Children’s independent mobility in South Africa, with specific reference to Cape Town and its hinterland.

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Executive summary

Until fairly recently, travel surveys in South Africa have focussed on motorised work trips occurring within the weekday morning peak period when congestion was generally at its worst. Travel by children was either omitted entirely or only partially considered. This however, has changed with school trips increasingly becoming the focus of some surveys. However, little is understood of child travel behaviour beyond the school trip.

This paper reports upon research conducted amongst schoolchildren aged 7-15 years, and their parents, aimed at exploring independent child mobility in the context of Cape Town and selected towns and rural settlements within its hinterland. With the exception of two schools, all the participating schools fall within the boundaries of the Western Cape Province. The survey (n=984) was conducted in 2010 and 2011 using pen and paper self-completion questionnaires as part of an international collaborative study on child mobility, led by the Policy Studies Institute (PSI) of the University of Westminster. The 9 participating schools recruited in the survey serve households from a wide socio-economic range. The schools were selected from four settlement types described in this paper as metropolitan high-income, metropolitan low-income, small town and rural settlements.

The key findings of the survey are discussed in terms of how independently mobile children are, how this varies, and how it has changed. It was found that independent mobility varied considerably between wealthy and poor households, and across age and gender. Children from poorer households were heavily reliant on walking (88% share of school trips), and were independently mobile at a relatively young age (67% of seven year olds were allowed to travel from school alone). Children from wealthier households appear to have experienced a rapid decline in independent mobility over the past three decades (no seven year olds were allowed to travel from school alone), and were heavily reliant on the car (87% share of school trips).

The study has two main limitations namely that the data presented is indicative and not statistically representative of all learners and parents in the study area as only a small number of schools was selected vis a vis the total number of schools in the study area. Secondly, bias in the data is introduced by non-response as a result of high unit non-response (43%) in the case of parent questionnaires and item non-response and recording error in the questionnaires.
1. Introduction

Past framings of the transport problem in South Africa have resulted in travel by children being poorly understood. A combination of apartheid policies that dictated an analytical focus on the daily transportation of ‘Coloured’ and ‘African’ labour in and out of cities, and a focus on the problem of traffic congestion and highway construction in the travel survey and demand forecasting methods that have dominated transport planning practice, led to a particular scope in travel behaviour analysis. With some exceptions, the travel surveys administered were limited to, and the travel demand models developed were calibrated for, motorised trips occurring within the weekday morning peak period when congestion was generally worst. In many instances only trips to work were included. The implicit underlying assumption was that a transport system that satisfies the need for motorised travel during the commuter peak would be able to satisfy other travel needs as well. Most analysis of travel need and behaviour was therefore restricted to either commuting or motorised travel, and travel by children was either omitted entirely or only partially considered. It is only relatively recently that school trips have been a focus in travel surveys – most notably in the inaugural National Household Travel Survey (NHTS) in 2003 (DoT 2005). Knowledge on how children travel to and from school is therefore growing. However, little is understood of child travel behaviour beyond the school trip, and of the degree to which children travel alone and have constraints imposed upon their independent mobility.

This paper addresses this gap, by exploring the extent and nature of independent child mobility in the context of Cape Town and selected towns and rural settlements within its hinterland. It seeks to develop insight into how independently mobile children are in this context, how this varies across population and space, how independent mobility has changed over time, and what the prospects are of promoting greater independence.

The paper presents the findings of research conducted as part of an international collaborative study on child independent mobility co-ordinated by the University of Westminster’s Policy Studies Institute. The research was conducted by the Centre for Transport Studies at the University of Cape Town with funding from the African Centre of Excellence for Studies in Public and Non-motorised Transport (ACET). The paper is divided into five sections including the introduction. In the following section the research methods adopted in collecting the data presented in the paper are described. Section 3 describes the study context and discusses trends in, and challenges confronting, child mobility in the study area. Section 4 presents the findings of the research conducted, and section 5 concludes with discussion on the implications of the findings and future research needs.
2. Survey method

The survey reported on was an international collaboration on child independent mobility coordinated by the Policy Studies Institute (PSI) of the University of Westminster. The research methods associated with the survey is described in terms of its instruments, sample design, data collection, and limitations.

2.1 Survey instruments

The standard English language child independent mobility survey instrument, in the form of separate child and parent self-completion pen-and-paper questionnaires, was developed by the Policy Studies Institute (see annexures 1A and 1B). The child questionnaire covered demographics, school trip mode use and travel time, mode preferences, attitudes towards safety, and independent mobility by public and non-motorised modes. The parent questionnaire covered demographics, independent mobility permission, reasons for adult accompaniment, and attitudes towards safety. The multi-lingual nature of the Western Cape population necessitated that the questionnaires were translated into two additional languages: Afrikaans and isiXhosa. The translated instruments were ‘back-translated’ into English to check that they had retained their original meaning. The English version was used in the higher income city schools, the Afrikaans version in the small town and rural schools, and the isiXhosa version in the lower income city schools. A (n=10) pilot survey was conducted at one of the lower income city schools, on the assumption that greatest respondent completion problems were likely to be experienced in these schools as they serve communities with relatively higher levels of illiteracy and innumeracy.

2.2 Sample design

Table 1 presents the settlement type and school grade stratification, sample sizes and response rates of the 9 schools that participated in the survey.

The unique and diverse nature of socio-demographic and settlement patterns in the Western Cape (see section 3.1) necessitated a departure from the standard sample stratification used in the other participating countries. Instead of solely settlement type, sample stratification was based on both neighbourhood affluence and location, namely: metropolitan high-income, Rondebosch and Claremont suburbs (n=170), metropolitan low-income, Khayelitsha and Nomzamo (n=572), small town, Grabouw (n=203) and rural, Calvinia (n=39). Participating schools within these neighbourhoods were recruited between August and October 2010 (for documents used to recruit schools, see Annexures 3A and 3B). Grades were selected to target children aged 7-15 years. At each school, only one class per grade was surveyed. All learners in the selected classes at each school were included in the survey. The age of child respondents ranged between 6 and 18 years, and 50% were girls, 45%
were boys (5% did not indicate their gender). Thirty six percent of the children were between 7 to 10 years old, 55% between 11 and 15 years old. The remaining 9% were children below 7 and over 15 years and item non response. The CIM survey was initially intended as a relatively elaborate pilot survey, to be followed by a larger, statistically representative study.

2.3 Data collection and analysis

The survey was conducted between October 2010 and March 2011, following research ethics clearance from both the University of Cape Town and the Western Cape Education Department (see Annex 2). Parents of children in the target classes were given a letter that explained the nature of the survey and an opt-out form to sign if they were not willing to let their children participate in the survey (see Annex 4A). The child questionnaires were completed in class (on Mondays) with the assistance of one of the authors and the respective class teachers, while the adult questionnaires were completed at home by a parent or guardian. In the case of the two rural schools, parent questionnaires were completed in a home interview. A reminder (see Annex 4B) was sent out to parents three days after the survey at each school reminding them to return the adult questionnaire to their respective schools.

Data was captured and analysed in MSExcel. Analysis was done after data cleaning, for which help was obtained from a researcher at the PSI. Unlike, the categorisation of children into primary and secondary school children done in other countries, children were grouped into two age categories, namely 7-10 years and 11-15 years. The education system in South Africa is such that learners must repeat a certain grade if they fail, resulting in some older children remaining in lower grades. Age was therefore deemed a better way than grade to categorise the children into groups. The results presented in section 4 use this categorisation.

2.4 Limitations of the survey method

The results of the analysis of the survey data are indicative rather than statistically representative of all learners and parents in the study area. The number of schools surveyed represents a very small proportion of the total number of schools in the Province (the 6 primary schools represent 0.6% and the four secondary schools 1.2% of all primary and secondary schools). The small town and rural schools are particularly unrepresentative of their sample strata. A further limitation of the data is bias introduced by non-response. The use of self-completion questionnaires resulted in item non-response and recording error (up to 5% for some questions), and a unit non-response rate of 43% in the case of the parent questionnaires.
<table>
<thead>
<tr>
<th>Settlement type</th>
<th>Neighbourhood/town</th>
<th>School level</th>
<th>School code</th>
<th>Total learners in school</th>
<th>Number of questionnaires distributed</th>
<th>% of school</th>
<th>Number of child questionnaires returned</th>
<th>% returned</th>
<th>Number of adult questionnaires returned</th>
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<td></td>
<td></td>
<td></td>
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<td>Nomzamo</td>
<td>primary</td>
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<td>4.8</td>
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<td>16.2</td>
<td></td>
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<td>8.1</td>
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<td>572</td>
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<td></td>
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<tr>
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<td></td>
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<td>9</td>
</tr>
<tr>
<td>Sub-total</td>
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<td></td>
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<td>39</td>
<td>25.3</td>
<td>39</td>
<td>100.0</td>
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<td>14.6</td>
<td>964</td>
<td>100.0</td>
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</tbody>
</table>

Notes:
1. The 100% child response rate was due to the administration of the surveys in class time.
2. Schools are identified by code because the research ethics clearance obtained from the Western Cape Department of Education for the CIM survey specified that schools should not be named in research publications.
3. The Grabouw primary and secondary schools indicated in the table are part of a combined school.
3. The areas surveyed.

The children and parents surveyed in the research either lived within the boundary of metropolitan Cape Town, or in selected small town and rural settlements within its hinterland. All but two of the nine schools included in the research fall within the boundary of the Western Cape Province (see figure 1). This study context is described briefly in terms of its demography and settlement pattern.

3.1 Demography

The population of the Western Cape Province is estimated at 5.2 million (48% male and 52% female), accounting for some 11% of the national population (SSA 2010). The majority population group in the region is ‘Coloured’ (54%), followed by ‘African’ (27%) and ‘White’ (18%).[^1] The major home languages spoken are Afrikaans (55%), isiXhosa (24%), and English (19%). Approximately 19% of the Province’s population is aged below 10 years, 18% are aged 10-19 years, 57% 20-64 years, and 6% are 65 years or older. Metropolitan Cape Town accounts for the bulk of the Western Cape population, estimated to be 3.5 million in 2007, and projected to be around 3.8 million in 2011 (CoCT 2010).

In 2009 the Western Cape’s estimated contribution to the South African gross domestic product was 14% (PGWC Treasury 2010). While the mean per capita income is about 55% above the national mean, and the Province has the highest Human Development Index in the country (0.77 vs. 0.67 in 2003), the region is marked by inequalities (UNDP 2003). There remains a strong correlation between income and population group. Despite policy prescriptions by the present democratic government to redress the socio-economic inequities inherited from the apartheid era, and considerable increases in income amongst certain strata of the ‘Coloured’ and ‘African’ sectors of the population, in aggregate, these population groups continue to record consistently low levels on social welfare indices.
3.2 Settlement

The Western Cape Province is 129,462 km² in extent, occupying 11% of the national land area (SSA 2010). Urban settlement in the Province began in the mid-1600s with the establishment of a provisioning station for Dutch East India Company ships traveling to and from the East (on the site of the current Cape Town city centre). Presently the settlements in the Province are characterised by a dominant metropolitan city in the form of Cape Town, and medium- and small-sized towns located...
along the southern coastline and the three main river valleys (Berg, Breede and Olifants) that produce the region’s agricultural exports. Population densities in the arid interior – known as the Karoo – are very low.

A defining feature of the urban settlements in the Province is their inefficiency with respect to the daily transportation of people, and the burden this places on lower income groups living on the peripheries. Past apartheid policies concerned with racial segregation and the associated forced removal of ‘Coloured’ and ‘African’ households from designated ‘White’ residential areas to peripheral locations, together with the regulation of ‘African’ urbanization, contributed significantly to a current context in which the travel needs of low-income populations are not well served by the pattern and distribution of land-use activities and the transport systems that connect them. [1]

3.3 Child mobility trends and challenges in the study area

Child mobility challenges in Cape Town and its hinterland are discussed in terms of trends with respect to school trip mode use, and current problems experienced during, and associated with, child travel patterns.

3.3.1 Mode use trends
Available historical data suggest that there has been a significant shift in mode use for school trips in the higher income neighbourhoods of Cape Town over the past three decades, with significantly fewer children now using the non-motorised travel (NMT) modes of walking and cycling. For example, a survey conducted in 1976 as part of the Cape Metropolitan Transportation Study found that amongst 1,020 middle- and high-income households living in Cape Town (assuming race to be an acceptable proxy for income), 49% of trips to school were on foot or by bicycle, 13% were by train or bus, and 38% were by car. A later survey of 100 households by Market and Opinion Surveys in 1992 suggested that, amongst the same group, school trips by foot or bicycle had dropped to 38%, trips by public transport had dropped to 9%, and trips by car had risen to 52%. A survey of 1,494 learners conducted by the Centre for Transport Studies in 2009 found that, amongst nine participating schools in Rondebosch, which serve predominantly middle- and high-income communities, trips to school by foot or bicycle had declined to 8% (7% on foot and 1% by bicycle), trips by public transport had declined to 3%, and trips by car had increased to 87% (Behrens & Van Rensburg, 2009). This increase in private car use and concomitant decline in walking and cycling for school trips may be even more pronounced than that observed in higher income countries elsewhere in the world, where NMT mode shares seldom record less than 10%. [2] Figure 2 presents a collation of available historical data in Cape Town on education trip car main mode share.
3.3.2 Current problems
The rising share of car use for school trips discussed above and the associated decline in the number of learners who walk or cycle to school, certainly amongst higher income communities, is likely to have reduced levels of child physical exercise and contributed to worsening traffic congestion and air pollution within school precincts. Supporting quantitative evidence of these impacts, particularly in relation to traffic congestion and air quality, is sparse. Recent studies do, however, confirm that childhood obesity is becoming a significant public health issue in South Africa across all communities. Armstrong et al (2006), for instance, in a study of 10,195 South African primary schoolchildren found that 2% of boys and 5% of girls were obese, and 11% of boys and 18% of girls were overweight.

While the lower income communities of Cape Town may not have experienced great shifts in school trip modal share, children from less affluent households are particularly exposed to a further problem, in the form of vulnerability to road crashes while walking. Cape Town road crash data from 2003 indicate that across all communities 6-12 year olds accounted for 17% of pedestrian road crash casualties (CoCT, 2003). More recent data for the entire Western Cape Province indicate that in 2007 31% of pedestrian road crash fatalities were children aged 17 years or less, and 16% children aged 10 years or less (Vanderschuren & Jobanputra, 2010). Boys account for a disproportionate share of child pedestrian facilities (68% within the 10 years or less category, and 64% in the 11-17 age category). Given the higher prevalence of walking in lower income communities, this casualty burden falls largely on these communities. Figure 3 shows the pedestrian road crash fatalities and injuries by age...
A further vulnerability relates to risks associated with crime and molestation. The perhaps inevitable consequence of the high rates of poverty and inequality discussed in section 3.1 is a high crime rate. The actual and perceived vulnerability of children to crime while travelling independently is likely to have had a major bearing on parental attitudes towards independent child mobility. Again supporting quantitative evidence is sparse, and detailed and updated crime statistics on a settlement basis are difficult to acquire. [4]

4. Findings

4.1 The six licences of independent mobility

Figures 4 and 5 present findings with respect to parental permission, or ‘licencing’, for different independent mobility activities. Differences were found between school neighbourhood categories. High-income city children were granted considerably fewer ‘licences’ to cross roads, come home from school alone, and go to other places alone than their low-income counterparts. Very few children of all ages were allowed to go out alone after dark.
Item non-response rates for the survey questions relating to parental 'licences' with respect to 7-10 year old children ranged between 0-3%, 4-26% and 2-13% for metropolitan high-income, metropolitan low-income and small town school respondents respectively. There was no item non-response for these questions among rural school respondents.

Figure 4 Parental 'licences' granted to 7-10 year old children, by school neighbourhood category (n=196)

Item non-response rates for the survey questions relating to parental 'licences' with respect to 11-15 year old children ranged between 0-9%, 5-25% and 0-12% for metropolitan high-income, metropolitan low-income and small town school respondents respectively. There was no item non-response for these questions among rural school respondents.

Figure 5 Parental 'licences' granted to 11-15 year old children, by school neighbourhood category (n=319)
4.2 The journey to and from school

4.2.1 Mode of transport

Two school trip travel modes – walking and car passenger – were found to dominate in the different city neighbourhoods (see tables 2 and 3). Walking was the dominant travel mode in metropolitan low-income schools (around 85% and 88% for trips to and from school respectively among children aged 7-10 years – the comparable figures for children aged 11-15 years in the same neighbourhoods were 96% for trips to school and 96% from school). The car was the dominant travel mode in metropolitan high-income schools (around 89% for trips to school and 87% for trips from school for children aged 7-10 years, and 85% and 82% for trips to and from school respectively among children aged 11-15 years). An unexpected finding was the high percentage of children who travelled by ‘car’ in the rural schools (15-46%), which is inconsistent with 2003 NHTS data for the Western Cape which indicated that car use accounted for 8-16% of education trips in rural districts (DoT 2007). Further investigation revealed that this high percentage was due to the farmers hosting the two schools transporting children to school in farm vehicles (recorded as ‘car’ in questionnaires).

Table 2  Percentage school trip (main) mode use among children aged 7-10 years, by trip direction and school neighbourhood category (n=334)

<table>
<thead>
<tr>
<th>Neighbourhood Category</th>
<th>To school</th>
<th>Cycle</th>
<th>School bus</th>
<th>Local bus or train</th>
<th>Car</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metropolitan high-income neighbourhood schools (n=71)</td>
<td>4.2</td>
<td>2.8</td>
<td>0.0</td>
<td>1.4</td>
<td>88.7</td>
<td>2.8</td>
<td>100.0</td>
</tr>
<tr>
<td>From school</td>
<td>2.9</td>
<td>2.9</td>
<td>0.0</td>
<td>4.3</td>
<td>87.1</td>
<td>2.9</td>
<td>100.0</td>
</tr>
<tr>
<td>Metropolitan low-income neighbourhood schools (n=168)</td>
<td>85.1</td>
<td>0.6</td>
<td>3.0</td>
<td>0.6</td>
<td>10.7</td>
<td>0.0</td>
<td>100.0</td>
</tr>
<tr>
<td>From school</td>
<td>87.8</td>
<td>0.6</td>
<td>2.3</td>
<td>0.6</td>
<td>7.6</td>
<td>1.2</td>
<td>100.0</td>
</tr>
<tr>
<td>Small town schools (n=70)</td>
<td>11.4</td>
<td>0.0</td>
<td>12.9</td>
<td>2.9</td>
<td>68.6</td>
<td>4.3</td>
<td>100.0</td>
</tr>
<tr>
<td>From school</td>
<td>15.9</td>
<td>0.0</td>
<td>11.6</td>
<td>2.9</td>
<td>63.8</td>
<td>5.8</td>
<td>100.0</td>
</tr>
<tr>
<td>Rural schools (25)</td>
<td>60.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>40.0</td>
<td>0.0</td>
<td>100.0</td>
</tr>
<tr>
<td>From school</td>
<td>68.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>32.0</td>
<td>0.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total (n=334)</td>
<td>50.6</td>
<td>0.9</td>
<td>4.2</td>
<td>1.2</td>
<td>41.6</td>
<td>1.5</td>
<td>100.0</td>
</tr>
<tr>
<td>From school</td>
<td>53.9</td>
<td>0.9</td>
<td>3.6</td>
<td>1.8</td>
<td>37.5</td>
<td>2.4</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Table 3  Percentage school trip (main) mode use among children aged 11-15 years, by trip direction and school neighbourhood category (n=527)

<table>
<thead>
<tr>
<th></th>
<th>To school</th>
<th>From school</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Metropolitan high-income neighbourhood schools (n=89)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To school</td>
<td>4.5</td>
<td>1.1</td>
<td>85.4</td>
</tr>
<tr>
<td>From school</td>
<td>6.7</td>
<td>1.1</td>
<td>100</td>
</tr>
<tr>
<td><strong>Metropolitan low-income neighbourhood schools (n=312)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To school</td>
<td>95.8</td>
<td>0.0</td>
<td>100</td>
</tr>
<tr>
<td>From school</td>
<td>95.6</td>
<td>0.3</td>
<td>100</td>
</tr>
<tr>
<td><strong>Small town schools (n=113)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To school</td>
<td>19.5</td>
<td>2.7</td>
<td>68.5</td>
</tr>
<tr>
<td>From school</td>
<td>17.5</td>
<td>2.6</td>
<td>68.5</td>
</tr>
<tr>
<td><strong>Rural schools (n=13)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To school</td>
<td>53.8</td>
<td>0.0</td>
<td>46.2</td>
</tr>
<tr>
<td>From school</td>
<td>84.6</td>
<td>0.0</td>
<td>15.4</td>
</tr>
<tr>
<td><strong>Total (n=527)</strong></td>
<td>63.0</td>
<td>0.8</td>
<td>37.0</td>
</tr>
</tbody>
</table>

4.2.2 Preferred mode to school

Figures 6 and 7 present findings with respect to mode preference among children in the different neighbourhood categories. Walking is the mode most preferred by children in low-income schools whereas at the high income neighbourhood schools, the car was the most preferred mode.

Note

1. Figures do not add up to 100% as item non response (1.4%, 10% and 0% for high income, low-income small town and rural schools respectively) was excluded from the analysis

Figure 6  Percentage preferred mode for children aged 7-10 years by school category (n=397)
Note

1. Figures do not add up to 100% as item non response was excluded. Item non response ranged from 0% to 7.7%

Figure 7  Percentage preferred mode among children aged 11-15 years by school category-Percentage (n=496)

4.2.3 Children not travelling by preferred mode

Table 4 presents findings with respect to school trip mode preferences. A notable difference between current and preferred modes was a preference for cycling instead of cars. Of the 139 high-income city children travelling to school by car, 28% indicated that they would prefer to travel by bicycle.
Tables 5 and 6 indicate that independent mobility was higher in the lower income communities for school trips (for instance only 10.3% and 7.0% of lower income city children aged 7-10 years travelled to school with a parent or other adult respectively, compared to 81.7% and 15.5% of higher income city children in the same age group). Given that children in the 7-15 year range do not have drivers licences, the particularly high rates of adult accompaniment for school trips in metropolitan high-income communities is clearly also a result of the observed high car passenger share of modal split (see tables 2 an 3).

Table 4  Comparison of Preferred school trip mode use and by actual mode and school neighbourhood category-all age groups (n=901)

<table>
<thead>
<tr>
<th>Preferred travel mode to school</th>
<th>Metropolitan (high-income) (n=159)</th>
<th>Metropolitan (low-income) (n=509)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Actual travel mode to school</td>
<td>Actual travel mode to school</td>
</tr>
<tr>
<td></td>
<td>walk</td>
<td>cycle</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>walk</td>
<td>6 6</td>
<td>0 0</td>
</tr>
<tr>
<td>%</td>
<td>66.7</td>
<td>3.3</td>
</tr>
<tr>
<td>cycle</td>
<td>1 1</td>
<td>0 0</td>
</tr>
<tr>
<td>%</td>
<td>16.7</td>
<td>33.3</td>
</tr>
<tr>
<td>school bus</td>
<td>0 0</td>
<td>0 0</td>
</tr>
<tr>
<td>%</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>bus/train</td>
<td>0 0</td>
<td>0 0</td>
</tr>
<tr>
<td>%</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>car</td>
<td>1 1</td>
<td>1 5</td>
</tr>
<tr>
<td>%</td>
<td>16.7</td>
<td>33.3</td>
</tr>
<tr>
<td>other</td>
<td>0 0</td>
<td>0 0</td>
</tr>
<tr>
<td>%</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>total</td>
<td>6 3</td>
<td>1 8</td>
</tr>
<tr>
<td>%</td>
<td>100 100 100 100 100</td>
<td>100 100 100 100</td>
</tr>
</tbody>
</table>

Note:
Item non-response rates for the survey question relating to preferred school trip travel mode use were 7%, 11%, 3% and 0% for metropolitan high-income, metropolitan low-income, small town and rural school respondents respectively.

4.2.4 Accompaniment to and from school

Table 5  Percentage school trip coupling among children aged 7-10 years, by trip direction and school neighbourhood category (n=352)
<table>
<thead>
<tr>
<th></th>
<th>travelled alone</th>
<th>travelled with parent</th>
<th>travelled with another parent</th>
<th>travelled with an older child/teenager</th>
<th>travelled with a child of same age or younger</th>
<th>item non-response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metropolitan high-income neighbourhood schools (n=71)</td>
<td>To school 0.0</td>
<td>81.7</td>
<td>15.5</td>
<td>18.3</td>
<td>15.5</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>from school 2.8</td>
<td>80.3</td>
<td>14.1</td>
<td>14.1</td>
<td>11.3</td>
<td>1.4</td>
</tr>
<tr>
<td>Metropolitan low-income neighbourhood schools (n=185)</td>
<td>To school 53.5</td>
<td>10.3</td>
<td>7.0</td>
<td>10.3</td>
<td>23.2</td>
<td>4.3</td>
</tr>
<tr>
<td></td>
<td>from school 43.2</td>
<td>8.6</td>
<td>7.6</td>
<td>9.2</td>
<td>20.5</td>
<td>7.0</td>
</tr>
<tr>
<td>Small town schools (n=71)</td>
<td>To school 7.0</td>
<td>35.2</td>
<td>32.4</td>
<td>11.3</td>
<td>9.9</td>
<td>5.6</td>
</tr>
<tr>
<td></td>
<td>from school 5.6</td>
<td>31.0</td>
<td>38.0</td>
<td>15.5</td>
<td>9.9</td>
<td>4.2</td>
</tr>
<tr>
<td>Rural schools (n=25)</td>
<td>To school 4.0</td>
<td>8.0</td>
<td>40.0</td>
<td>28.0</td>
<td>20.0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>from school 8.0</td>
<td>4.0</td>
<td>32.0</td>
<td>32.0</td>
<td>24.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>travelled alone</th>
<th>travelled with parent</th>
<th>travelled with another parent</th>
<th>travelled with an older child/teenager</th>
<th>travelled with a child of same age or younger</th>
<th>item non-response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metropolitan high-income neighbourhood schools (n=91)</td>
<td>To school 7.7</td>
<td>76.9</td>
<td>15.4</td>
<td>14.3</td>
<td>12.1</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>from school 11.0</td>
<td>72.5</td>
<td>13.2</td>
<td>13.2</td>
<td>14.3</td>
<td>0.0</td>
</tr>
<tr>
<td>Metropolitan low-income neighbourhood schools (n=321)</td>
<td>To school 51.7</td>
<td>7.2</td>
<td>5.9</td>
<td>15.0</td>
<td>13.4</td>
<td>0.3</td>
</tr>
<tr>
<td></td>
<td>from school 43.9</td>
<td>5.0</td>
<td>5.3</td>
<td>14.3</td>
<td>44.2</td>
<td>0.0</td>
</tr>
<tr>
<td>Small town schools (n=116)</td>
<td>To school 7.8</td>
<td>30.2</td>
<td>31.0</td>
<td>15.5</td>
<td>6.0</td>
<td>0.9</td>
</tr>
<tr>
<td></td>
<td>from school 8.6</td>
<td>25.0</td>
<td>31.9</td>
<td>15.5</td>
<td>30.2</td>
<td>0.0</td>
</tr>
<tr>
<td>Rural schools (n=13)</td>
<td>To school 0.0</td>
<td>0.0</td>
<td>46.2</td>
<td>15.4</td>
<td>38.5</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>from school 0.0</td>
<td>0.0</td>
<td>15.4</td>
<td>15.4</td>
<td>69.2</td>
<td>0.0</td>
</tr>
</tbody>
</table>

**Table 6** Percentage school trip coupling among children aged 11-15 years, by trip direction and school neighbourhood category (n=541)

### 4.2.5 Reasons for accompaniment

In the survey, disregarding distance to school, crime (48%) and traffic (43%) danger were the most common reasons given by parents for adult accompaniment in the metropolitan high income neighbourhoods. In the metropolitan low-income neighbourhoods – somewhat inconsistently given the child independent mobility concerns reported in section 4.3.2 – the main reasons given by parents for adult accompaniment were concerns for traffic safety (69%) and bullying (40%).

### 4.2.6 Length of journey to school

Travel time distributions for the different school neighbourhood categories are shown in figures 8 and 9. The majority of learners in both the 7-10 years and 11-15 years age groups and across all categories spent less than 30 minutes travelling to school. The percentage of children who spent more than 30 minutes travelling to school in metropolitan high-income and low-income schools
(15% and 14% respectively) is slightly less than the comparable 2003 NHTS figure of 20% for education trips in Cape Town (but this value included tertiary education activities which are likely to be longer than school trips on average). Overall, the findings are broadly consistent with the 2003 NHTS finding that 16% of primary school trips were longer than 30 minutes (DoT 2007). Given the very different mode use shares presented in section on mode use, the similarity of the travel time distributions presented in figures 8 and 9 is surprising — suggesting perhaps a similar tolerance to maxima in overall travel time budgets observed elsewhere (see, for instance, Schafer and Victor 2000). The rural schools are an outlier here, but probably peculiar to specific farm school travel arrangements.

Note 1. Figures do not add up to 100% as non response (4.2%, 9.7%, 4.2% and 0% for high-income, low-income, small town and rural schools respectively) was excluded

Figure 8 Distribution of trip to school travel time among children aged 7-10 years by all travel modes, by school neighbourhood (n=352)

Note 1. Figures do not add up to 100% as item non response (0, 3.4%, 1.7% and 0% for high-income, low-income, small town and rural schools respectively) was excluded
4.2.7 Distance to child’s school

The major difference in trip length was found between high and low-income areas. The majority of children in high-income areas (84%) did not attend the nearest school whereas in low-income school the majority of children (70%) did attend the nearest school. This partly explains the mode use findings discussed earlier where car use is very high among children at the high-income neighbourhood schools. All children at the rural schools attended the nearest school. The findings on the distance to school are presented in Figure 10.

![Figure 10](distance_to_school.png)

The reasons given by parents for taking their children to distant schools are presented in figure 11.
Notes:
Figures do not add up to 100% as some parents gave more than the required single response. Such responses were not weighted.

Figure 11 Most important reason cited by parents for not choosing the nearest school for their children (n=530)

4.3 Non school travel and activities

4.3.1 Weekend activities
Significant differences were found in trip coupling patterns across higher and lower income city neighbourhoods for non school travel activities. Table 7 indicates that independent mobility was consistently higher in the lower income communities for weekend trip destinations (the only exceptions were two trip purposes undertaken by rural children). Small town and rural children were found to be consistently more independent than higher income city children. Further analysis of these data indicated that independence increases with age for some activity destinations (friend’s home, shop, and playground), but decreases with age for others where the activity is more likely to be undertaken by the household as a group (relatives, and place of worship).

Table 7 Weekend child independent mobility, by school neighbourhood category and destination activity (n=984)
<table>
<thead>
<tr>
<th></th>
<th>number of trips</th>
<th>Metropolitan (high-income) (n=170)</th>
<th>Metropolitan (low-income) (n=572)</th>
<th>Small town (n=203)</th>
<th>Rural (n=39)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>without an adult</td>
<td>without an adult</td>
<td>without an adult</td>
<td>without an adult</td>
</tr>
<tr>
<td>number of trips</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metropolitan (high-income) (n=170)</td>
<td>74</td>
<td>43.5</td>
<td>56.8</td>
<td>261</td>
<td>113</td>
</tr>
<tr>
<td>Metropolitan (low-income) (n=572)</td>
<td>450</td>
<td>78.7</td>
<td>53.5</td>
<td>314</td>
<td>121</td>
</tr>
<tr>
<td>Small town (n=203)</td>
<td>136</td>
<td>67.0</td>
<td>55.7</td>
<td>99</td>
<td>25</td>
</tr>
<tr>
<td>Rural (n=39)</td>
<td>25</td>
<td>64.1</td>
<td>56.4</td>
<td>22</td>
<td>4</td>
</tr>
</tbody>
</table>

### 4.3.2 Perception of safety and local area

The survey found that, of the four school neighbourhood categories, low-income city children felt most unsafe when travelling in their local neighbourhoods (44% vs. 16% and 8% for high income city and small town children respectively). Across all strata, it was found that there are age and gender differences in how safe children feel in their local neighbourhoods. Interestingly, feeling unsafe declined with age amongst metropolitan high-income and small town children (from 33% of 7-10 year old to 16% of 11-15 year old high-income city children, and from 16% of 7-10 year old to 8% of 11-15 year old small town children), but increased amongst metropolitan low-income children (from 36% of 7-10 year old to 44% of 11-15 year old children). With respect to gender, 45% of low-income city girls felt unsafe compared to 35% of low-income city boys. The equivalent comparison for high-income city girls and boys was 25% vs. 19%. No gender difference was found amongst the small town children surveyed.

### 4.4 The influence of different factors on independent mobility

#### 4.4.1 The impact of age

Figures 12, 13 and 14 disaggregate the findings on the granting of parental licences on the basis of age. Unsurprisingly there was a consistent increase found in the proportion of children who were granted ‘licences’ by age, across all school neighbourhood categories. More surprising, however, was the extent of the differences found between school neighbourhood categories. High-income city children were granted considerably fewer ‘licences’ to cross roads, come home from school alone, and go to other places alone than their low-income counterparts. Very few children of all ages were allowed to go out alone after dark.
Note:
Item non-response rates for the survey questions relating to parental 'licences' ranged between 0-2%

Figure 12 Growth in the granting of parental 'licences', by age at metropolitan high-income schools (n=112)

Note:
Item non-response rates for the survey questions relating to parental 'licences' ranged between 6-25%

Figure 13 Growth in the granting of parental 'licences', by age at metropolitan low-income schools (n=237)
Note:
Item non-response rates for the survey questions relating to parental ‘licences’ ranged between 2-10%

Figure 14 Growth in the granting of parental ‘licences’, by age at small town schools (n=124)

4.4.2. The impact of car availability
As discussed in earlier sections, the school categories were defined on the basis of socio-economic class and geographical characteristics. The level of affluence (using car availability as a proxy for affluence) seems to have a strong bearing on child independent mobility. Car availability is high in the high-income areas and the findings suggest that levels of independent mobility are lower in these areas compared to low income areas. Household car access is shown in figures 15 and 16.

Figure 15 Percentage household car access among children aged 7-10 years, by school neighbourhood category (n=195)
4.5 How parents travelled as children

4.5.1 Parent versus child mode use
Table 9 compares child and parent usual school trip mode use. Notwithstanding the problems of identifying ‘usual’ behaviour in travel surveys, this inter-generational comparison suggests that, with the exception of lower income metropolitan communities, all school categories had experienced a shift from walking to car use. This was most pronounced amongst the higher income metropolitan communities, where, of the 96 children who travelled to school by car, 53% of their parents walked to school when they were children (alternatively, of the 60 parents who walked to school when children, 85% send their children to school by car).
Table 8  Inter-generational comparison of school trip (main) mode use, by school neighbourhood category (n=507)

<table>
<thead>
<tr>
<th>Child’s usual travel mode to school</th>
<th>Child’s usual travel mode to school</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Metropolitan (high-income) (n=108)</td>
</tr>
<tr>
<td></td>
<td>walk</td>
</tr>
<tr>
<td>walk</td>
<td>51</td>
</tr>
<tr>
<td>%</td>
<td>60.0</td>
</tr>
<tr>
<td>cycle</td>
<td>0.0</td>
</tr>
<tr>
<td>%</td>
<td>0.0</td>
</tr>
<tr>
<td>school bus</td>
<td>0.0</td>
</tr>
<tr>
<td>%</td>
<td>0.0</td>
</tr>
<tr>
<td>bus/train</td>
<td>0.0</td>
</tr>
<tr>
<td>%</td>
<td>0.0</td>
</tr>
<tr>
<td>car</td>
<td>0.0</td>
</tr>
<tr>
<td>%</td>
<td>0.0</td>
</tr>
<tr>
<td>other</td>
<td>0.0</td>
</tr>
<tr>
<td>%</td>
<td>0.0</td>
</tr>
<tr>
<td>total</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parent's usual travel mode to school</th>
<th>Small town (n=124)</th>
<th>Rural (n=26)</th>
</tr>
</thead>
<tbody>
<tr>
<td>walk</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>%</td>
<td>61.1</td>
<td>75.0</td>
</tr>
<tr>
<td>cycle</td>
<td>0.0</td>
<td>2.0</td>
</tr>
<tr>
<td>%</td>
<td>0.0</td>
<td>12.5</td>
</tr>
<tr>
<td>school bus</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>%</td>
<td>11.1</td>
<td>0.0</td>
</tr>
<tr>
<td>bus/train</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>%</td>
<td>5.6</td>
<td>16.7</td>
</tr>
<tr>
<td>car</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>%</td>
<td>15.4</td>
<td>16.7</td>
</tr>
<tr>
<td>other</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>%</td>
<td>8.1</td>
<td>0.0</td>
</tr>
<tr>
<td>total</td>
<td>16</td>
<td>2</td>
</tr>
<tr>
<td>%</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>
4.5.2 Distance to school when parents were young

![Intergenerational comparison of travel distance to school](image)

Figure 17 Intergenerational comparison of travel distance to school

5 Discussion and conclusions

This paper set out to explore how independently mobile children are in the context of Cape Town and selected towns and rural settlements within its hinterland, how this independent mobility varies across population and space, how it has changed over time, and what the prospects are of promoting greater independence. The directions of the findings of the research are perhaps largely intuitive and unsurprising. Of greater interest is the magnitude of the variation and heterogeneity observed, which reflects the inequalities of contemporary South African society and the dualistic nature of the transport systems that operate within South African settlements.

With regard to how independently mobile children are, it was found that this varied considerably across wealthy and poor households, by age, and to a lesser extent across gender. While only indicative in nature, the data do suggest that children from poorer communities are independently mobile at a much younger age than those from wealthier communities. This pattern is reflected in mode use: most children from wealthier households travelled to school as a car passenger, while most children from poorer households travelled to school on foot and were therefore not as dependent on an adult. The data also suggest, somewhat obscurely given the absence of a clear differentiation of children on the basis of an explicit household income question, that children living in smaller towns and in rural settlements are more likely to be independently mobile at an earlier age than city children. Unsurprisingly, younger children and girls are granted independent mobility ‘licenses’ by parents less than older children and boys.

With regard to how child independent mobility has changed over time, assuming that mode share serves as an adequate proxy, the available historical school trip mode use data, and inter-
generational comparisons of parent and child school trip mode share, suggest that in lower income communities little change has occurred. However, in wealthier communities children appear to have experienced a rapid decline in independent mobility over the past three decades that equates to, or perhaps even surpasses, similar trends observed in countries of the developed world. Parent responses to questions regarding why they do not allow their children to walk, and child attitudes towards safety, suggest that the main drivers of this change have been rising concerns for crime security and road safety.

With regard to the prospects of promoting greater child independent mobility, given the heterogeneity discussed above, these are clearly different across poorer and wealthier communities. In lower income communities children have clearly remained fairly independent, but reported significantly higher levels of safety fears when moving around their local neighbourhood than children in wealthier communities. It was found that the proportion of low-income city children travelling to school alone or with other children of the same age (90%) was considerably greater than the proportion of low-income city children who felt safe when travelling alone in their local neighbourhood (55% in case of girls and 65% in the case of boys). In these instances arguably greater adult accompaniment and less child independence is required. In higher income communities perceptions of risk may have been inflated and parents have arguably become overly risk averse. A mitigating action appropriate to both socio-economic contexts may be voluntary ‘walking buses’, which increase adult accompaniment and decrease child independence in the former, and represent a necessary first step towards regaining child independence in the latter (for discussion on the results of initial walking bus demonstrations in Cape Town, see Muchaka et al 2011). A working hypothesis requiring future research is that it is unlikely that parents in wealthier communities will permit greater child independent mobility without first reintroducing a culture of walking and satisfying their concerns with respect to the ability of their children to negotiate neighbourhood street networks safely.
ANNEX 1A: CHILD QUESTIONNAIRE

HOW YOU GET ABOUT

A questionnaire for children and young people 7 to 15 years old

- Please answer the questions as best you can – there are no right or wrong answers.
- We will not know who filled in this questionnaire, only the class it was completed in.
- Please ask if you have any questions.

TRAVELLING TO AND FROM SCHOOL

1) How did you get to school this morning?
(Only tick one box, to show the main method you used)

- □ Walked most or all the way
- □ Cycled
- □ School bus
- □ Local bus or train
- □ Car
- □ Other please write in: .....................................................

2) Who did you travel to school with this morning?
(Tick as many boxes as you need)

- □ Travelled on my own
- □ Parent
- □ Another adult
- □ Older child / teenager
- □ Child of same age or younger

3) How long did it take you to travel to school this morning?
(Only tick one box)

- □ Less than 5 minutes
- □ 5 to 15 minutes
- □ 16 to 30 minutes
- □ 31 to 45 minutes
- □ 46 minutes or more
4) **How will you go home today?**  
(Only tick one box)
- [ ] Walk most or all the way
- [ ] Cycle
- [ ] School bus
- [ ] Local bus or train
- [ ] Car
- [ ] Other please write in: ........................................................................................................

5) **Who will you travel home with today?**  
(Tick as many boxes as you need)
- [ ] Travelling home alone
- [ ] Parent
- [ ] Another adult
- [ ] Older child / teenager
- [ ] Child of same age or younger

6) **How would you like to be able to travel to and from school?**  
(Only tick one box)
- [ ] Walk most or all the way
- [ ] Cycle
- [ ] School bus
- [ ] Local bus or train
- [ ] Car
- [ ] Other please write in: ........................................................................................................

**WALKING**

7a) **Are you allowed to cross main roads on your own?**
- [ ] YES (Please go to Question 7c)
- [ ] NO
7b) If you don't cross main roads on your own, would you like to be allowed to do so?

☐ YES
☐ NO

7c) How old were you when you first crossed main roads on your own?

(Please estimate if you are not sure)

☐ Age
☐ Not allowed to cross roads on my own

---

**CYCLING**

8a) Do you have a bicycle?

☐ YES
☐ NO (Please go to Question 9)

8b) Are you allowed to cycle on main roads by your parents?

☐ YES At what age were you first allowed?

☐ NO

8c) If you have a bicycle, are you allowed to ride it to go to places (like the park or friend's houses) without any grown ups?

☐ YES
☐ NO

☐ Don't have a bicycle

8d) How many times do you cycle in a typical week (both with and without parents) including the weekend?

☐ Once a week or less
☐ One or two days a week
☐ Three or more days a week
☐ Don't have a bicycle
9) Are you allowed to go on local buses on your own (other than a school bus)?

☐ YES  ☐ NO

AT THE WEEKEND

10) Which of these activities did you do this weekend (yesterday or on Saturday):

(tick the first column if you did these things on your own or with another young person)
(tick in the second column if you did them with a parent or other adult)

<table>
<thead>
<tr>
<th>On your own or with another young person</th>
<th>With a parent or other adult</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visited a friend’s home</td>
<td></td>
</tr>
<tr>
<td>Visited relatives or grown-ups</td>
<td></td>
</tr>
<tr>
<td>Went to a youth club (including Scouts, Guides, Cadets, Sunday school etc.)</td>
<td></td>
</tr>
<tr>
<td>Went to the shops</td>
<td></td>
</tr>
<tr>
<td>Went to a library</td>
<td></td>
</tr>
<tr>
<td>Went to a cinema</td>
<td></td>
</tr>
<tr>
<td>Spent time with friends outside after dark</td>
<td></td>
</tr>
<tr>
<td>Went to a playground, park or playing fields</td>
<td></td>
</tr>
<tr>
<td>Played sport or went swimming (individual or team sports or lessons)</td>
<td></td>
</tr>
<tr>
<td>Went for a walk or cycled around</td>
<td></td>
</tr>
<tr>
<td>Went to a concert or nightclub</td>
<td></td>
</tr>
<tr>
<td>Visited a place of worship</td>
<td></td>
</tr>
<tr>
<td>Other (please write in):</td>
<td></td>
</tr>
<tr>
<td>Other (please write in):</td>
<td></td>
</tr>
<tr>
<td>Other (please write in):</td>
<td></td>
</tr>
</tbody>
</table>
11a) How safe do you feel on your own in your local neighbourhood?

(Only tick one box)

□ Not allowed out on my own
□ Very safe
□ Fairly safe
□ Not very safe
□ Not at all safe

11b) When you are outside on your own or with friends are you worried by any of the following?

(Tick as many boxes as you need)

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traffic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Getting lost</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bullying</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strangers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do not feel that I am old enough to go about on my own</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not knowing what to do if someone speaks to me</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

11c) Is there anything else you are worried about when you are outside on your own or with friends?

Please write in:........................................................................................................

ABOUT YOU

12) How old are you?

□ Age

13) Are you...?

a Girl □ or □ a Boy □

Thank you very much for your help 😊
ANNEX 1B: ADULT QUESTIONNAIRE

HOW YOUR CHILD GETS ABOUT

Questions for the father, mother or carer of a child 7 to 15 years old

THE FOLLOWING QUESTIONS ARE ABOUT YOUR CHILD

- This form should take about ten minutes to complete.
- Please only answer in relation to the child who gave you this form – do not answer about any other children in your household.
- Please answer the questions honestly and as best you can.
- Your answers will be made anonymous and will be kept confidential.

Coming home from school

1a) Does your child travel home from school alone?

☐ YES - When did you first let them travel home from school alone?

   □ Age

☐ NO - At what age will you be likely to let your child travel home from school alone?

   □ Age

1b) How many days a week is your child typically collected from school by an adult?

   (Please insert number)

   □ times each week

1c) What are your main reasons for picking your child up from school (even if you no longer do)?

   (Please tick no more than three boxes)

   □ 1. Opportunity to spend time with my child
   □ 2. Opportunity for exercise or to get out of house
   □ 3. Concern about traffic danger
   □ 4. Child unreliable or too young
   □ 5. Danger from adults
   □ 6. Fear of bullying by other children
   □ 7. Opportunity to meet people (teachers, other parents etc)
   □ 8. On the way to an activity for you or the child (e.g. shopping, visiting a relative, after school club etc)
   □ 9. School too far away
   □ 10. Other, please write in:
1d) How long would it typically take you to get to your child’s school?  
(Insert a time however large or small, or tick ‘Don’t know / Not applicable’)

<table>
<thead>
<tr>
<th>Mode</th>
<th>Minutes</th>
<th>or</th>
</tr>
</thead>
<tbody>
<tr>
<td>On foot</td>
<td></td>
<td>□ Don’t know / Not applicable</td>
</tr>
<tr>
<td>By car</td>
<td></td>
<td>□ Don’t know / Not applicable</td>
</tr>
<tr>
<td>Public transport</td>
<td></td>
<td>□ Don’t know / Not applicable</td>
</tr>
</tbody>
</table>

1e) Is the school the nearest one your child can attend?  
□ YES (Please go to Question 1g)  
□ NO

1f) If NO, what is the main reason for your child attending this school?  
(Tick as many as you need)

1. No places available at nearest school  
2. Did not want to send child to local school or preferred a specific school elsewhere  
3. Wanted a specific type of school (faith school, performing arts, etc)  
4. Moved home after child started at school  
5. Travel easier  
6. Other, please write in:

1g) Does your child have a long-standing illness, disability or infirmity?  
□ YES - Please give brief details (optional)…………………………………………  
□ NO

Other journeys

2a) When going to places other than school that are within walking distance, is your child taken there or allowed to go alone?  
□ Usually goes alone (Please go to Question 3)  
□ Usually taken  
□ Varies

2b) What is the approximate number of round trips made each week to accompany your child, excluding the journey to school?  
(For example, travelling to the swimming pool and then home again would count as one round trip)  
□ Round trips each week
2c) What is the method of travel most frequently used on these trips?

(Tick as many as you need)

☐  Walk most or all the way
☐  Cycle
☐  Local bus or train
☐  Car
☐  Other method, please write in: ............................................................... 

Crossing roads

3) Is your child allowed to cross main roads alone?

Please note: this question is included for all parents of children aged between 7 and 15 years old. Please answer even if the answer seems obvious.

☐  YES What age was your child first allowed to do so?

☐  NO What age do you think you will allow your child to do so?

Going out after dark

4a) Is your child usually allowed to go out alone after dark?

☐  YES (Please go to Question 5)
☐  NO

4b) If NO, what is the main reason your child is not allowed to go out alone after dark?

Please write in: ........................................................................................................

Cycling

5) Is your child allowed to cycle on main roads alone?

☐  Does not own a bicycle
☐  YES - At what age was your child first allowed to cycle on main roads alone?

☐  NO At what age do you think you will allow your child to cycle on main roads alone?

☐  Age
Buses

6) Is your child usually allowed to travel on local buses alone (other than a school bus)?
   □ YES At what age was your child first allowed to travel on buses alone?
   □ Age
   □ NO At what age do you think you will allow your child to travel on buses alone?
   □ Age

Mobile Phones

7a) Does your child have a mobile phone?
   □ YES
   □ NO (Please go to Question 8)

7b) If YES, does this give you more confidence about letting your child go out alone?
   □ YES
   □ NO
   □ Child does not go out alone

Traffic

8) How worried are you about the risk of your child being injured in a traffic accident when crossing a road?
   □ Very
   □ Quite
   □ Not very
   □ Not at all
   □ Don’t know / not sure
The following questions are about you

9a) When you were a child aged 8 or 9, how did you usually travel to school?

(Only tick one box)

☒ Walked most or all the way
☒ Cycled
☒ School bus
☒ Local bus or train
☒ Car
☐ Other. Please write in:………………………………………………

9b) How did the distance you had to travel to primary school compare with the distance your child has to travel to primary school?

<table>
<thead>
<tr>
<th>Much less</th>
<th>Less</th>
<th>About the same</th>
<th>Further</th>
<th>Much further</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

9c) At about what age were you allowed to get about on your own?

☐ Age

10) To what extent do you agree or disagree with the following two statements? Put a cross in the box which best matches your opinion.

<table>
<thead>
<tr>
<th>10a) Most adults who live in the neighbourhood look out for other people’s children in the area</th>
<th>Agree strongly</th>
<th>Agree</th>
<th>Neither agree nor disagree</th>
<th>Disagree</th>
<th>Disagree strongly</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>10b) Some young people and adults in the area make you afraid to let your children play outdoors</th>
<th>Agree strongly</th>
<th>Agree</th>
<th>Neither agree nor disagree</th>
<th>Disagree</th>
<th>Disagree strongly</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

Your household

11a) Does your household have regular use of a car (including car share)?

☐ No
☐ Yes, 1 car
☐ Yes, 2 or more cars
11b) How many adults in your household, *including yourself*, have a full driving licence?

- Number

12) How many people live in your home, *including yourself*?

- Children aged 10 years or less
- Children aged 11 to 15 years
- Everyone else aged 16 or more
- TOTAL

13) Does your family own your home or is it rented?

- Own home (with or without mortgage)
- Rented home from Council or Housing Association
- Private rented
- Live in a relative’s home
- Temporary accommodation
- Other .........................

14) Do you have access to outside space(s) where your children can play?

*(Please tick all the relevant boxes)*

<table>
<thead>
<tr>
<th>1. Garden</th>
<th>6. Shared communal space</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Park which you can reach without crossing a main road</td>
<td>7. Other please write in</td>
</tr>
<tr>
<td>3. Park you reach by crossing a main road</td>
<td>8. No suitable outside space available</td>
</tr>
<tr>
<td>4. Quiet residential road</td>
<td></td>
</tr>
</tbody>
</table>

15) Please write in your postcode

[ ] [ ] [ ] [ ] [ ]
### 16a) How old are you?

Please tick the boxes for you and (if applicable) your partner Your husband, wife or partner (if applicable)

| Under 30 | □ | □ |
| 30 to 44 | □ | □ |
| 45 or over | □ | □ |

### 16b) What gender are you?

*Please tick the boxes for you and (if applicable) your partner*

<table>
<thead>
<tr>
<th>You</th>
<th>Your husband, wife or partner (if applicable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>□</td>
</tr>
<tr>
<td>Female</td>
<td>□</td>
</tr>
</tbody>
</table>

### 17a) Are you in paid work?

<table>
<thead>
<tr>
<th>You</th>
<th>Your husband, wife or partner (if applicable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, full-time</td>
<td>□</td>
</tr>
<tr>
<td>Yes, part-time</td>
<td>□</td>
</tr>
<tr>
<td>No</td>
<td>□</td>
</tr>
</tbody>
</table>

### 17b) If you are in paid work, do you work at home or elsewhere?

<table>
<thead>
<tr>
<th>You</th>
<th>Your husband, wife or partner (if applicable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home</td>
<td>□</td>
</tr>
<tr>
<td>Elsewhere</td>
<td>□</td>
</tr>
</tbody>
</table>
17c) What is your current or most recent job title?
You ........................................................................................................................................
Your husband / wife / partner..............................................................................................

17d) If you are an employee, what is made or done at your place of work?
You ........................................................................................................................................
Your husband / wife / partner..............................................................................................

Please give the completed questionnaire to your child to take back to school tomorrow, the following day or as soon as possible after that.

Thank you very much for your help 😊
ANNEX 2: RESEARCH APPROVAL LETTER

Navrae Enquiries  
Imibuzo  

Dr A.T  
Wyngaard

Telefoon Telephone  
Ifoni  

021 467 9272

Faks Fax  
Ifaksi

(021) 425-7445

Verwysing Reference  
Salathiso  

20101005-0016

DATE: 05 October 2010

Mr Patrick Muchaka  
University of Cape Town  
Department of Civil Engineering  
Private Bag X3  
Rondebosch  
7701

Dear Mr Patrick Muchaka

RESEARCH PROPOSAL: STUDY OF CHILD INDEPENDENT MOBILITY AMONG LEARNERS AGED 7-15 YEARS OLD

Your application to conduct the above-mentioned research in schools in the Western Cape has been approved subject to the following conditions:

1. Principals, educators and learners are under no obligation to assist you in your investigation.

2. Principals, educators, learners and schools should not be identifiable in any way from the results of the investigation.

3. You make all the arrangements concerning your investigation.

4. Educators’ programmes are not to be interrupted.

5. The Study is to be conducted from 17 January 2011 till 30 April 2011

6. No research can be conducted during the fourth term as schools are preparing and finalizing syllabi for examinations (October to December).

7. Should you wish to extend the period of your survey, please contact Dr A.T Wyngaard at the contact numbers above quoting the reference number.
8. A photocopy of this letter is submitted to the principal where the intended research is to be conducted.

9. Your research will be limited to the list of schools as forwarded to the Western Cape Education Department.

10. A brief summary of the content, findings and recommendations is provided to the Director: Research Services.

11. The Department receives a copy of the completed report/dissertation/thesis addressed to:

   The Director: Research Services  
   Western Cape Education Department  
   Private Bag X9114  
   CAPE TOWN  
   8000

We wish you success in your research.

Kind regards.  
Signed: Audrey T Wyngaard  
for: HEAD: EDUCATION
ANNEX 3A: SCHOOLS RECRUITMENT LETTER

Faculty of Engineering & the Built Environment
Centre for Transport Studies

c/o Department of Civil Engineering
Private Bag X3
Rondebosch
SOUTH AFRICA

Telephone: +27 (21) 650 3499
Facsimile: +27 (21) 689 7471
Email: roger.behrens@uct.ac.za
Website: www.cfts.uct.ac.za

The Principal

[School address]

26 July 2010

Dear Madam

Study of Children’s Independent Mobility among Children and Teenagers aged 7–15 years old

The Centre for Transport Studies (University of Cape Town) in conjunction with the Policy Studies Institute (UK) intends to undertake a study on children’s independent mobility among children aged 7-15 years (i.e. grade 1-7 in primary school and grade 8-9 in secondary school). The aim of this research is to explore children’s independent mobility— that is the degree to which children of different ages are allowed to make trips to school, friends, shops and other destinations unaccompanied by adults – how this has changed over time and its implications for children’s personal and physical development. This research project will replicate a longitudinal study from 1971-2010 being conducted in the UK, in seven countries: Australia, New Zealand, Indonesia, Japan, India, Tanzania and South Africa.

We are currently recruiting schools in the Western Cape to participate and we would be delighted if you would agree to your school being involved in this research. Further details of the previous research and its findings, our plans for the research and some of the potential benefits to the
schools involved are given in the attached note. If you would like to get in touch with us or have any questions, you can contact me on the contact details given above.

Yours sincerely

A/Prof Roger Behrens

Director: Centre for Transport Studies
Child independent mobility information sheet for schools

Independent Mobility as a Critical Aspect of Children’s Development and Quality of Life:

A longitudinal comparison over four decades in England, a cultural one over two decades with Germany, and an international extension to other countries.

In February 2011, the Centre for Transport Studies (UCT) in conjunction with the Policy Studies Institute (PSI), a research institute at the University of Westminster (UK) is planning to replicate a Children’s Independent Mobility study that was carried out in 5 primary schools and 5 secondary schools in England, in 1971 and England and Germany in 1990. This is a study of Children’s Independent Mobility among Children and Teenagers aged 7–15 years old. Child independent mobility refers to the degree to which children of different ages are allowed to make trips to school, friends, shops and other destinations unaccompanied by adults. The study is being repeated in England and Germany and replicated in other countries across the world (including Australia, New Zealand, Indonesia, Japan, India, Tanzania and South Africa) during the course of 2010.

When the last study was published in 1990, it had a revolutionary effect on the way that children’s health and well-being was viewed by policymakers. The report of the study – published as One False Move... a study in Children’s Independent Mobility challenged Britain’s Department of Transport’s view that the marked decline in child fatalities on the roads was explained by the fact that Britain’s roads had become much safer. The study demonstrated that the reduction was partly attributable to a dramatic reduction in children’s freedom and independent mobility over the previous decades, i.e. children were
removed from danger rather than the danger being removed from the environment. For instance, it found that, in 1971, 80 per cent of 7- and 8-year old children got to school unaccompanied by an adult but by 1990 this proportion had fallen to 9 per cent.

The 1990 study was also duplicated in German schools. It found that English children enjoyed substantially less freedom and mobility than their German counterparts in equivalent towns and villages. The findings generated a revision in the way that children’s independent mobility, road safety, and wider measures of children’s health was assessed and catered for in national policy. It also started an international debate about children’s well-being. The report of the original research can be found at: http://john-adams.co.uk/books/

We are seeking to replicate the research in South Africa with a focus on Western Cape schools. The survey will focus on one class from each school grade (from seven years old upwards), getting the pupils to fill in a questionnaire of approximately two sides of A4 paper and 20 simple questions (please see attached questionnaire). Among younger children, this will take around three quarters of an hour, although older ones are very likely to be able to complete it more quickly.

We will also ask each child to take home a questionnaire of approximately three A4 pages-see attached- (with questions focussed on parental attitudes to their child getting about outside the home on their own), for completion by one parent or guardian and then to return it to school on the following day in the envelope provided where we will collect it. We understand that there may be some practical restrictions on how the survey is conducted, and would be happy to talk to you about altering our methodology to suit your school.

There will be no cost to your school to take part in the work, and you may gain some benefits. First, CfTS can provide your school with an anonymised dataset on how far children in different grades have to travel to school, their method of transport and what restrictions are placed on their mode of transport by their parents. Second, the work should also be of interest to the children themselves, and could be incorporated into geography, maths, and local history lessons. Third, your school will be contributing to a landmark survey that could have far-reaching impacts on how policymakers can improve children’s well-being and development.
The project as a whole will be led at PSI by Ben Shaw, head of Environment Group at PSI. In South Africa the project will be led by Associate Professor Roger Behrens, Director of the Centre for Transport Studies in the faculty of Engineering and the Built Environment at the University of Cape Town. We would like to highlight that the research has obtained approval from the UCT’s Faculty of Engineering and the Built Environment Ethics Committee which is intended to ensure the research is conducted to the highest ethical standards.

This note gives only a brief overview of the project. We are of course happy to discuss this further or provide details as required including the questionnaires and procedures we intend to use.

Yours faithfully

Roger Behrens

Director: Centre for Transport Studies
Dear Parent/Guardian

Study of Children’s Independent Mobility among Children and Teenagers aged 7 – 15 years old

I am writing to inform you a researcher from the Centre for Transport Studies (University of Cape Town) will be visiting your child’s school to conduct some research.

This research is about children’s independent mobility—that is, the extent to which children and young people travel to and from school, friend’s houses, shops etc without adult supervision. This research repeats surveys that were carried out in the UK in 1971 and in the UK and Germany in 1990, and will allow us to understand how children’s travel and play outside and adult supervision of this has changed over time. The research is being carried out in conjunction with the Policy Studies institute/PSI (UK) and is being replicated in 7 countries including South Africa.

What does the research involve?
The research will be conducted in class as part of your child’s normal school day. A teacher will be present and your child will be asked to complete a brief questionnaire of around 25 questions which covers the types of transport they use, how they travelled around over the previous week and activities that they travelled to and from at the weekend. Depending on the age of your child, it is estimated that this will take between 20 and 50 minutes.

As part of this work, the researchers would also like one parent or guardian to complete a questionnaire asking about how your child travels around, with a brief section on how you travelled to school when you were younger. It should take about 10 minutes to fill in. Your child will bring this questionnaire home to you. Please fill it in, and give it back to them to hand in at school the following day.

The research project has been approved by the University’s Faculty of Engineering Ethics board to ensure the research is run in an acceptable way. The project is led by Roger Behrens, Director of the UCT’s Centre for Transport Studies. If you have any queries you can contact the project leader on the contact details above.

What will happen to the data gathered?

Your answers and those of your child will be kept confidential. The surveys will be processed and all information linking individual questionnaires to children/parents will be removed in the results we publish. The name of the school will not be used in any results we publish. The questionnaires will be destroyed following completion of the project. The anonymous data that is retained to allow comparison with any future research will be kept in accordance with the Universities’ policies.

Participation in this research is voluntary. You and your child do not have to take part in the research, and can withdraw at any point during the project. If you do not want your child to take part in the research for whatever reason, please fill in the form below and return it to the school office; there will be no negative consequences for your child’s education.

Yours sincerely

A/Prof Roger Behrens
Director: Centre for Transport Studies
If you DO NOT want to take part in the research; or if you DO NOT want your child to take part in the research; please fill in the form below and return it to school before [insert date]

Name of Child (please print in capitals) …………………………………………………………………..

Class name / number ………………………………………………………………………………………

Teacher …………………………………………………………………………………………....
Dear Parent/Guardian

Earlier in the week, your child should have brought home a questionnaire for you to complete, on how they travel about.

If you haven’t yet returned this questionnaire and would like to participate in the research, we would be very grateful if you could return the questionnaire to the school tomorrow, the following day or early next week. You can either give the questionnaire to your child to hand in at the school.

The questionnaire is part of an important research project trying to find out the age at which children travel to and from school, friend’s houses, shops etc and play outside without an adult and the factors that affect this. We hope that the research will lead to actions that improve the local environments that young people grow up in.

The research is being conducted by researchers from the Centre for Transport Studies at University of Cape Town. If you have any questions about the research, or did not receive a questionnaire; please contact Roger Behrens at the Centre for Transport Studies by email or telephone on the number given above or Patrick Muchaka by email, Patrick.Muchaka@uct.ac.za

THANK YOU
ANNEX 5A:

Script to introduce Questionnaire to older Primary School children and to Secondary School children

To the teacher: 1. Please read out to learners

2. Ask for any opt-out forms and collect these (if there are any)

This is a survey to find out about how you travel around – whether you travel on your own, if you go with your friends or parents, and how you get about whether you walk, go in the car or go on your bike or the bus. We also want to find out what sort of things you do when you are outside.

Please answer honestly – this is a very important study, and we want you to be truthful. If you feel uncomfortable answering any of the questions, please do let me know; there won’t be any problems if you don’t answer a question. All of your answers will be kept private and we won’t know who filled in this questionnaire, only the class it was completed in. Please do put your hand up if you need help.

Some of the questions will require you to tick a box, or boxes, to give your answer. Others will require you to write a few words to answer them. Sometimes you may be asked to skip some questions. So please read the instructions for each question carefully and answer as best you can. Please tick the boxes and write your answers clearly.

I’m going to give you two questionnaires. Put the questionnaire written ‘HOW YOUR CHILD GETS ABOUT’ in your bag and give it to your parent when you get home. Do not write your name on the questionnaires.

NB Please make sure that children have put away the questionnaire written ‘HOW YOUR CHILD GETS ABOUT’ so that they do not fill in the wrong questionnaire

Hand out questionnaires and once everyone has a form

Has everyone got a questionnaire written ‘HOW YOU GET ABOUT’ at the top? Do not write your name on the questionnaire.

Please fill them out quietly. If you have any questions, put your hand up and I will try to help you.

Once everyone have completed the survey: Collect the questionnaires filled in by children

Thank you very much!

As I said before, I have given you another questionnaire. Please take this home and give it to your parent or guardian. Please try and make sure your father or mother or guardian has filled it and return it back to school.
ANNEX 5B:

Script to introduce Questionnaire to younger children in Primary Schools

To the teacher: 1. Please read out to children

2. Ask if there are any opt-out forms and collect these (if there are any)

This is a survey to find out about how you travel around – whether you travel on your own, if you go with your friends or Mum and Dad, and how you get about. We also want to find out what sort of things you do when you are outside – like playing football, going shopping, going out with friends and whether you do these with or without adults.

I’m going to give you 2 questionnaires one of which you I would like you to fill in. I will read it aloud to you to help you answer it. Some of the questions need you to tick 1 box, some will need you to tick 2 or more boxes and some will need you to write a number into a box – so listen carefully.

Please answer truthfully. If you feel uncomfortable answering any of the questions, please tell us; it’s not a problem if you don’t answer a question, but please do put your hand up if you need help from the teacher.

Put the questionnaire written ‘HOW YOUR CHILD GETS ABOUT’ in your bag and give it to your mum or dad when you get home. Do not write your name on either questionnaire.

NB To the teacher: Please ask children to immediately put the questionnaire ‘written ‘HOW YOUR CHILD GETS ABOUT’ in their bags so that they do not fill in the wrong questionnaire.

Once you have given out the questionnaire

Has everyone got a questionnaire written ‘HOW YOU GET ABOUT’ at the top of page 1? (Hold up demonstration questionnaire)

If you have any questions, put your hand up and either I will try to help you.

Now, everyone put their finger on question 1. Has everyone got their finger on question 1? OK, let’s begin…

On completion of survey: collect the questionnaires filled in by children

Thank you very much!

As I said before, I have given you another questionnaire. Please take this home and give it to your parents or guardian. Make sure your Mother, father or guardian have filled it in and return it to school.
References


DoT (2007) Preliminary results of the National Household Travel Survey for Western Cape, Department of Transport, Pretoria.


**Endnotes**

[1] The term ‘Coloured’ generally refers to persons of mixed ethnic origins drawn mainly from first nation Khoi and San peoples, slaves from present day Indonesia and European colonialists; ‘African’ to persons descended from one or more of the Bantu-speaking peoples; and ‘White’ to persons descended from European settlers.

[2] By developing world standards, and indeed by South African standards, present day Cape Town has an extensive fixed road and rail infrastructure. The rail and major road network is essentially radial, with rail lines and freeways radiating from the city centre, and connecting the city to its hinterland in the north, east and south. Cape Town’s public transport vehicle fleet and rolling stock is comprised of trains, scheduled buses, and unscheduled and partially regulated minibus-taxis. Despite a rate of car growth that exceeds that of population growth in recent years, a large portion of the city and provincial population remains without access to private motor cars – around 51% of households in Cape Town, and 54% of households across the entire Province, do not have access to a car (DoT 2007).

[3] In the seminal study of declining child independent mobility in the United Kingdom, for instance, Hillman et al (1990) found the main mode share of walking to school declined from 81% in 1971 to 63% in 1990, and that car use increased from 9% to 33% over this period. More recent data indicate that the proportion of children aged 5-10 years driven to school increased from 29% in 1993 to 41% in 2002 (Department for Transport 2002, cited in Cooper et al, 2005). In the United States, Davison et al (2008) report that the number of children aged 5-15 who walk or bike to school has also decreased dramatically, from 48% in 1969 to 16% in 2001.

[4] To provide a crude indicator of the South African crime context, murder rates in the countries represented in this special issue are compared. According to international police records on the most recent available intentional homicide rates per 100,000 population compiled by the United Nations Office on Drugs and Crime, South Africa compares poorly (public health records appear in parenthesis): Australia 1.2 in 2008 (1.3 in 2004); Germany 0.8 in 2008 (0.6 in 2006), Japan 0.5 in 2008 (0.5 in 2004), South Africa 36.5 in 2008 (68.0 in 2004), Sri Lanka 7.4 in 2008 (6.8 in 2004), Tanzania 7.7 in 2004 (25.8 in 2004), and United Kingdom 1.2 in 2008.