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THE RAILWAYS AND THE ZIMBABWE
COAL CRISIS OF THE LATE 1980S

C. Kunaka

AGE AND SEX CHARACTERISTICS OF THE
POPULATION OF ZIMBABWE: AN
ANALYSIS BASED ON THE 1982 CENSUS

L. Zanamwe

INTRA-PROVINCIAL INEQUALITIES IN THE
PROVISION OF HEALTH CARE IN THE
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INTRA-PROVINCIAL INEQUALITIES IN THE PROVISION OF HEALTH CARE IN THE MIDLANDS PROVINCE OF ZIMBABWE

by

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INTRODUCTION

The geography of health care has been extensively researched in the western industrialised countries (Dauskardt, 1990; Learmonth, 1981; Joseph and Phillips, 1984). Much of the debate has focused on issues such as the 'spatial location, distribution, accessibility, efficacy and utilisation of health care delivery systems' (Dauskardt, 1990, p.275). However, empirical research on the geography of health care in developing countries still remains scanty (Joseph and Phillips, 1984).

The objective of this paper is to assess the magnitude of spatial inequalities in opportunity levels for access to western type health care facilities and personnel in the Midlands province of Zimbabwe. There are three main reasons for focusing on the provision of health facilities at the provincial level. Firstly, there is need to complement the recent national studies on the provision of basic social services in Zimbabwe carried out by Zinyama (1987) and Zanamwe (1988) by focusing on the meso-scale level such as the administrative region. Secondly, adequate health care is a basic requirement needed by all and yet its provision in Zimbabwe is still very uneven. Comprehensive facilities are found especially in the major urban areas while in rural areas only rudimentary health services are found. It is the rural areas which are in most need of comprehensive and accessible health care facilities because of the low sanitation standards in these areas. Rural communities commonly draw their drinking water from contaminated sources, consequently diseases related to unhygienic conditions and unsafe drinking water are prevalent. Thirdly, the Midlands province provides an interesting context for examining intra-provincial inequalities in the provision of medical care because it is one of the most heterogeneous provinces in the country in terms of differences in the levels of urbanisation, provision of infrastructure, ecological diversity, economic activities, ethnic composition and migration patterns.

Of concern to Zimbabwean policy-makers and economic planners is that there has been a progressive distortion in the distribution of the benefits

of economic growth between geographical regions (particularly rural and urban areas) and between socio-economic groups. Zimbabwe, like most developing countries, is characterized by substantial socio-spatial polarization in levels of well-being of the population. This polarization partly arises from variations in access to basic goods, services and amenities. Disparities, as measured spatially by shares of income distribution between regions or socially between groups, are a common feature. The allocation and distribution of public infrastructural investment is a major concern in developing countries because investment capital is limited and consequently infrastructure and services tend to be concentrated in the urban areas. However, Third World cities also contain significant socio-economic inequalities and as a result not all urban groups benefit from, or have access to, these social investments. As Mehretu (1986, p.31) observed, there is a tendency for 'some classes of people residing in "central" locations to pre-empt development benefits, while less advantaged masses living in "marginal" areas continue to lose out in the competition for development resources and access to input and output markets'. Many members of the elite have access to expensive imported goods, better medical facilities, better schools and other welfare services. On the other hand, a large percentage of the low income population in the urban shanties or in the rural areas live in abject poverty. They have limited access to social services such as health facilities and it is extremely doubtful whether any appreciable improvement in the supply of, and access to, services will be achieved in the foreseeable future. Several recent studies of spatial inequalities in levels of living highlight the persistent pattern of inequity in post-independent Zimbabwe (Chimhowu, 1989; Simon, 1986; Zanamwe, 1988; Zinyama, 1987).

Since independence in 1980 the development objectives of the government have been based upon a policy of 'growth with equity', especially with respect to the provision of social services (Republic of Zimbabwe, 1981, 1982, 1986a). In an attempt to achieve this goal the government embarked on numerous rural projects such as the construction of schools, boreholes and the establishment of a health care system intended to increase the availability of preventive and curative medical care. In 1981 the government introduced free basic medical attention to all those whose monthly incomes were less than Z\$150. Ultimately, the objective of government is to provide 'health for all' by the year 2000. As Herbst (1990, p. 166) observed, 'the increased provision of health care by the new government of Zimbabwe has been one of the most visible fruits of the liberation struggle, and the new regime's health programme has entailed a massive increase in funds devoted to medical care'.

However, the resources allocated to public health and medical facilities have been inadequate in relation to the needs of the rapidly growing population. Besides, most of these resources have had a bias towards curative rather than preventive medicine (Agere, 1986). The problem is that, unlike preventive medicine which is low cost and can be made easily available to people living in remote communal areas, curative medicine is usually based on sophisticated medical technology, is expensive and remains mainly accessible to the urban population. While independence resulted in improved well-being for many people however, poverty and inequality still exist largely because the benefits from independence have not been distributed equitably within society and across geographic space. The situation in 1988, when foreign currency shortages resulted in a 25% shortage of essential medicines throughout the country with rural shortages estimated at 48%, is a telling point (Leistner, 1989).

In Zimbabwe, the Ministry of Health has overall responsibility for the provision of health services and infrastructure. In addition, local authorities (such as district and rural councils) and missionary organisations provide health services mainly in the rural areas. For example, many rural health centres opened before independence were established by local authorities and by missionaries. In addition to the public health facilities, private medical facilities are available in most urban areas. However, the latter are mainly for a small elite who can afford the high fees charged.

The intra-provincial distribution of health care in Zimbabwe is quite similar to that reported elsewhere in colonial Africa whereby the health care system was concentrated in the larger urban areas to cater for a wage-earning labour force and as a result health care was not readily available to the rural people (Gwebu, 1983; Schoeman, 1981). Before independence, health and other social services in Zimbabwe were similarly concentrated in the larger towns, leaving the rural and small-town residents with only rudimentary services (Agere, 1986; Gilmurray *et al.*, 1979; Herbst, 1990). Nevertheless, the available data indicate that progress towards the improvement of access to health facilities has been made since independence (Agere, 1986; Sanders and Davies, 1988).

THE PROVISION OF HEALTH FACILITIES IN THE MIDLANDS PROVINCE

The Midlands province occupies a geographically central position in Zimbabwe (Figure 1). According to the 1982 population census, 1.09 million people lived in the province out of a national total of 7.5 million. Estimates show that the province had about 1.3 million people or 14.5% of Zimbabwe's population by 1989, thereby making it the third largest province in the

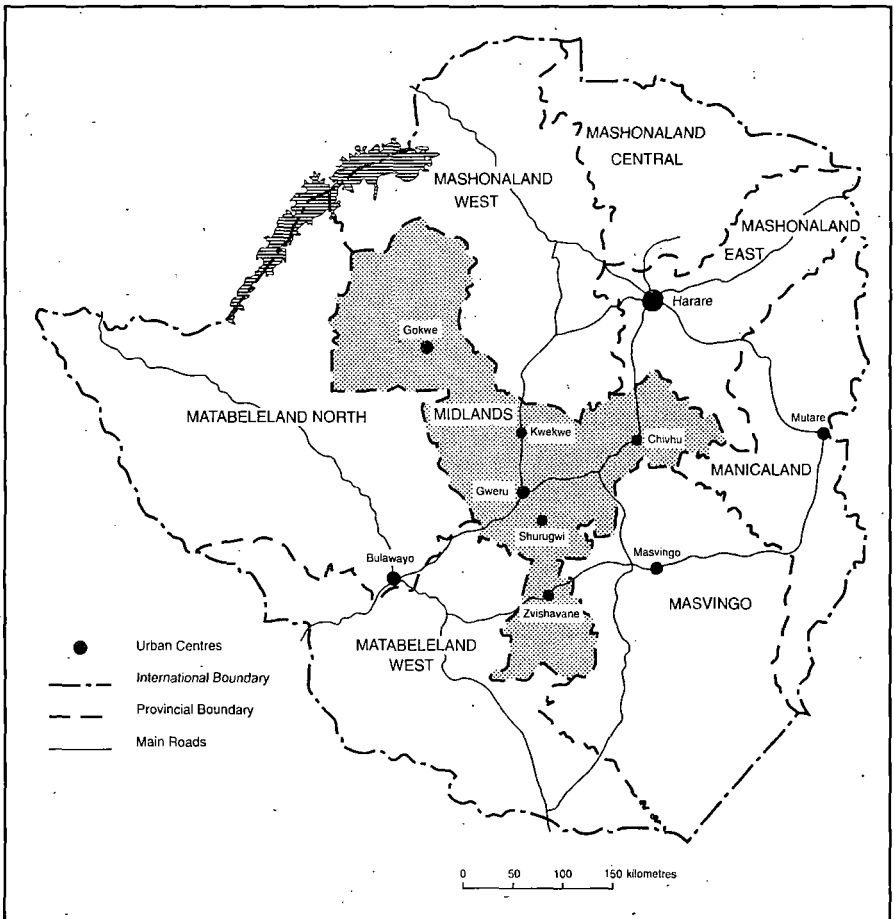


Figure 1: The Midlands Province of Zimbabwe

country after Mashonaland East and Manicaland. The province covers an area of 58 967 square kilometres (i.e. 15.1% of the country's total land area) and it stretches across several agro-ecological belts. The province is divided by the Ministry of Health into 8 administrative districts as follows: Charter, Gokwe, Gweru, Kwekwe, Mberengwa, Chirumanzu, Shurugwi and Zvishavane.

This paper primarily relies on various documents produced in the late 1980s by the government of Zimbabwe to examine the provision of various health care facilities and personnel such as number of establishments, hospital beds, doctors and other health personnel such as certified nurses, state registered nurses, nurse aids, health assistants and village health workers in the Midlands province. Given the paucity of disaggregated data the computation of health status indices based on life expectancy, child

mortality and malnutrition for the various districts in the Midlands province was not possible. However, the data allow for the calculation of the ratios of population per medical doctor and population per health institution. More importantly, the data make it possible to compute for each district a coefficient of advantage with respect to the provision of health institutions, medical doctors, health personnel and hospital beds. The coefficient of advantage was determined by calculating the ratio between the district share of the variable and that of its population. Values greater than 1.0 infer that the district has more than its fair share while values less than 1.0 suggest that the district has less than its fair share of the variable in question.

Health care facilities

The distribution of health care facilities ranging from general and private hospitals, clinics to rural health centres within the province is highly uneven (Table 1). Four of the eight districts, that is Zvishavane, Mberengwa, Kwekwe and Gokwe, are noticeably disadvantaged in the sense that they all have coefficient of advantage values of less than 1.0. This means that they have less than their fair share of the province's health care facilities and consequently have higher population per health care facility ratios than the other districts in the province. Gokwe district, which has a coefficient of advantage of 0.73, is the most disadvantaged district. It has 24.8% of the province's population yet its share of the health institutions in the province is only 18.1%. Shurugwi district has only 6.5% of the provincial population but has 11% of the health institutions in the province and this gives it a high coefficient of advantage of 1.70. In other words it has almost double the expected number of health institutions. A series of choropleth maps were drawn for the purpose of showing inter-district variations in the provision of various health facilities (Figure 2). Figure 2a highlights the inequalities in the provision of health institutions in the Midlands province.

The four disadvantaged districts have one common characteristic in that they have more communal lands than the other four and together have 82.6% of their population living in the communal lands, most of them as peasant farmers. Gokwe district in particular has not been able to attract adequate health services because, for a long time, it has been a frontier area which has suffered from a geographical constraint characterised by Whitlow (1982) as 'marginality and remoteness'. The rural economy in Gokwe district is fragile because agriculture, which is the principal economic activity, is hampered by such factors as low and variable rainfall and inadequate all-weather roads. This observation reinforces the argument made by critics that Zimbabwe's current development strategies have not yet been able to significantly reverse the anti-rural bias of pre-independence governments.

TABLE 1:
DISTRIBUTION OF VARIOUS HEALTH FACILITIES IN THE MIDLANDS PROVINCE (1989)

District	Population (1989): estimate	Health Care Facilities		Medical Doctors		Hospital Beds		Health Personnel	
		No. of Facilities	Co-efficient of Advantage	No. of Doctors	Co-efficient of Advantage	No. of Beds	Co-efficient of Advantage	No. of Staff	Co-efficient of Advantage
Charter	176 780	36	1.19	4	1.30	145	0.60	194	1.09
Gokwe	328 307	41	0.73	2	0.54	160	0.37	124	0.37
Gwern	145 280	28	1.12	11	4.35	294	1.49	333	2.27
Kwekwe	219 635	34	0.90	4	1.05	399	1.34	276	1.25
Mberengwa	197 564	31	0.91	0	0.00	105	0.39	114	0.57
Chirumanzu	54 526	14	1.49	0	0.00	176	2.38	70	1.27
Shurugwi	113 351	25	1.70	1	0.67	155	1.33	110	1.27
Zvishavane	85 745	18	0.92	1	0.51	359	2.33	112	0.98
TOTAL	1 321 188	227	-	23	-	1 793	-	1 333	-

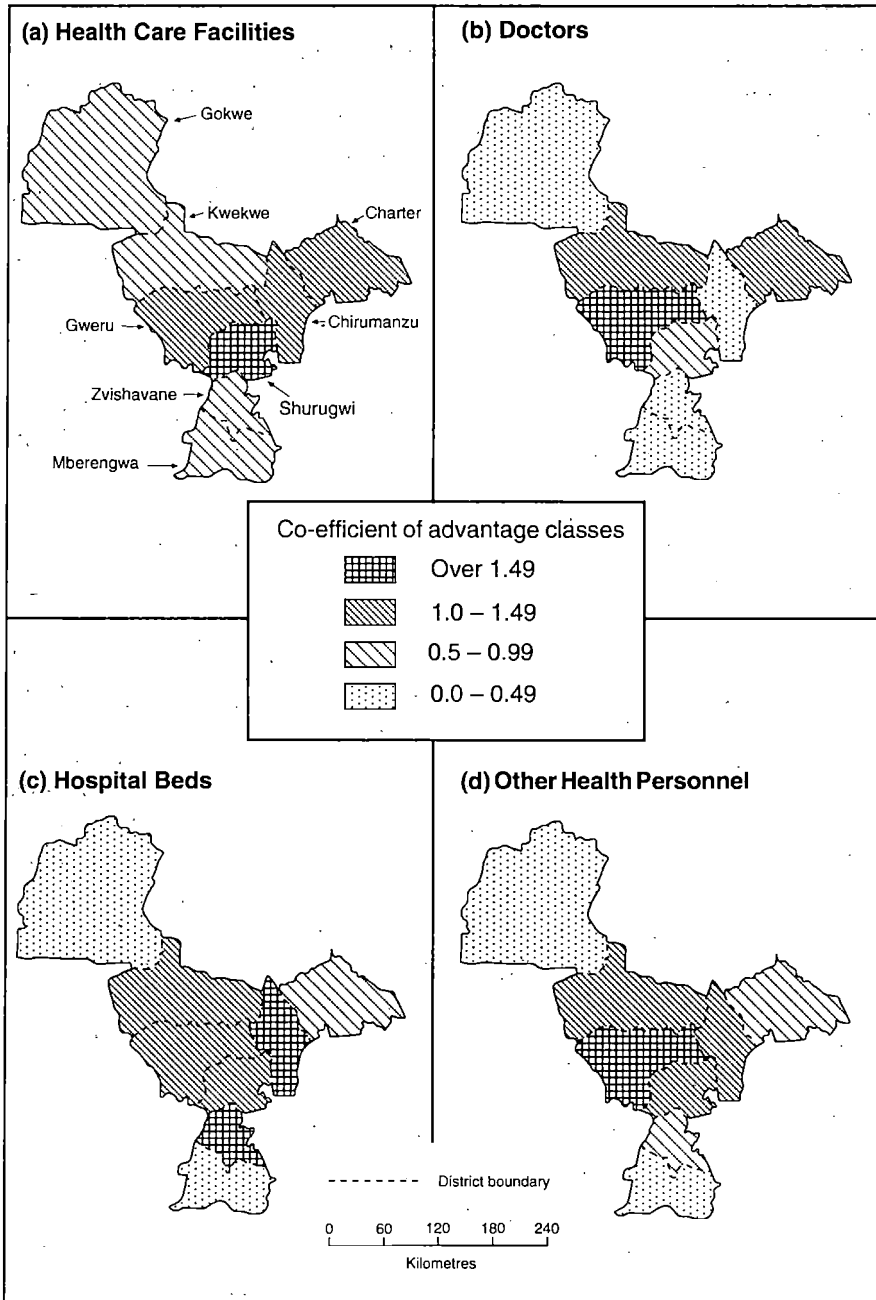


Figure 2: Inter-district variations in the distribution of health services in the Midlands province by co-efficients of advantage

Doctors

As predicted, districts with large urban centres have more favourable population-doctor ratios than the rural more peripheral districts. Although the demand for medical care is often relatively greater in the more remote districts, where mortality rates are high and sanitation is generally low, the needs of such districts appear poorly served because of the doctors' preference for the larger urban areas.

The distribution of government-registered doctors in the Midlands province is very uneven (Table 1) and this suggests that the probabilities of surviving serious accidents or sudden major illnesses are lowest in those areas where there are no resident doctors. Only three of the eight districts, Gweru, Kwekwe and Charter, have equal or more than their fair shares of the medical doctors in the province, with coefficient of advantage values of 4.35, 1.05 and 1.30 respectively (Figure 2b). The remaining five districts are disadvantaged and have values less than 1.0. The predominantly subsistence agricultural and peripherally located districts of Gokwe and Mberengwa are particularly disadvantaged. None of the 23 doctors practising in the Midlands province in 1989 was resident in Mberengwa and Chirumanzu despite the fact that the two districts had a combined population of 271 880 (19.1% of the provincial total). Instead, both districts had to contend with a visiting doctor operating from the provincial capital, Gweru.

The districts of Gweru, Charter and Kwekwe have 23% of the communal land area and 33% of the provincial population yet they have 82.6% of the doctors. Gweru district alone has only 11 percent of the total provincial population yet it enjoys the services of 47.8% of the province's doctors. Theoretically, this means that a doctor in Gweru district has to attend to 10 784 people while his counterpart in Gokwe district is expected to attend to 134 030 people. These statistics have several implications. For instance, the chances for a patient in Gweru district of seeing a doctor are at least ten times higher than those for a patient in Gokwe. This high concentration of medical doctors in Gweru district is explained by the designation of the city of Gweru as the provincial capital. Although the general hospital in Gweru city functions as a provincial referral centre and receives patients from throughout the province and possibly from districts in the bordering provinces, increased distance from the city has a bearing on transport costs and the time spent on a journey to the hospital to see a doctor. This has several implications for the accessibility and availability of urgent medical attention for the residents of these districts. As Zanamwe (1988, p. 9) observed, this 'implies a cost in both time as well as money even though the service provided in the end might be free'. Generally, there is a positive correlation between the quality of health services and the distance from the major urban centres

anywhere in Zimbabwe. In the case of Midlands province, there is a gradual deterioration in health services with increasing distance from urban areas of Gweru, Kwekwe, Shurugwi and Zvishavane into rural areas such as Gokwe and Mberengwa communal lands.

The lack of doctors in some districts implies that patients have to travel long distances to urban centres where doctors are available. Although doctors periodically visit the low order health institutions in the communal areas, the irregularity of their visits coupled with the long lists of priority patients for attention make it more difficult for the less serious cases to be seen by doctors.

Hospital beds

In Zimbabwe, all health institutions which detain patients for closer medical observation provide beds. In the Midlands province, hospital beds are provided at all hospitals and selected rural health centres. In 1989, Kwekwe district with 399 beds had the highest number of hospital beds in the province while Mberengwa district, with 105 beds, had the smallest (Table 1). Coefficient of advantage values reveal that the districts of Gokwe and Mberengwa are the most disadvantaged followed by Charter district (Figure 2c). The common factor that these three districts with coefficient of advantage values of less than 1.0 possess is that they are the most rural districts in the Midlands province. The districts of Chirumanzu, Zvishavane, Kwekwe, Gweru and Shurugwi all have coefficient of advantage values above 1.0 and this makes them the advantaged districts in the province. Gweru, Zvishavane and Shurugwi all have a relatively large urban centre within them while Chirumanzu is a large scale commercial farming district. Chirumanzu contains 4.3% of the provincial population but has 9.8% of the provincial hospital beds. On the other hand, Gokwe, which has 24.8% of the provincial population has only 8.9% of the total number of beds while Mberengwa with 14.9% of the population has 5.8% of the hospital beds in the province. Theoretically, while 195 people share a hospital bed in Zvishavane district, in Mberengwa district 1 536 share one while in Gokwe a single bed is expected to serve 1 675 people.

The disadvantaged districts of Gokwe and Mberengwa occupy 64% of the total communal land area and 69% of the peasant farming population in the province yet they only have 15% of the hospital beds. Such discrepancies in the provision of hospital beds have several implications. It has led to situations whereby people who, under normal circumstances, would need closer medical attention and rest in a hospital bed, have to commute as out-patients or to travel long distances to the nearest hospital for admission. This may result in patients taking long to recover and many hours lost and money

wasted by travelling if they come from long distances. Such inter-district movements are not only costly but also cause congestion in some areas where the local people have worked hard and pooled resources so that better treatment can be obtained.

Other health personnel

The term 'health personnel', as used by the Ministry of Health, includes state certified nurses, state registered nurses, nurse aids, health assistants and village health workers but excluding doctors. Considerable inequality exists in the distribution of these grades of health personnel in the province with Gokwe, Mberengwa and Zvishavane districts having coefficient of advantage values of less than 1.0 (Table 1 and Figure 2d). These disadvantaged districts have 62.9% of the provincial population but are served by 40.8% of the health personnel in the province. On the other hand, Gweru, Shurugwi, Chirumanzu and Kwekwe are the most advantaged districts containing 38.2% of the population while they have 59.2% of the number of these health personnel in the province. On average, in Gokwe each health officer (excluding doctors) attends to 2 162 people while in Gweru the ratio is one to 333 people only. Such a skewed pattern of distribution underscores that although there is a general shortage of qualified medical staff, some districts are worse off than others.

CONCLUSIONS

The study of the provision of health care facilities and personnel in the Midlands province highlights that ten years after independence, there still exists a maldistribution of health resources in Zimbabwe both at the national level (between rural and urban areas) and at the provincial level (both between rural and urban areas and also between districts within the same province). Despite the considerable strides in health care planning and provision since 1980, striking spatial inequalities in opportunity levels for access to health care facilities still exist in the Midlands province of Zimbabwe. Although district and provincial boundaries are quite porous and allow inter-provincial and inter-district flows of patients, the people living in rural districts with less than a fair share of doctors or health institutions invariably travel longer distances to the nearest health facility than their counterparts in the better served areas. In Zimbabwe transport networks do not always exist throughout the provincial areas and even if they do, public bus transport may be infrequent and unreliable. Furthermore, most of the rural people cannot afford the high travel costs to distant urban areas where comprehensive health facilities are available. Since the rural people have to incur travel costs to urban areas to receive treatment, their access to those

facilities which are considered free and are utilised at little or no cost by the urban dwellers, is constrained. Unequal access to basic facilities such as hospitals and schools partly accounts for the increasing marginalization of the rural people. The spatial variations in access to health facilities in the province that were revealed in this study have important implications for planning. They indicate that there is need for government to allocate more financial and human resources to the rural sector if its objective to provide 'health for all' by the year 2000 is to be realised. Social well-being in the rural districts would be enhanced by increased governmental expenditure on both preventive and curative medicine.

The findings show that in the Midlands province the predominantly rural districts are under-served by both doctors and other health personnel and their people have more limited access to health institutions and hospital beds. This situation is particularly critical in the more remote districts like Gokwe. The constrained access to health facilities experienced by people living in these areas partly accounts for the high incidence of poverty-related diseases and high mortality rates from diseases that are now almost fully controlled in the urban areas. According to Sanders and Waterson (1983, cited by Agere 1986, p. 363),

...infants born in town stand a better chance of living through childhood than rural infants... of every 1000 babies born in Mufakose high density suburb, 21 will die before they are one year old, but in remote Binga District, the infant mortality is 300 for every thousand babies born.

The perpetuation of such inequalities in the provision of health facilities in Zimbabwe as exemplified by the Midlands province suggests that the attempts to date by government to achieve an equitable spread of health services have had limited success. Given constraining factors on government expenditure such as the severe droughts of 1982/3 and 1985/6 in most of the country, the government has gone a long way to improve the social conditions of the rural population. However, as Chimhowu (1989, p. 69) argued, in order to minimise the existing gap in the level of health facilities between rural and urban areas, 'what is needed is a radical social reform package that may include preferential treatment of some of these remote districts which have poor living conditions'.

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