Structural adjustment: source of structural adversity. Socio-economic stress, health and child nutritional status in Zimbabwe
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Chitungwiza and Murehwa district: Description of study sites and study populations

This chapter provides background information about the two areas in Zimbabwe from which most of the primary data presented in this thesis were collected: the urban area of Chitungwiza and the rural area of Murehwa district. Apart from a very practical reason for selecting these two areas for our study – i.e. their proximity to Harare, where the research team was based – we also believed that some of the characteristics of the two areas were ideal for a study on the effects of structural adjustment. Chitungwiza is a young and dynamic city with a diverse population. Many people have a rural base, which they support in one way or another or on which they may fall back in difficult times. Murehwa district consists almost entirely of communal farming areas. While most households rely on agriculture or horticulture for their livelihood, many have some economic connection with nearby Harare as well, either directly or through relatives. Both areas have a fairly good infrastructure, which suggests a certain exposure to changes in the macro-economic and health policy environment.

This chapter tries to assess to what extent the two areas can be considered as representative for larger parts of Zimbabwe. It further provides a description of the households that were enrolled in the cohort for the longitudinal study of which the results will be presented in later chapters.
Chitungwiza

Chitungwiza is a large conurbation situated about 30 km south of central Harare, the capital of Zimbabwe. The city was established in the mid-1970s by the then white minority government to absorb the rapid influx of black people into Harare that resulted from the poor standards of living in rural areas – especially in the communal farming areas, to which the majority of the black population was confined – the escalating war of national liberation and the changing nature of the economy. Chitungwiza’s population has always been almost exclusively black. Because of the limited economic opportunities in the city itself, many of the employed people commute to and from Harare on a daily basis.

Map 4.1: Chitungwiza in Zimbabwe

The official population of Chitungwiza, according to the 1992 census, was 274,912, of which 49.8% were women (CSO, 1994a). Thirty-nine percent of the population was below 15 years of age, while only 2% was 60 years or older. The activity rate, which is the rate of economically active persons among those who are 15 years or older, was calculated at 63%. Of these, less than one-third were women (32%). Sixty-one percent of the economically active persons were paid employees, 13% worked were self-employed
and 24% were reported to be unemployed (the remaining 2% falling into other categories). Households had 4.4 members on average, and women headed 19% of the households. With respect to tenure status it is worth mentioning that more than half of the households in Chitungwiza were lodgers (56%), while 5% were tenants and 37% were owners or purchasers of the house they were occupying at the time of the census.

Chitungwiza is divided into 24 administrative wards, each comprising between 400 and 2,400 stands or housing plots. According to the 1992 census, each ward had between 1,050 and 4,550 households and populations of 4,700 to 21,200 (CSO, 1994a). More popularly known than the wards are the town areas and town units: St Mary’s area (the oldest), Zengeza area (divided into Units 1 to 5), and Seke North and South areas (Units A to P).

Two studies provide insight into the relative position of Chitungwiza in Zimbabwe with regard to the prevalence and intensity of poverty.

The 1995 Poverty Assessment Study (Government of Zimbabwe, 1996) calculated that the poverty lines for Chitungwiza – the food poverty line and the total consumption poverty line – were slightly higher, and therefore less favourable than for all urban areas combined (by almost 2%; see Table 4.1). Likewise, the proportion of households in Chitungwiza that were poor or very poor was higher than the average for all urban areas combined, which suggests that Chitungwiza is a relatively poor urban area.

Table 4.1: Poverty lines and prevalence of poverty among households by area

<table>
<thead>
<tr>
<th>Poverty lines:</th>
<th>National average</th>
<th>Urban average</th>
<th>Chitungwiza average</th>
<th>Rural average</th>
<th>Murehwa district</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Food</td>
<td>$1332</td>
<td>$1512</td>
<td>$1530</td>
<td>$1180</td>
<td>$1351</td>
</tr>
<tr>
<td>* Total consumption</td>
<td>$2213</td>
<td>$2555</td>
<td>$2586</td>
<td>$1924</td>
<td>$2248</td>
</tr>
</tbody>
</table>

Households categorised as:

<table>
<thead>
<tr>
<th>Category</th>
<th>Very poor</th>
<th>Poor</th>
<th>Non-poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Very poor</td>
<td>46%</td>
<td>25%</td>
<td>30%</td>
</tr>
<tr>
<td>* Poor</td>
<td>16%</td>
<td>21%</td>
<td>24%</td>
</tr>
<tr>
<td>* Non-poor</td>
<td>38%</td>
<td>54%</td>
<td>46%</td>
</tr>
</tbody>
</table>

Source: GoZ (1996)

Poverty lines in ZWD per person per year

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1 As pointed out already in Chapter 2, the census used a loose definition of the head of the household. The head of the household was the person who was regarded head of the household by the members and who must have stayed the census night in the household, or have returned on the morning of the census day. Female headed households according to this definition can be either de jure female headed households, meaning that they are headed by women who are either single, divorced or widowed, or de facto female headed households, meaning that there is a male person but most of the time he is staying elsewhere.

2 A tenant is renting an entire house or apartment, while a lodger is renting part of a house and shares some of the facilities (entrance, bathroom and or kitchen) with others.

3 See Chapter 2 for an explanation of these two concepts and how they were used.
The 1998 Zimbabwe Human Development Report (UNDP, 1998) computed a Human Development Index and a Human Poverty Index and made rural-urban, provincial and district level comparisons. Chitungwiza was ranked 14th out of 77 districts on the Human Development Index, behind Harare Urban, Bulawayo – the two major economic and administrative centres of Zimbabwe – and some other urban districts, but still ahead of for example Bindura, Kariba, Mutare and Kadoma urban districts and most rural districts. On the Human Poverty Index Chitungwiza was ranked 19th best out of 77. Its score was slightly worse than that of Harare Urban and Bulawayo (13.52 versus 12.76 and 12.08, respectively) but better than that of Zimbabwe as a whole (17.40). On one of the indicators – access to clean water – Chitungwiza scored better than Harare and Bulawayo.

It is clear that Chitungwiza, with its large commuter workforce and high level of informal economic activity, is not representative of all urban areas in Zimbabwe. Unfortunately, few data allow a comparison between Chitungwiza and the high-density areas of Harare or other cities. This is because most of the statistics for urban centres are averages that are influenced by the presence of elite minorities – white and black – and they are not broken down by suburb. It appears, though, that the social and economic structure of Chitungwiza does not differ much from the high-density suburbs of Harare or Bulawayo.

Health care infrastructure

Chitungwiza is served by one hospital, which is administered directly by the Ministry of Health and Child Welfare, and four municipal clinics, administered by the Chitungwiza town council. They are Seke North, Seke South, St Mary and Zengeza. The hospital has 350 to 400 beds and occasionally uses Harare Central Hospital as its referral centre in case of emergencies that cannot be dealt with locally. The four municipal clinics do not keep inpatients, except for maternity services. The municipal clinics benefit from some technical and small financial inputs through projects that are run by the Department of Community Medicine of the University of Zimbabwe, who regularly send students on attachment, and the Zimbabwe AIDS Prevention Programme.

The number of registered private clinics in Chitungwiza increased from 32 in 1994 to 49 in 1997, which indicates an increase in private sector activities. At the end of 1999 a

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\(^{2}\) See Chapter 2.

\(^{3}\) This number is larger than the actual number of 56 administrative districts, as some of the districts were divided into a rural and an urban part, for the purpose of this study.

\(^{4}\) In Harare and other major cities in Zimbabwe a distinction is made between low-density suburbs, which historically were reserved for white people, and high-density suburbs for blacks. Although many blacks now live in low-density suburbs, there are still very few whites that reside in high-density suburbs.

\(^{5}\) The reported number of beds changes over time. There were 90 maternity beds in 1995, but this number was reduced to 64 in the course of 1996; the number of other hospital beds changed from 252 in 1995, to 323 in early 1997 and to 299 in late 1997.

\(^{6}\) Seke South clinic started providing antenatal and delivery services only in 1995.

\(^{7}\) Personal communication with Chitungwiza Town Council officers.
new private hospital – South Medical Hospital – was opened in Zengeza area, a novelty for the city of Chitungwiza.

Murehwa district

Murehwa district is one of the 56 districts in Zimbabwe. Located in Mashonaland East province, it comprises 30 administrative wards and a total of 493 villages. Murehwa growth point is situated about 70 km north of the provincial capital Marondera and about 80 km east of Harare. The district covers an area of about 1830 km², which consists mainly of communal farming areas¹⁰ and a small-scale commercial farming area (Chitowa). The entire district falls into natural region II (or agro-ecological zone II), which is characterised by reasonable rainfall (750 to 1000 mm per annum) and makes it suitable for intensive crop farming and livestock breeding. Prior to independence, Chitowa had its own administrative structure – a rural council – just like all commercial farming areas elsewhere in the country and separate from the district council that administered the communal areas.¹¹ Since the amalgamation of rural and district councils in the mid-1980s, the entire district has been administered by one single rural district council.

Map 4.2: Murehwa district in Zimbabwe

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¹⁰ The communal land area of Murehwa district is known as Mangwende communal land.

¹¹ This separation of rural and district councils was a colonial heritage. Rural councils had a much stronger resource base, thus reinforcing the existing disparity between large-scale commercial farming areas and communal farming areas.
According to the 1992 national census, Murehwa district had 152,505 inhabitants, 52.2% of whom were women (CSO, 1993). Almost half of the population (48%) was below 15 years of age, while 7% was 60 years or older. The activity rate was calculated at 62.4%. While the average household size in the district was 4.8 members, not less than 40% of the households in Mashonaland East province as a whole were female-headed. This high percentage reflects the fact that many men stay in Harare as migrant workers, separated from their families for most of the year.

Agricultural production in Murehwa district is fairly good compared to other parts of the country but has varied much over the years. Chapter 2 has described the severe influence of the 1991-92 and 1994-95 droughts on the maize production in communal farming areas as a whole in Zimbabwe and on the monetary value of crop sales in these areas. We do not have such data for Murehwa district specifically.

Like in other parts of Zimbabwe, Murehwa was targeted by several relief operations that aimed at alleviating the effects of drought. The Child Supplementary Feeding Programme (CSFP) and the Food-for-Work programme were operational in 1992-93 (see Box 4.1 for details). Unlike in other parts of Zimbabwe, the CSFP was not reactivated in Murehwa district after the 1995 drought. The Grain Loan Scheme, which replaced the Food-for-Work programme, did become operational in Murehwa district but, as pointed out already in Chapter 2, this was only for some 6-7 months. Because of their location in a part of the country that was relatively less affected by the drought, none of the schools in Murehwa district were covered by a school feeding programme.

Three studies provide insight into the relative position of Murehwa district in Zimbabwe with regard to poverty and household vulnerability. The first, the 1995 Poverty Assessment Study, initiated by the Government of Zimbabwe and UNDP after the 1994-95 drought episode (GoZ, 1996), calculated that for Murehwa district the two poverty lines used – the food poverty line and the total consumption poverty line\(^1\) – approximated the national average. But they were substantially higher than the poverty lines calculated for all rural areas combined (see Table 4.1). This suggests that prices for basic consumer goods and services in Murehwa district are higher than in most other rural areas. The percentage of poor and very poor households in Murehwa district (16% and 70%, respectively) was also higher than the national average for all rural areas combined (15% and 57%, respectively). However, the Murehwa district figures correspond reasonably well with the averages obtained for all communal lands combined, which had 13% of the households categorised as poor and 68% as very poor. As far as the distribution of poverty in 1995 is concerned, Murehwa district can therefore not be seen as representative of the whole of “rural Zimbabwe”, while it appears slightly better off than the rest of the communal lands.

\(^1\) See Chapter 2 for an explanation of these two concepts and how they were used.
Box 4.1: Relief operations in Murehwa district

The national Child Supplementary Feeding Programme was initiated by several non-governmental organisations in the early 1980s, following three nutrition surveys, which showed the severity of malnutrition in communal areas. The Ministry of Health took over the programme and progressively phased it out from the mid-1980s onwards as the droughts subsided. The programme was reintroduced in Zimbabwe in mid-1992 after the severe 1991-92 drought.

In Murehwa district it became operational in June 1992. In the first three months, feeding points for under-five year old children were set up in the entire district. All 14 health facilities (two hospitals and 12 Rural Health Centres) had a number of feeding points, between seven and 38 feeding points per facility, with a total of 212 feeding points for the whole district. Most of the health facilities stopped the programme in November or December 1993, while a few continued into 1994.

The Food-for-Work programme was another relief operation that was initiated after the 1991-92 drought. This programme too had been operational earlier (in 1988). It comprised several types of works - roads, dams, waiting mother shelters - in which participants first received food (as described in Chapter 2) and later earned ZWD 4 per day, payable at the end of the month. This programme was stopped in April 1993, although some projects continued until completion.

Data on the numbers of participants in the two relief programmes could not be obtained.

Source: personal communication (in 1994) with officers from Murehwa District Health Office and the District Administrator’s office.

A vulnerability assessment study conducted by Eilerts (1994), who made a relative ranking of need of all 171 communal land areas in Zimbabwe on the basis of four different dimensions of vulnerability, provides additional insight into the distribution of poverty in Zimbabwe. On the basis of historic baseline data (covering 1980-91) the study ranked Murehwa district 149th among 171 communal land areas (the 23rd best ranking), indicating that it is traditionally one of the least vulnerable areas in the country. In terms of income from staple food, cash crops, livestock off-take and food-for-work grain distribution it ranked even 156th (or 16th best). Only about 12% of its population was considered eligible for drought relief, which also gave the district a relatively good rating with regard to food stress. Only on one of the four dimensions - that of resources - did Murehwa district score less than average (67th). The district’s current vulnerability, based on the value of agricultural and livestock income for the period 1991-92 to 1993-94 and the change in income compared to the baseline, was also limited, giving it a 17th best score out of 171 communal land areas (154th rank). This suggests that the impact of the 1991-92 drought on household vulnerability in Murehwa district was not as strong as in most other communal land areas.

The 1998 Zimbabwe Human Development Report (UNDP, 1998), finally, which computed a Human Development Index and Human Poverty Index and made rural-urban, provincial and district level comparisons assigns Murehwa district a less favourable position. The district ranked only 55th out of 77 ‘districts’ for the Human Develop-

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13 See Chapter 2.
14 The 1st rank being the worst.
15 See Chapter 2.
ment Index - the composite measure of four indicators: income, life expectancy, adult literacy and schooling - and it had the 31st worst score on the Human Poverty Index - another composite indicator derived from life expectancy, educational attainment and living standard. This suggests that the district is among the least developed and poorest half of the country. Districts that were ranked worse all consist mainly of communal farming areas.

While the three studies used different indicators of poverty, it is clear that Murehwa district is among the relatively well-endowed communal lands in Zimbabwe in terms of natural resources and that it is relatively less vulnerable to drought. In terms of key social statistics, though, the district performs below expectation. This may be a reflection of the high proportion of female headed households because of male migration to nearby Harare.

Health care infrastructure

Murehwa district has two hospitals and several rural health centres. Murehwa district hospital, situated at Murehwa growth point, is administered by the Ministry of Health and Child Welfare. It provides the entire range of referral services needed at that level, i.e. inpatient care, minor surgery, obstetrical care and X-ray and laboratory services. The hospital has 60 beds, of which nine are for maternity patients.17 There are three posts for medical doctors, one of which is occupied by the District Medical Officer, who is not available full-time for clinical work because of managerial and administrative duties. The remaining two posts are not always both occupied, as vacancies at times remain open for quite some time.

A second hospital, St Paul's hospital, is run by the Catholic mission at Musami, situated 75 km east of Harare and some 20 km south-west of Murehwa growth point. With 150 beds, of which 33 are for maternity patients, it is much larger than the district hospital in terms of bed establishment, but it has fewer staff and lower attendance levels. In the early 1990s there were two expatriate medical doctors, later only one, and since late 1998 the hospital has been without a doctor, which leaves patient care in the hands of a clinical officer and the nursing staff.

In the early 1990s, Murehwa district had 12 rural health centres, of which five were run by the government, six by the rural district council and one by the Catholic mission at Nhowe.18 In May 1996, a new clinic was opened at Murehwa growth point as part of an effort to decongest the district hospital's overcrowded outpatient department and strengthen its function as a referral hospital. In May 1999, another clinic was opened in Chitowa, the second clinic in this small-scale commercial farming area. Box 4.2 gives the full list of rural health centres and clinics in Murehwa district. Almost the entire population now lives at less than seven km of a health facility (Criel et al., 1996).

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17 Previously the hospital had 89 beds, of which 13 were for maternity cases. A new maternity ward with 40 beds was under construction in 2000.
18 In 2000, the Catholic mission had a hospital under construction at Nhowe.
suggesting an optimal coverage in terms of health infrastructure, much better than in many other parts of Zimbabwe.

**Box 4.2: Rural health centres and clinics in Murehwa district**

<table>
<thead>
<tr>
<th>Government rural health centres</th>
<th>Rural District Council clinics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chitwe</td>
<td>Chitowa I</td>
</tr>
<tr>
<td>Jekwa</td>
<td>Dandara</td>
</tr>
<tr>
<td>Kadenge</td>
<td>Dombwe</td>
</tr>
<tr>
<td>Madamombe</td>
<td>Kadzere</td>
</tr>
<tr>
<td>Munamba</td>
<td>Nyamutumbu</td>
</tr>
<tr>
<td></td>
<td>Shambamoto</td>
</tr>
<tr>
<td>Mission clinic</td>
<td></td>
</tr>
<tr>
<td>Nhowe</td>
<td>Machecke *</td>
</tr>
<tr>
<td></td>
<td>Virginia *</td>
</tr>
<tr>
<td></td>
<td>Waterloo *</td>
</tr>
<tr>
<td></td>
<td>Murehwa GP polyclinic (since 1996)</td>
</tr>
<tr>
<td></td>
<td>Chitowa II (since May 1999)</td>
</tr>
</tbody>
</table>

* These three clinics are part of Marondera district, but have been supervised by Murehwa district since 1995

For more than 10 years, until 1998, Murehwa district received technical and financial support from a foreign non-governmental organisation, *Medicus Mundi Belgium*, under the *District Health Services Management project*.

While private clinics were non-existent in the early 1990s, they entered the local scene from 1995 onwards. In April 2000, there were at least five private practices in Murehwa district. It strikes that four of these were operated by civil servants or ex-civil servants from the district: the district medical officer, one of the previous district medical officers, one of the two general medical officers at the district hospital and the clinical officer of the same institution.\(^{19}\)

This surge in private sector activities goes together with an increasing difficulty for the Ministry of Health to recruit local doctors and nursing staff. Unofficial reports indicate that in early 2000 more than 20% of the nursing posts in Murehwa district were vacant. Musami mission hospital had seven vacancies on a total of 17 posts for nurses. Eight rural health centres had only one nurse in place,\(^{20}\) making it difficult to assure adequate service delivery. In 1998, the Rural District Council started contracting retired nurses to fill the vacancies at the health centres administered by the council.\(^{21}\)

The public sector and the churches – whose health institutions clearly have a public purpose – therefore no longer play the dominant, almost exclusive role they once had in

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\(^{19}\) Personal communication with health staff, in April 2000

\(^{20}\) Health centres usually require two or three nurses to assure adequate service delivery during the day and provide emergency assistance during evening and night hours and on weekend days.

\(^{21}\) A report on the success rate of this effort is not available.
Murehwa district. Similar to what happened already a little earlier in Harare and Chitungwiza, private activities in the rural area appear to be a lucrative and accepted phenomenon, even when they are undertaken by government employees. Chapter 5 will explore to what extent the human resource factor has had an influence on the quality of care and the utilisation of health services.

Household samples enrolled in the longitudinal study

This section describes the sampling methods applied to the longitudinal study that was conducted between 1993 and 1998 in Chitungwiza and Murehwa district, respectively.

Definition of the study population
We defined the study population as households with one or more children in the age range of 12 to 59 months. Households were defined as comprising all people who live together for most of the week and who usually share their meals.

The restriction of the study population to households with children in the age range of one to four years was based on the assumption that under-fives are most vulnerable to adverse socio-economic conditions in terms of their health and nutritional status. We excluded those under one year of age because of the technical difficulties of height measurements required for assessment of nutritional status. In the years following the baseline household survey of 1993, repeat interviews were held in the same households. Households that had changed residence in between subsequent survey rounds and whose new addresses could be traced, continued to be enrolled in the study.

All interviews were conducted with adults only, i.e. those 18 years of age or older, preferably the mother of the index child or index children. Participation of husbands and other adults in the interview sessions was encouraged, provided they formed part of the household.

We employed five research assistants, all females between 30 and 45 years of age, who conducted all interviews in the two study areas. Each research assistant took responsibility for a geographical cluster of households sampled for the study. One of the research assistants tragically passed away in November 1996. In the 1997 survey round another female research assistant took over her role in the team.

The possible effect of seasonality on the findings was taken into account by conducting the household interviews in the same period of the year, namely the dry winter season (see Chapter 1). From a logistical viewpoint, it was an advantage to conduct the interviews during this period of the year since household members are less engaged in agricultural activities and could therefore be expected to be at home rather than in their fields. This made it easier for the research assistants to achieve high follow-up rates.

In order to be able to draw conclusions that would be valid for the entire populations of households in Chitungwiza and Murehwa district respectively, the two samples needed
to be representative. For this, we used a combination of cluster sampling and systematic sampling.

**Sample size**

Based on prior experience with household interviews by the Department of Community Medicine of the Faculty of Medicine in Harare, we estimated that between 150 and 200 households would be adequate for each of the two areas – urban and rural – to examine changes over time in socio-economic conditions and child nutritional status. However, in order to accommodate comparisons between subgroups of female headed versus male headed households, employed versus non-employed, well nourished versus malnourished – we increased the sample size to 300 households per area.

**Sampling method used in Chitungwiza**

The list of 24 administrative wards provided a sampling frame for the selection of geographical clusters, from which households could be sampled in a multistage manner. Based on information from the Planning Department and the Health Department at Chitungwiza Town Council, the wards and town units were divided into four categories, according to the socio-economic status of the households: upper (two units), upper-middle (six units), lower-middle (eight units) and lower category (five units). Wards were then selected in such a way that units from all the above four categories were included. Through a combination of purposive and random sampling, ten wards were selected out of the total of 24 (see Box 4.3 in Appendix 2).

Using lists of residential plot numbers as a second sampling frame, we then applied systematic sampling to select 25 plots from each of the ten wards (taking every nth plot). This resulted in a list of 250 residential plots. Each of the five research assistants was assigned two wards and given a list of the selected plot numbers to take into the field.

Realising that at a particular residential plot there could be either one eligible household, more than one or none at all – the latter being the case if there was no child in the required age range – we instructed the research assistants to include all eligible households living at the selected plot. In all cases where there was no eligible household the next nearest plot qualified as a replacement. In case people were absent at the selected plot or household, two call-back visits on subsequent days were made before replacing the plot or abandoning the household.

In total, 327 households enrolled in the study in Chitungwiza. This sample is representative of all households that had at least one child aged one to four years in 1993.

**Sampling method used in Murehwa district**

Unlike in the urban area, we used primary schools rather than administrative wards as a sampling frame in Murehwa district. Primary schools are much more densely spread than rural health centres in Zimbabwe, and well over 90% of children attend primary school. Using catchment areas of primary schools, rather than those of rural health centres, as sampling clusters ensured that communities far from a health facility had an almost equal chance of being recruited into the study as communities close to a health facility.
Out of the total of 63 primary schools in Murehwa district, we obtained a weighted sample of 20 (see Box 4.4 in Appendix 2), taking into account the total enrolment at each school. Each of the five research assistants was assigned four schools.

School registers were then used in the field to perform a systematic sampling of five Grade 1 children (taking every $n^{th}$ child on the list). The homesteads of each of the children selected were visited for interviews. From the area around each of these homesteads, we selected two more households by choosing a fourth and eighth household on a straight line in a randomly chosen direction from the original household. As in Chitungwiza, if no eligible household was found at a selected homestead, we took the nearest homestead. In this manner 15 household interviews were performed in each of the 20 geographical clusters, resulting in a total of 300 interviews at baseline in 1993.

The introductory sections of chapters 6 and 7 describe the samples of households and children enrolled in the study at baseline in 1993 and the respective follow-up rates in subsequent survey years.

Conclusion

The results that will be presented in the following chapters have significance not only for the two study areas where the study was conducted, but for other parts of Zimbabwe as well. Chitungwiza is not very different from the high-density suburbs of Harare city. Murehwa district should be considered as one of the more endowed communal areas in Zimbabwe. The district was not disproportionately affected by the severe drought that hit the country in 1991-92, although it did receive support from national relief programmes aimed at alleviating the effects of drought. This made Murehwa district suitable for studying the implications of changes in the economic and health policy environment for household welfare, health and nutritional status.

With regard to the sampling of households, it is unlikely that the method used in Chitungwiza has introduced any significant selection bias, since the selected wards are a fair representation of the entire city and all households in these wards had an almost equal chance of being included in the study. Only a few houses where nobody was found at home after three attempts on different days were excluded, but it is not very likely that the households concerned had children in the required age range. The sampling method used in Murehwa district may have introduced a slight bias by favouring households that had a child in Grade 1 of the primary school. This however may have been the case for at most a third of the households sampled, as the remaining two-thirds were chosen independently from schools. Like in Chitungwiza, absence from home at the time of visit by the research assistant is unlikely to have introduced a significant selection bias.