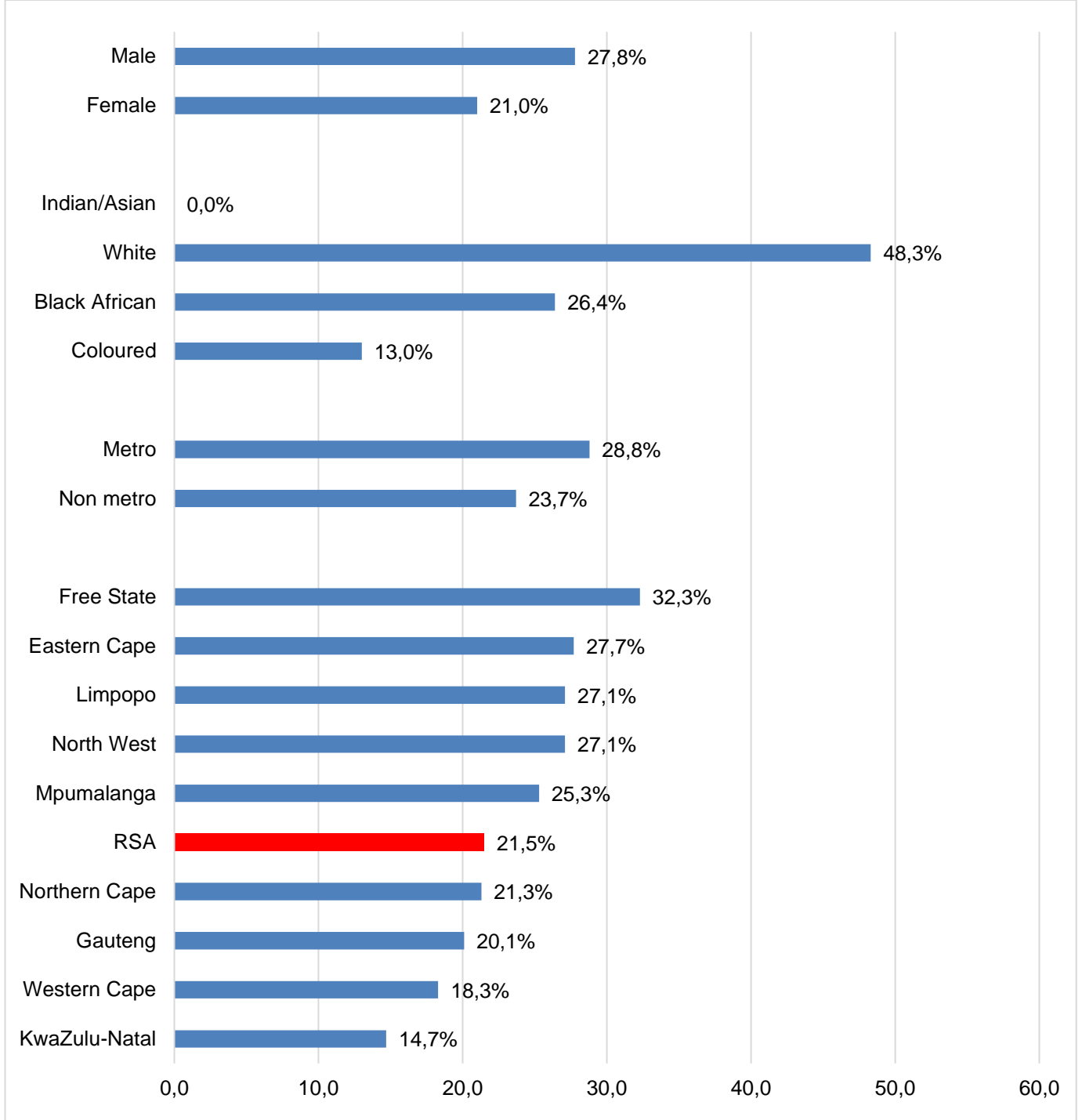


Source: NHTS, 2020

Figure 48 shows that male work seekers were more likely to walk between 31 to 60 minutes to get to the destinations at 41,1% than female work seekers at 35,8%. The white population group walked the least, between 31 to 60 minutes at 3,3%.

Looking at geographic locations, metropolitan work seekers were slightly more likely to walk all the way between 31 and 60 minutes to their destination compared to work seekers in non metro areas. In terms of provinces, the highest percentages of workers who walked all the way between 31 and 60 minutes were found in Mpumalanga (45,0%), Gauteng (44,4%) and Eastern Cape (42,5%). Nationally, about 39,1% of work seekers needed between 31 and 60 minutes to walk all the way to their destination.

Figure 49: Percentage of work seekers who walked all the way for more than 60 minutes to their destination by province, geographic location, population group and gender, 2020



Source: NHTS, 2020

Males were more likely to walk more than 60 minutes (27,8%) than females (21,0%) as shown in the figure above. White work seekers were more likely to walk for more than 60 minutes to their destination than other population groups.

In terms of geographic location, work seekers in the metropolitan areas were more likely to walk all the way for more than 60 minutes compared to workers in non metro areas. Free State had the highest percentage (32,3%) of workers who walked all the way for more than 60 minutes, followed by Eastern Cape (27,7%), Limpopo (27,1%) and North West (27,1%). The figure also shows that an average of 21,5% of work seekers in South Africa walked for more than 60 minutes to their destination while looking for work or to start a business.

7.6 Summary

This section explored the usage of NMT in much greater detail, focusing on households, learners, workers and work seekers. The analyses show that out of a total of 586 000 households that used NMT in South Africa. In both 2013 and 2020 it mainly took up to 30 minutes to access services and facilities for households using NMT, followed by households that took between 31 to 60 minutes then more than 60 minutes. Of those households that used NMT to their destinations, the main source of household income was salaries (39,5%), followed by grants at 33,7% and other income sources at 19,1%.

In 2020, a total of 10,1 million learners used NMT in the country, with 7,1 million of these learners residing in non metro areas and 2,9 million residing in metro areas. Walking all the way had higher proportions which were all above 99,0% for learners in all geographic areas. Bicycles were another form of NMT that learners used to get to their educational institutions. In 2013 there were approximately 22 000 learners using bicycles, whereas in 2020 there were approximately 16 000 learners using bicycles. Proportions for bicycles were not enough to give reliable estimates, therefore, their estimates should be used with caution.

It was also observed that male learners (51,4%) were more likely to use NMT than female learners (48,6%). For most learners (44,7%) who walked all the way to their educational institutions, the main source of household income was grants, followed by salaries at 41,4% and remittances at 7,7%. For those learners who used bicycles, the main source of household income was mainly salaries (57,9%) followed by grants (20,9%). On average, across all geographic locations most learners who walked all the way to their educational institutions took up to 30 minutes to get to their educational institutions in both 2013 and 2020. In metro areas learners who walked up to 30 minutes to get to their educational institutions were over 80,0%, whereas in non metro areas the percentages were just above 70,0%.

There was a total of about 2,8 million workers who used NMT in South Africa, the majority of which were males (1,6 million). Most workers, about 2,7 million, walked all the way to work. Overall, the proportion of workers who walked all the way to their workplace for between 31 and 60 minutes in South Africa was 3,8%. Mpumalanga recorded the highest percentage of workers who walked between 31 to 60 minutes to their workplace at 28,4%. Gauteng, on the other hand, had the highest proportion of workers walking for more than 60 minutes to get to work at 13,8%.

There was a total of 738 000 work seekers who used NMT to get to their destinations in 2020, of those, 463 000 were males and 275 000 were females. Work seekers in metro areas were more likely to walk all the way at 99,6% compared to work seekers in non metro areas at 98,7%. In South Africa, 25,3% of work seekers walked all the way for more than 60 minutes to their destination. Free State had the highest percentage (32,3%) of work seekers who walked for more than 60 minutes to reach their destinations, followed by Eastern Cape (27,7%), Limpopo (27,1%) and North West (27,1%).



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8. Modelling Non-motorised Transport

8.1 Logistic regression

The following section used binomial logistic regression modelling to investigate factors associated with the mode of travel choice for members of households who took a trip a week before the survey. The model presents a list of variables hypothesised to be associated with mode choice on a given travel day for those who took a trip. The dependent variable is the different main modes of transport, which are grouped into two groups. The first group consists of Non-motorised Transport (NMT), and the second group consists of motorised transport.

The logistic regression technique was used to produce a model that predicts the likelihood of choosing motorised transport (where the odds ratio is bigger than 1) or less likelihood of occurrence (where the odds ratio is less than 1) and also identifies the variables that are significant in predicting the outcome variable.

The model is given by:

$$Y = \frac{e^{(\alpha+\beta)}}{1 + e^{(\alpha+\beta)}}$$

Table 24: Levels of the variables used in the logistic regression model, 2020

Predictor variable	Level
Sex	1= M
	2= F
Population group	1= Black African
	2= Coloured
	3= Indian/Asian
	4= White
Age group	1= 0-14
	2= 15-24
	3= 25-34
	4= 35-44
	5= 45-54
	6= 55-64
	7= 65+
Household income quintile	1= Quintile 1 (Lowest income quintile)
	2= Quintile 2
	3= Quintile 3
	4= Quintile 4
	5= Quintile 5 (Highest income quintile)
Purpose	1= Usual workplace
	2= Educational institution
	3= Other purposes
Metro codes	1= Metro
	2= Non-Metro
Travel day	1= Week days

Source: Own analysis using NHTS, 2020

Table 26 shows the independent variables used to model travel mode. These are sex, population group, age, household income quintile, purpose, metro codes, travel day

Table 25: Wald testing and Chi-squared test of independence between choice of travel mode and predictors, 2020

Testing Global Null Hypothesis: BETA=0				
Test	F Value	Num DF	Den DF	Pr > F
Likelihood Ratio	684.91	15.2653	89378	<.0001
Score	221.66	18	5838	<.0001
Wald	220.09	18	5838	<.0001
NOTE: Second-order Rao-Scott design correction 0.1889 applied to the Likelihood Ratio test.				
Type 3 Analysis of Effects				
Effect	F Value	Num DF	Den DF	Pr > F
Sex	21.82	1	5855	<.0001
Population group	59.43	3	5853	<.0001
Age	167.10	6	5850	<.0001
Household income quintile	144.94	4	5852	<.0001
Purpose	195.74	2	5854	<.0001
Metro codes	229.51	1	5855	<.0001
Travel day	12.92	1	5855	0.0003

Source: Own analysis using NHTS, 2020

*Significant at 0,05 level

Table 25 presents the Wald and Chi-squared tests of independence between choice of travel mode and the predictor variables. It is seen that the tests have small p-values (<.0001) which indicates that our model as a whole fits significantly better than an intercept-only model. The analysis of effects with its associated p-values shows that each of the independent variables in the model significantly improves the model fit.

This means that all the independent variables; sex, population group, age group, income, purpose, metro areas and travel days may be regarded as significant predictors of travel mode choice on a given travel day for those taking a trip.

Table 26: Predictors associated with travel mode choice on a given travel day, 2020

Parameter	Coding: formats	NMT		
		Estimate	Pr > |t|	Odds Ratio
Intercept		-1.3196	<.0001	
Sex	M	reff	reff	reff
	F	-0.0554	<.0001	0.895
Population group	Black African	reff	reff	reff
	Coloured	1.0178	<.0001	0.944
	Indian/Asian	-0.9931	0.0001	0.126
	White	-1.1007	<.0001	0.113
Age	0 - 14	reff	reff	reff
	15 - 24	0.4996	<.0001	0.735
	25 - 34	-0.2343	<.0001	0.353
	35 - 44	-0.3142	<.0001	0.326
	45 - 54	-0.2809	<.0001	0.337
	55 - 64	-0.2370	<.0001	0.352
	65 +	-0.2411	<.0001	0.350
Income quintile	Quintile 1 (Lowest income quintile)	reff	reff	reff
	Quintile 2	0.3328	<.0001	1.818
	Quintile 3	0.2759	<.0001	1.717
	Quintile 4	0.2345	<.0001	1.648
	Quintile 5 (Highest income quintile)	-0.5782	<.0001	0.731
Purpose	Usual work place	-0.6331	<.0001	0.479
	Educational institution	0.5293	<.0001	1.530
	Other purposes	reff	reff	reff
Metro codes	Metro	reff	reff	reff
	Non-Metro	0.3008	<.0001	1.825
Travel day	Week days	reff	reff	reff
	Weekends	0.0543	0.0003	1.115

Source: Own analysis using NHTS, 2020

Reff: reference category

Significant at 0.05 level

Table 26 shows the estimates and odds ratios for each level of the predictor variable, which is the main mode of transportation divided into two groups: Non-motorised Transport (NMT) and motorised transport.

According to the findings, females are less likely than males to use NMT. When other variables in the model are controlled for, females reduce the likelihood of using NMT over motorised transport by 10,0%. This finding is consistent with descriptive statistics from the Stats SA thematic report *Gender Series Volume VIII: Gender patterns in transport, 2020*, which show gender differences in the main mode of transport—males were more likely to walk all the way to their destination.

In comparison to black Africans, whites, Indian/Asian and coloured population groups were less likely to prefer NMT to other main modes of transport.

The model shows that, when compared to age groups 0-14, all older age groups are significantly less likely to prefer NMT over other main modes of transport. The results also show that the older the age group, the lower the odds of preferring NMT over other main modes of transport.

Individuals from the highest household income quintile (quintile 5) were less likely to prefer NMT over other main modes of transport. Furthermore, those in the highest household income quintile reduced their chances of using NMT by 26,9% when compared to those in the lowest household income quintile.

When the purpose of the trip was considered as a factor influencing mode choice on a given travel day, workers were 52,7% less likely to use NMT as their mode of choice. Learners, on the other hand, are 53,0% more likely to use NMT. This confirms descriptive statistics from the *NHTS 2020* report, which show that 10,1 million learners walked all the way to their educational institution.

Those in non-metro areas are more likely to use NMT than those in metro areas; those in non-metro areas are 1,825 times more likely to use NMT than those in metro areas.

Those who travelled on the weekend were 12,0% more likely to use NMT than those who travelled during the week.

Summary

The model proves the earlier observations in the descriptive analysis sections that females are less likely to use NMT than males. There could be numerous explanations behind this finding which leaves room for more studies to be conducted to investigate this phenomenon. NMT is less likely to be a mode of choice for white, Indian/Asian and coloured population group, even for those individuals in the older age groups.

NMT usage is more prevalent among individuals from households with lower income quintiles. The results showed that those in the highest income quintile are less likely to use NMT over motorised transport than those in the lowest income quintile.

Individuals travelling to educational institutions are more likely to use NMT than those travelling for other purposes. In contrast, those travelling to their usual place of work are less likely to use NMT. This confirms that NMT is more common among learners than workers.

Geographical location also influences mode choice; people in non-metro areas are more likely to use NMT over other modes of transport. This is consistent with the findings of many other scholars who have investigated the phenomenon mentioned in the introduction and background of this report.



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9. Conclusion

Non-motorised transport (NMT) is recognised both globally and locally as a complement to the existing transport systems that not only help reduce carbon emissions and traffic congestion but is also economically efficient and has desirable health benefits, including improved lung and heart health.

This report provided an analysis of NMT using NHTS 2013 and 2020 data. The main aim of the report was to locate the position of NMT in everyday travel relative to the other modes and to further disaggregate its use by profiling households, learners, workers and work seekers across different geographic locations. This report, therefore, provides users, particularly agencies in the transportation ecosystem, with information necessary to inform NMT policy planning and development.

The analyses showed that out of a total of 17,3 million households that travelled using various modes of transport across the country, around 586 000 of these households used NMT. The highest proportions of households in non metro areas were more likely to use NMT as their mode of transport (78,1% in 2013 and 72,6,1% in 2020) than in metro areas. The estimates for use of bicycles and animal-drawn transport by households were too low to give reliable estimates.

A focus on learners shows that in 2013 there was a total of 11,1 million of learners who used NMT to get to their educational institutions, 8,0 million were in non metro areas. In 2020, 10,1 million learners used NMT to get to their educational institutions and 7,0 million were in non metro areas. Most learners across all geographic locations in the country walked all the way to their educational institutions. Moreover, most learners who walked all the way to their educational institution took up to 30 minutes to reach their destinations, followed by those who walked for 31 to 60 minutes and those who walked for more than 60 minutes.

On the other hand, there were about 2,8 million workers who used NMT, the majority of which, were male workers (2,7 million). The analyses also showed that workers who walked all the way to their work place were from the formal work sector at 46,8%, followed by informal at 33,3% then private households at 19,4%. For workers using bicycles to get to their work place, 49,0% were from the formal work sector at 49,0% followed by private households at 26,8% and informal at 23,8%. Mpumalanga had the highest percentage of workers who walked between 31 to 60 minutes to their workplace. While Gauteng had the highest percentage of workers who walked for more than 60 minutes.

Looking into the profile of work seekers, the analyses show that about 738 000 individuals used NMT in 2020 to get to their destinations in search of work. Of these individuals, 463 000 were males and 275 000 were female. Work seekers in metro areas were more likely to walk all the way compared to those in non metro areas. Moreover, 25,3% of individuals who were in search of work walked all the way for more than 60 minutes. Most work seekers in Free State (32,3%) walked all the way to their destinations in search of work, followed by those in Eastern Cape (27,7%) and those in Limpopo (27,1%) and North West (27,1%).

Modelling NMT confirms findings in the descriptive analysis sections that females are less likely to use NMT than males. The results further show that those from lower household income quintiles are more likely to use NMT than those from higher household income quintiles. Moreover, the results show that NMT is more common among learners than workers.

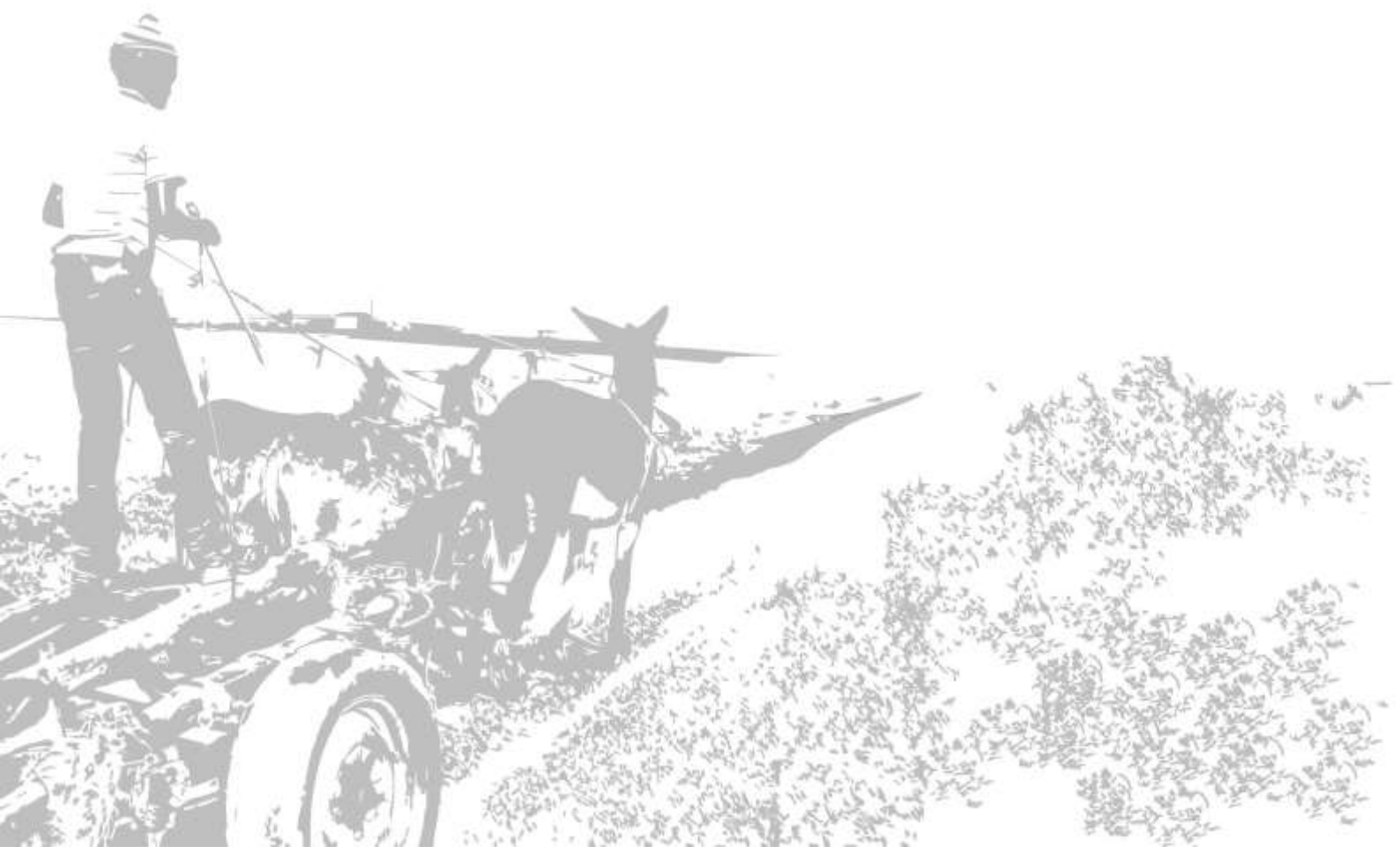
This report provides crucial information pertaining the South African transportation system. A comparison between the NHTS 2013 and NHTS 2020 shows an increase in the number of households that used NMT. About 319 000 households in 2013 and 586 000 households in 2020 reported to have used NMT for purposes of accessing public service facilities (Stats SA 2016). This demonstrates the need for further efforts to advance the infrastructural development for non-motorised transportation and the coordination of the draft NMT policy and related strategies.



Section:

Introduction
Main mode of travel at a glance
Non-motorised transport explored in greater detail
Modelling non-motorised transport
Conclusions

Reference and Annexure



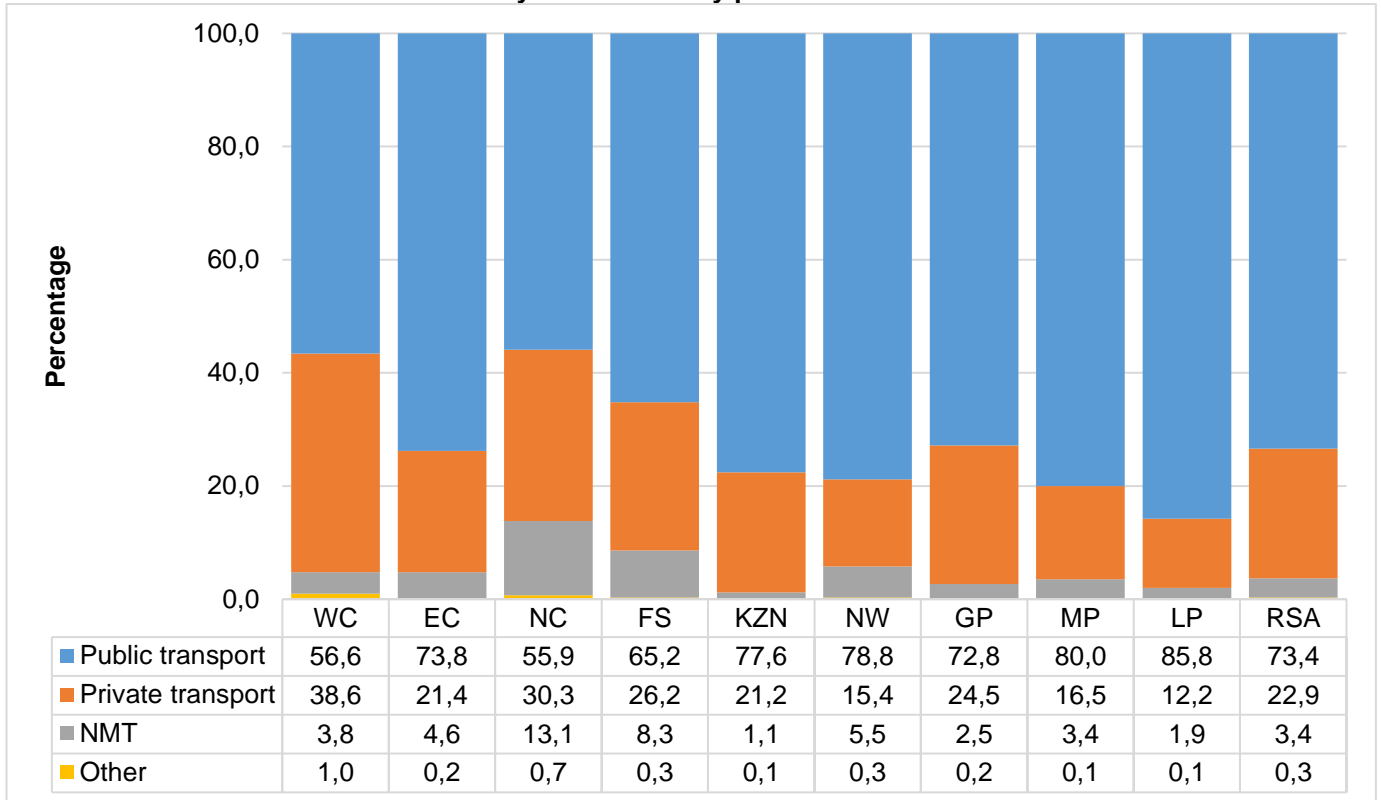
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11. Annexures

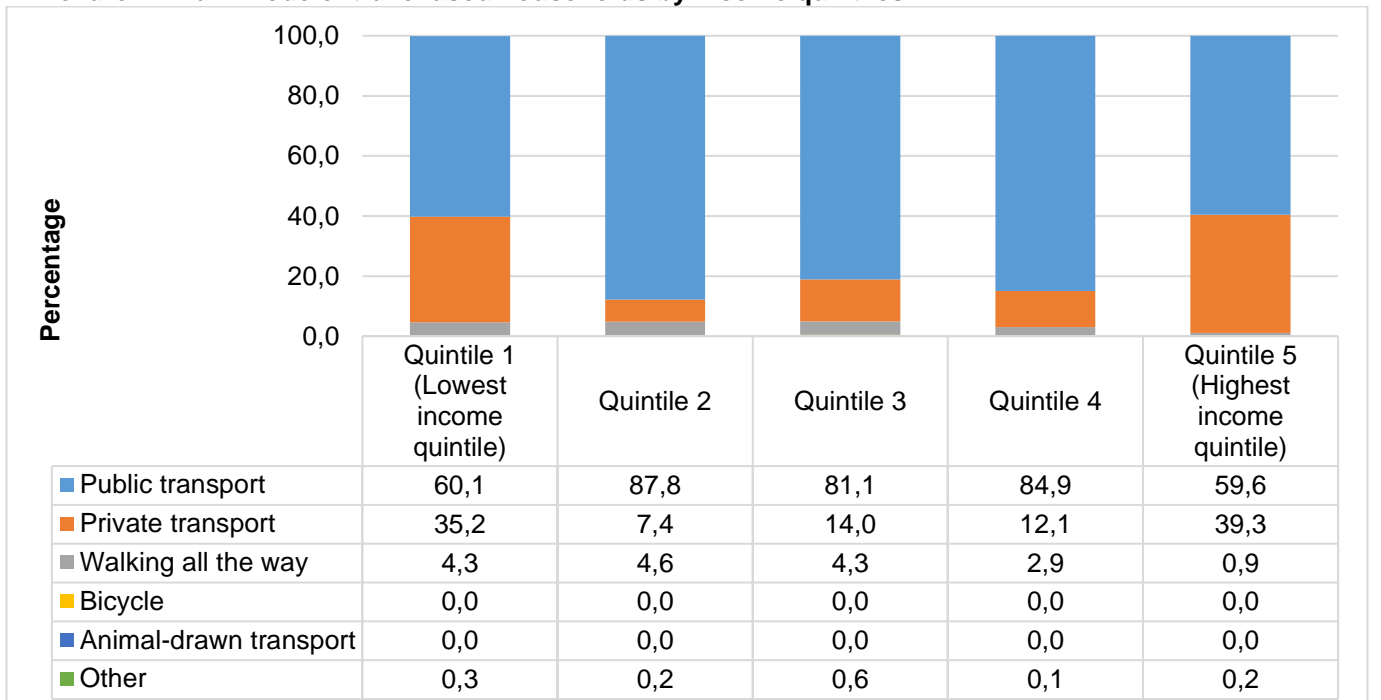
Annexure A: Main mode of travel used by households by provinces



Source: NHTS, 2020

'Other' includes aircraft, scooter/motorcycle, tuk-tuk, etc.

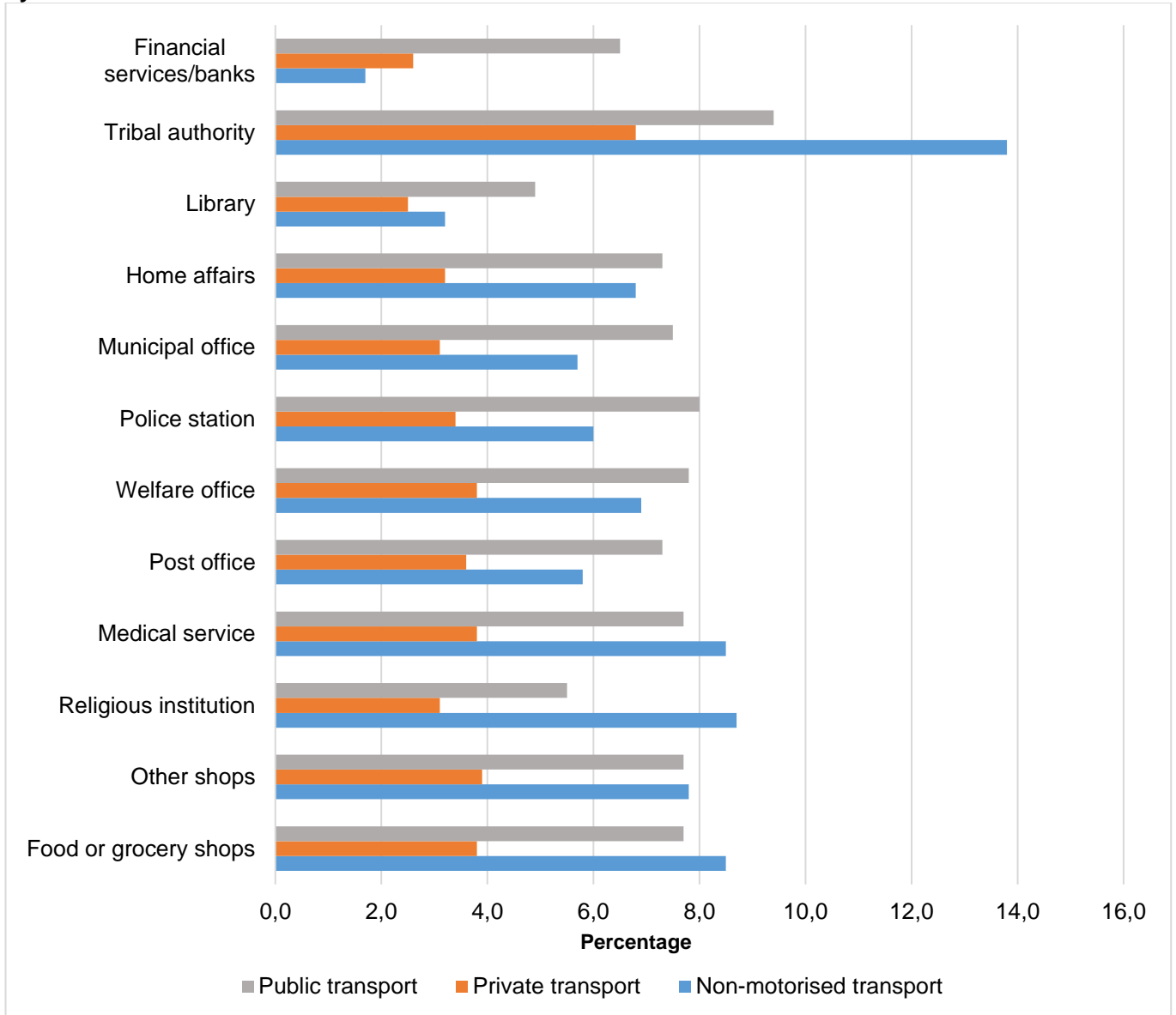
Annexure B: Main mode of travel used households by income quintiles



'Other' includes aircraft, scooter/motorcycle, tuk-tuk, etc.

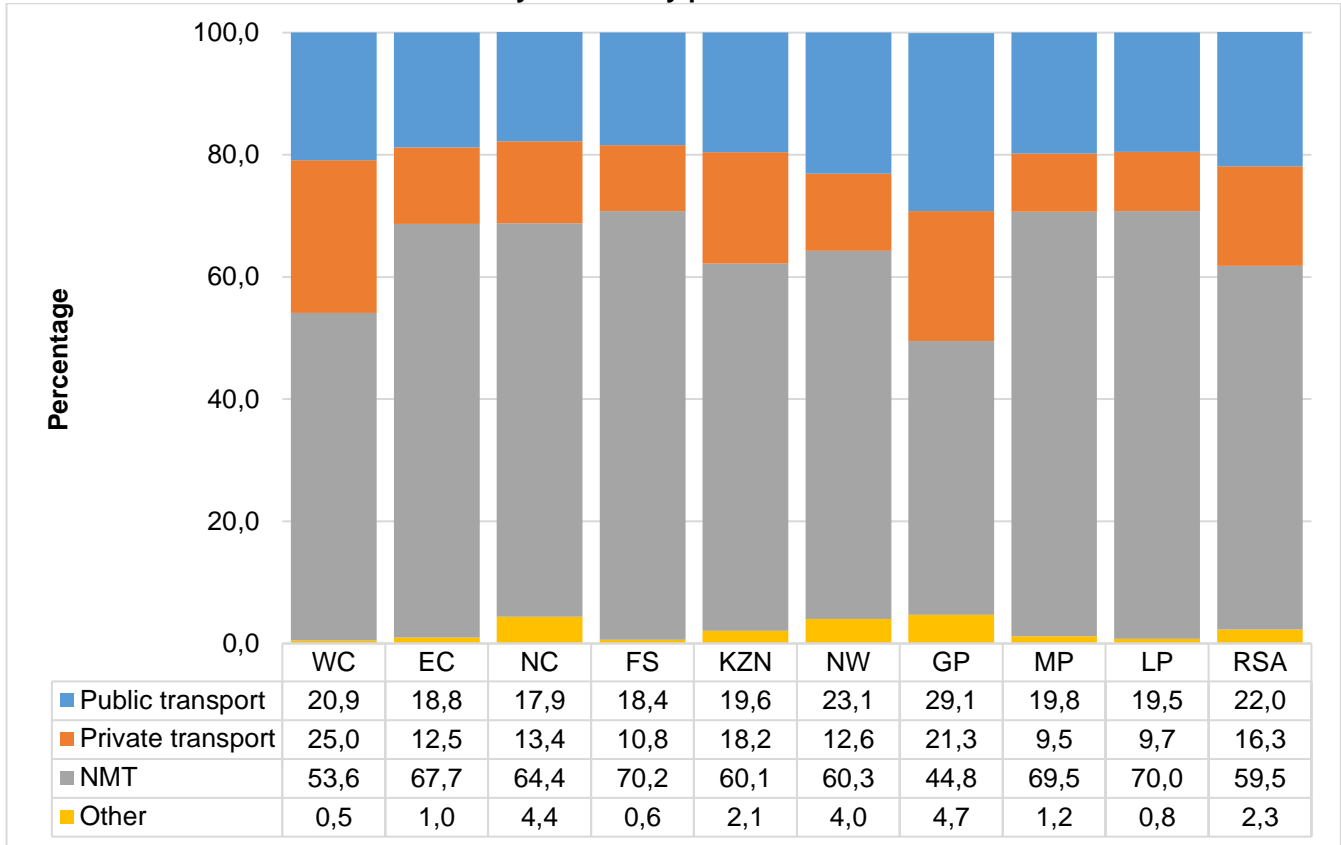
Source: NHTS, 2020

Annexure C: Percentage of households that travel more than 60 minutes to selected services and facilities by mode of travel



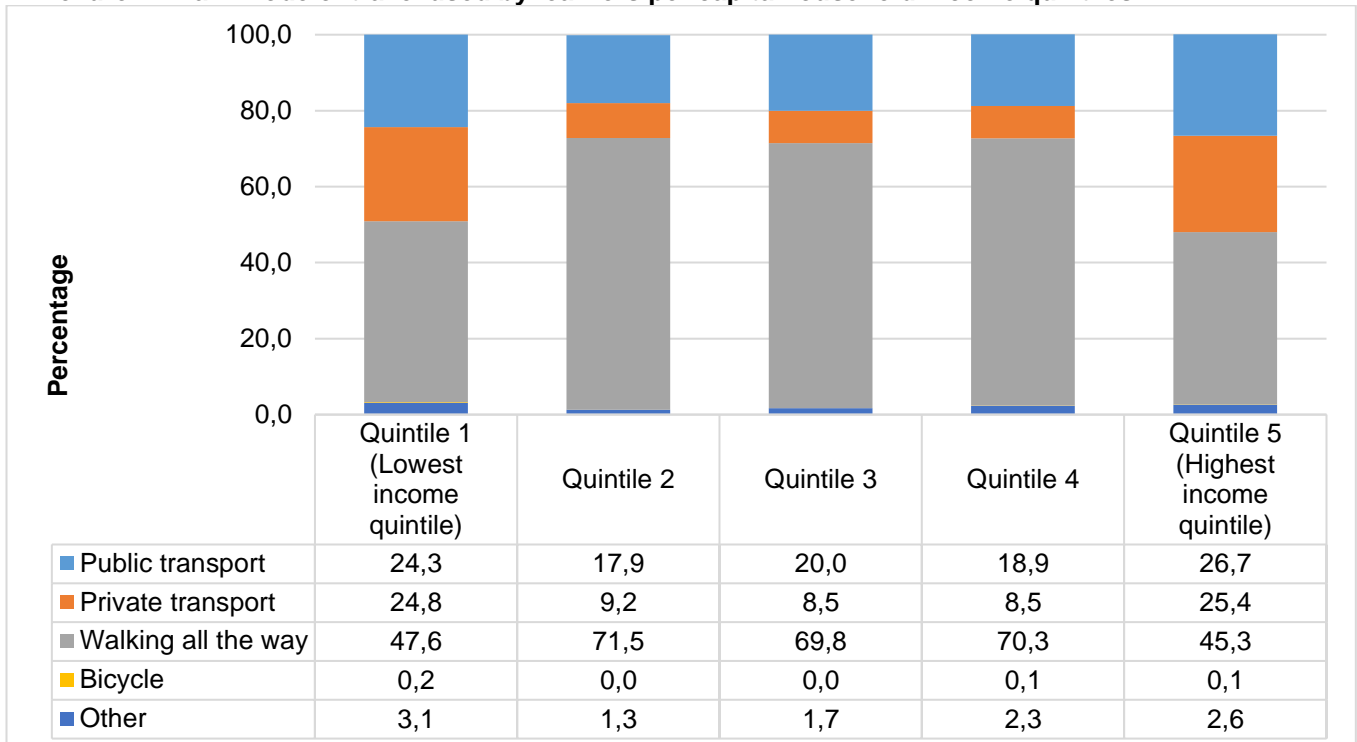
Source: NHTS, 2020

Annexure D: Main mode of travel used by learners by province



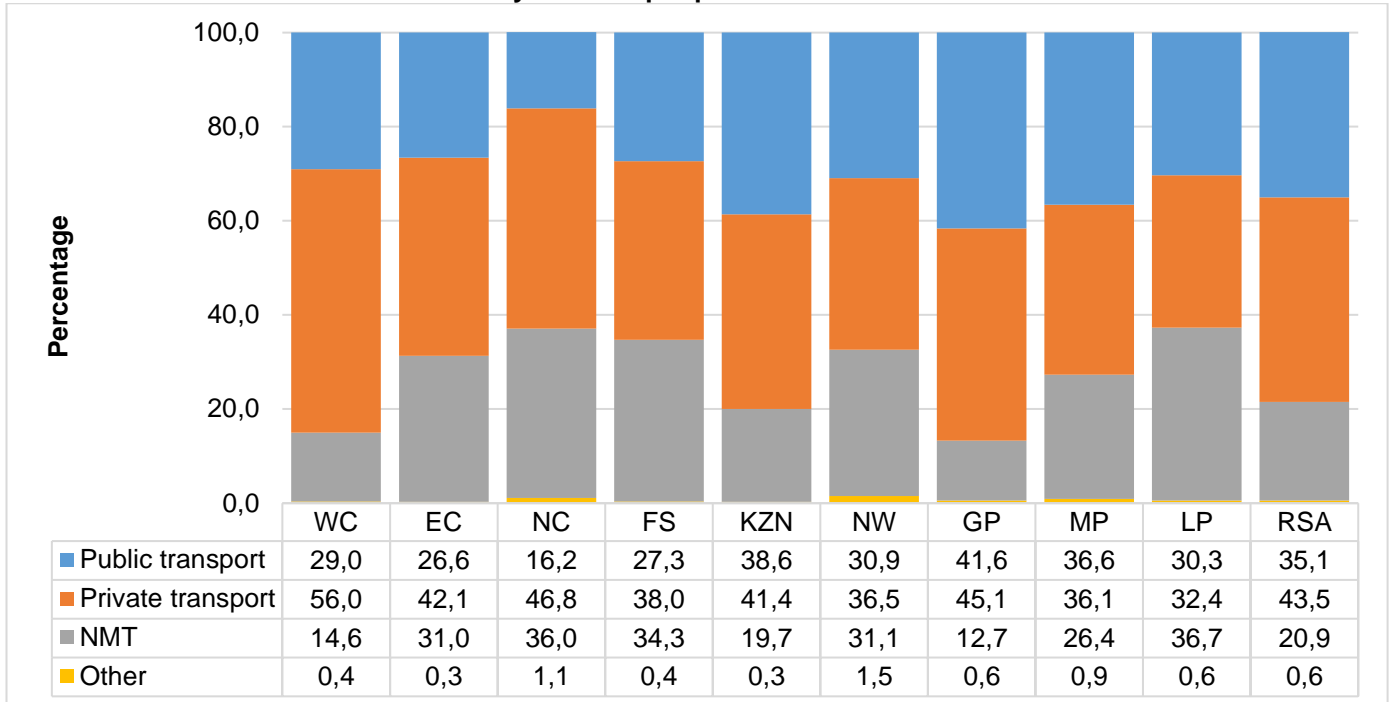
'Other' includes aircraft, scooter/motorcycle, tuk-tuk, etc.
Source: NHTS, 2020

Annexure E: Main mode of travel used by learners per capita household income quintiles



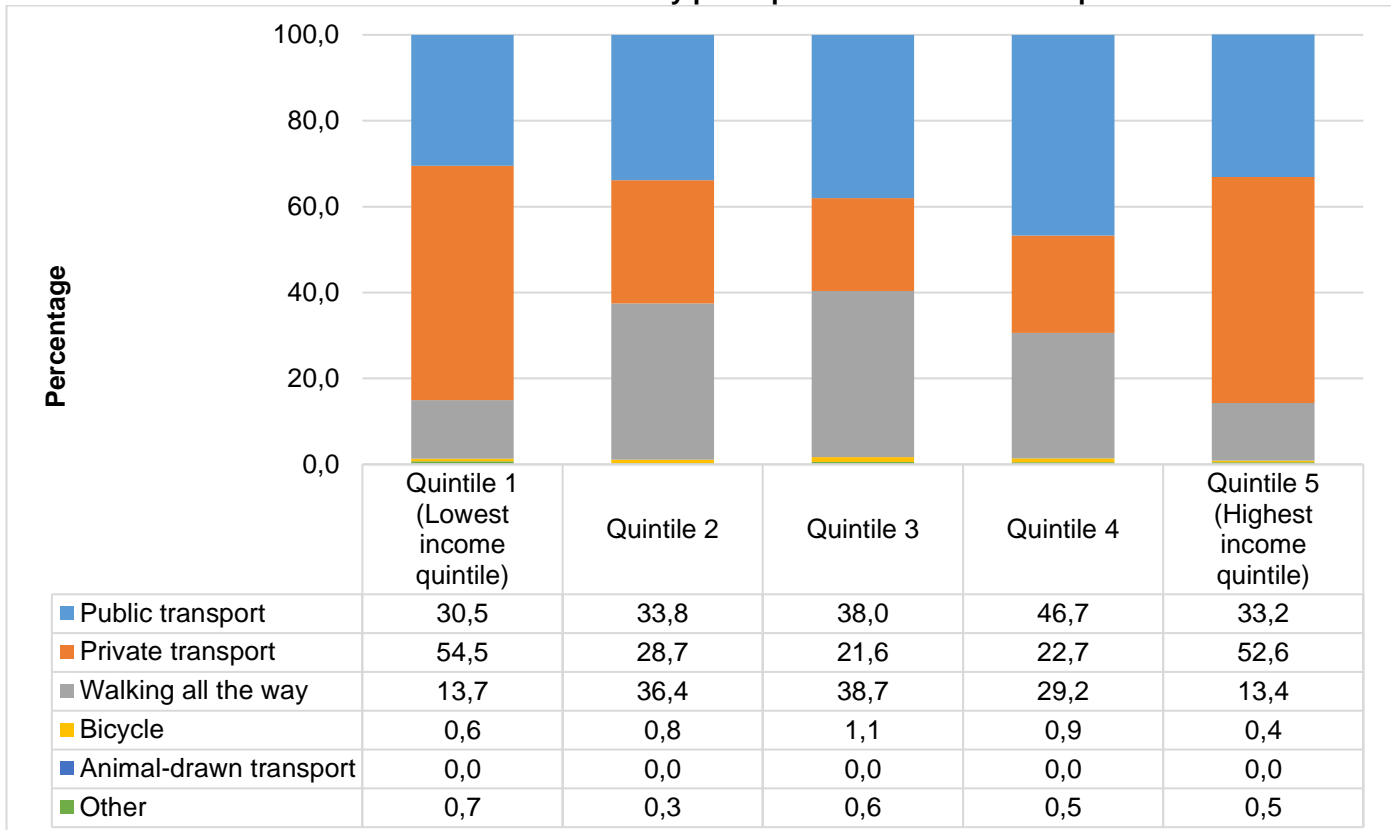
'Other' includes aircraft, scooter/motorcycle, tuk-tuk, etc.
Source: NHTS, 2020

Annexure F: Main mode of travel used by workers per province



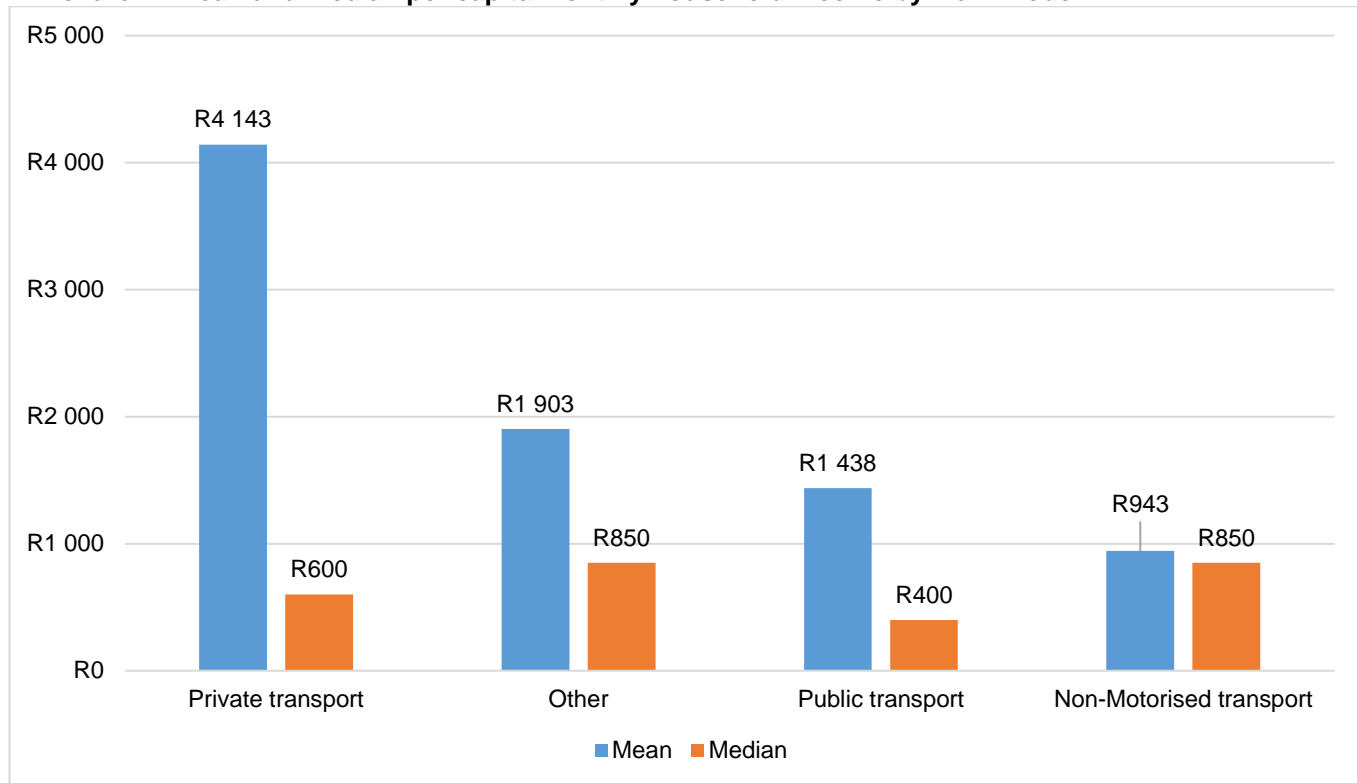
'Other' includes aircraft, scooter/motorcycle, tuk-tuk, etc.
Source: NHTS, 2020

Annexure G: Main mode of travel used for workers by per capita household income quintiles



'Other' includes aircraft, scooter/motorcycle, tuk-tuk, etc.
Source: NHTS, 2020

Annexure H: Mean and median per capita monthly household income by main mode



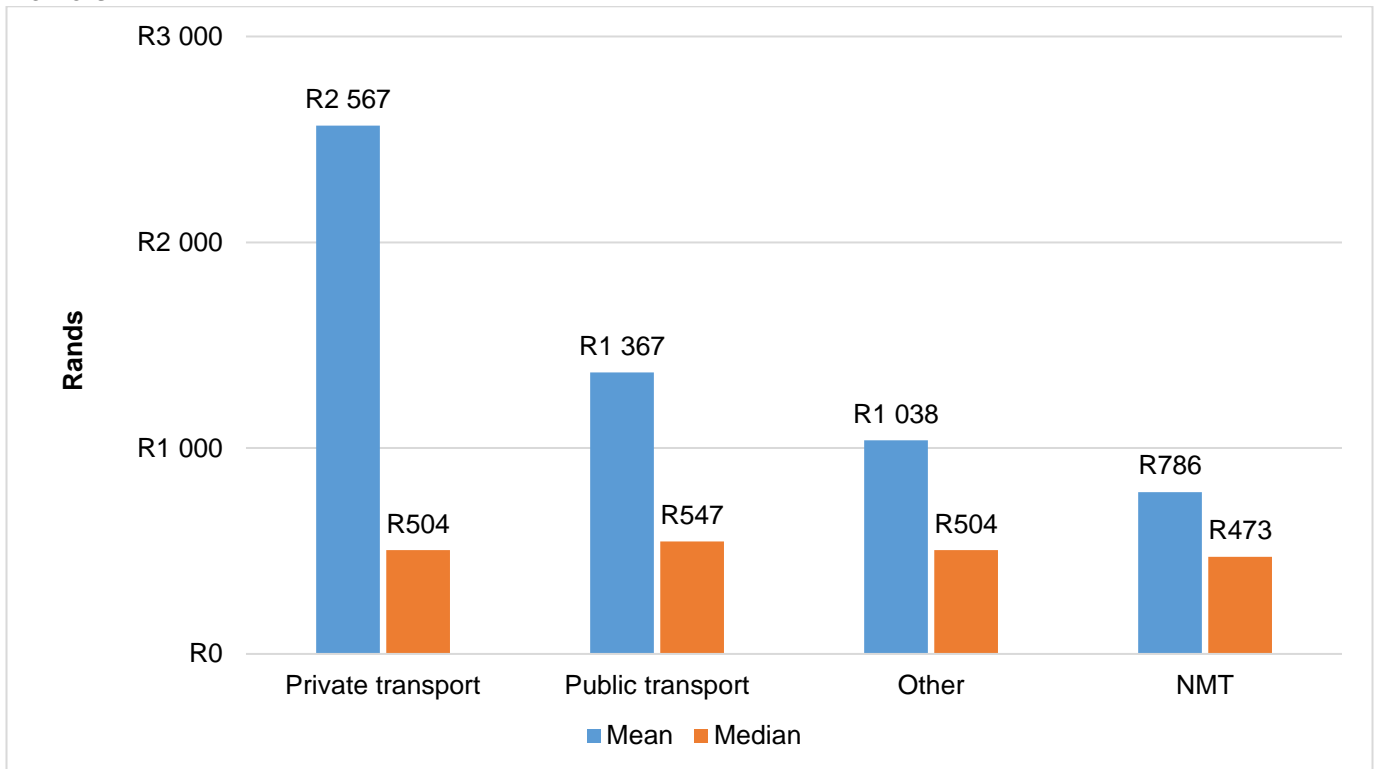
'Other' includes aircraft, scooter/motorcycle, tuk-tuk, etc.
 Source: NHTS, 2020

Annexure I: Total time travelled to educational institutions by type for non-motorised transport and province

Main mode of travel and total time in minutes	Statistics ('000)	Province									RSA
		WC	EC	NC	FS	KZN	NW	GP	MP	LP	
Walking all the way											
Mean		19,8	32,5	22,3	24,8	34,7	26,0	25,0	29,9	29,9	28,6
Up to 30 minutes	Number	773	979	181	499	1 283	548	1 400	679	1 059	7 401
	Percent	90,8	66,7	85,3	79,7	62,5	79,4	78,1	72,2	71,9	73,2
Between 31–60 minutes	Number	68	374	28	106	591	119	331	217	335	2 169
	Percent	7,9	25,5	13,0	17,0	28,8	17,2	18,5	23,1	22,7	21,5
More than 60 minutes	Number	11	114	4	20	178	23	61	45	79	536
	Percent	1,3	7,8	1,7	3,3	8,7	3,4	3,4	4,8	5,4	5,3
Total	Number	851	1 468	212	626	2 052	690	1 792	940	1 474	10 105
	Percent	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Bicycle											
Mean											30,2
Up to 30 minutes	Number	3			2	2	1	2		1	11
	Percent	64,2	49,8	67,6	90,0	81,6	59,5	100,0	100,0	41,4	71,3
Between 31–60 minutes	Number	2		.			1	.	.		3
	Percent	35,8	13,5	.	10,0	18,4	40,5	.	.	11,0	20,6
More than 60 minutes	Number	.			.	.	.	.	.	1	1
	Percent	.	36,7	32,4	.	.	.	.	.	47,6	8,2
Total	Number	5	1		2	2	1	2		2	15
	Percent	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0

Source: NHTS, 2020

Annexure J: Mean and median per capita monthly household income by main mode of transport used by workers



'Other' includes aircraft, scooter/motorcycle, tuk-tuk, etc.
Source: NHTS, 2020

Annexure K: Households that used non-motorised transport by main source of household income

Main sources of household income	Statistics ('000)	Walking all the way	Bicycle	Animal-drawn transport	Total
Salaries	Number	207	1		208
	Per cent	35,5	69,0	17,6	35,5
Income from business	Number	23			23
	Per cent	3,9	21,1	22,3	4,0
Pensions	Number	4	*	*	4
	Per cent	0,7	*	*	0,7
Grants	Number	197	*	*	198
	Per cent	33,8	5,5	60,1	33,7
Remittances	Number	104	*	*	104
	Per cent	17,8	*	*	17,8
Other income sources	Number	8	*	*	8
	Per cent	1,3	*	*	1,3
No income	Number	41	*	*	41
	Per cent	7,0	4,4	*	7,0
Total	Number	584	1	1	586
	Per cent	100,0	100,0	100,0	100,0

Source: NHTS, 2020

Annexure L: Main source of household income for learners who used non-motorised transport

Sources of income	Statistics ('000)	Walking all the way	Bicycle	Total
Salaries	Number	4 194	9	4 204
	Per cent	41,4	57,9	41,5
Income from business	Number	334	1	335
	Per cent	3,3	7,7	3,3
Pensions	Number	112	*	112
	Per cent	1,1	*	1,1
Grants	Number	4 526	3	4 529
	Per cent	44,7	20,9	44,7
Remittances	Number	780	1	781
	Per cent	7,7	6,4	7,7
Other income sources	Number	85	*	85
	Per cent	0,8	*	0,8
No income	Number	89	1	90
	Per cent	0,9	7,1	0,9
Total	Number	10 121	16	10 136
	Per cent	100,0	100,0	100,0

Source: NHTS, 2020

Annexure M: Percentage of workers who used non-motorised transport by work sector and monthly per capita household income

Indicator	Walking all the way	Bicycle	Animal-Drawn Vehicle	RSA
Work sector				
Formal	46,8	49,0	*	46,9
Informal	33,3	23,8	55,0	33,0
Private household	19,4	26,8	45,0	19,6
Do not know	0,5	0,4	*	0,5
Monthly per capita household income				
R0 – 1 000	53,6	51,3	44,8	53,6
R1 001 – 3 000	32,2	34,8	55,2	32,3
R3 001 – 6 000	10,2	7,2	*	10,2
>R6 000	3,9	6,7	*	4,0
Total	53,6	51,3	44,8	53,6

Source: NHTS, 2020

Annexure N: Percentage of work seekers who used non-motorised transport by average monthly per capita household income

Monthly per capita household income	Mode of travel	RSA
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		Walking all the way	Bicycle	
R0 - R1 000	Number	628	7	635
	Percent	86,0	92,1	86,0
R1 001 - R3 000	Number	91	1	91
	Percent	12,4	7,9	12,4
R3 001 - R6 000	Number	8	*	8
	Percent	1,1	*	1,1
> R6 000	Number	3	*	3
	Percent	0,4	*	0,4
Total	Number	730	8	738
	Percent	100,0	100,0	100,0

Source: NHTS, 2020

Annexure O: Distribution of work seekers who used non-motorised transport by main source of household income

Source of household income	Statistics ('000)	Walking all the way	Bicycle	NMT
Salaries	Number	249	3	252
	Per cent	34,2	39,3	34,2
Income from business	Number	36	*	37
	Per cent	5,0	3,2	5,0
Pensions	Number	11	*	11
	Per cent	1,6	*	1,5
Grants	Number	255	3	258
	Per cent	34,9	38,2	35,0
Remittances	Number	114	*	114
	Per cent	15,6	5,8	15,5
Other income sources	Number	20	*	20
	Per cent	2,7	*	2,7
No income	Number	45	1	46
	Per cent	6,1	13,4	6,2
Total	Number	730	8	738
	Per cent	100,0	100,0	100,0

Source: NHTS, 2020

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