

CHAPTER 6

STRATEGIES FOR SPATIAL DEVELOPMENT IN ZIMBABWE

6.1 Introduction

In the previous chapter it became evident that the Zimbabwean space economy is very unequal in terms of socio-economic development and that there are several development problems. Over the years the Zimbabwean government, like other governments in countries with severe spatial inequalities in development, has adopted various policies and strategies to obtain a more equal spatial distribution of economic development in the national space economy. The aim of this chapter is threefold. The first aim is to provide an overview of spatial development planning strategies and policies in Zimbabwe in the past and to evaluate why these strategies and policies were not successful. Proposal will also be made on how to improve on some of the old strategies. The second aim of this chapter is to apply the spatial development planning strategies for the different regional types, as proposed by Friedmann (1966) for Venezuela, to the demarcated regions in the Zimbabwean space economy

6.2 Development strategies used in Zimbabwe in the past.

Over the years there have been many strategies and policies, which have been formulated to reduce the imbalances existing within the Zimbabwean national space economy. An overview of these strategies was presented in Chapter 2. The strategies can be divided into four time periods: spatial planning in the pre-independence period (up to 1977), the transition to independence: 1978-1979, post independence in the 1980s and the post independence period of the 1990s and up to the present.

6.2.1 Spatial planning in the pre-independence period (up to 1977)

As already mentioned in section 6.2 above, Zimbabwe became an independent state in 1980. In the period before 1978, national spatial planning was constrained by the division of the country into European and African (tribal) owned areas and strategies could not be formulated effectively across the boundaries (Davies, 1988:141) of these areas. According to Davies (1988:141), development planning in the African areas consisted mainly of local irrigation and other intensive agriculture schemes largely formulated in growth centre terms.

As part of agricultural reform, large-scale resettlements occurred from densely to more sparsely settled tribal lands, but not into inviolable European farmlands. In urban areas, there was concern over the perceived excessive growth of the capital city, Salisbury (now Harare). This led to a white paper proposing a simple decentralization policy. The policy had as its main aim, the encouragement of the growth of smaller urban centres. The policy was introduced in 1970 and according to the Department of Finance and Economic Development, Rhodesia (1974:20), this policy was however not very effective and was soon overtaken by the escalating guerrilla war. No official use of formal spatial analysis techniques was apparent during this period. Such analyses were confined to few, mostly uninfluential academic studies, framed in terms of a single future national space economy (Davies 1978, Heath 1978, Kay 1980).

It is clear from the above that during the period before 1978, spatial planning policy concentrated on development of agriculture, especially in the African owned areas, and to a lesser extent on attempting to curb the excessive growth of the capital city. There was no overall spatial planning policy aimed at achieving an integrated national space economy.

6.2.2 The transition to independence: 1978-1979.

Shortly before independence, the transitional government produced a hurried public sector development programme, in part covertly designed to dampen the radical development planning expected to follow majority rule (Zimbabwe-Rhodesia, 1979:28). According to Davies (1988:142), the hurried public sector development programme involved rapid large-scale development of infrastructure, intensive rural development and introduction of growth points.

During this period, there was a significant shift in the approach to spatial planning which was mainly stimulated by expectation of majority rule. The hurried development programme revealed that official thinking had greatly changed. Davies (1988:142) argues that for the first time, the transitional government squarely faced the basic national planning problems of rapid population growth, looming urbanization and regional disparities. There was no clear urbanization strategy and urban unemployment was not addressed. Only the seven largest urban centres and numerous small rural growth points were examined (Davies, 1988:142). There were development plans for only these areas. The rural development programme was however clear. Riddell (1978:38) holds that the rural development programme took a major shift towards a single space economy, tacitly accepting the view that up to a maximum of about one third of underutilized commercial farmland could be resettled by tribal farmers without significantly reducing national output. According to post-independence plans, about 60% of the under utilized land was proposed for resettlement. Resettlement was accompanied by a development thrust within the communal lands and involved credit facilities, infrastructure development and growth points.

The growth points or growth centres were introduced in 1978 as part of a policy document called “Integrated plan for Rural Development” (Conyers, 2001: 182). This plan designated ten growth points in communal areas (which were known as tribal trust areas or African areas): Chisumbanje, Gutu, Jerera, Maphisa, Mataga, Murehwa, Mushumbi, Nkayi, Sanyati and Wedza (Mlalazi and Conyers, 1989:9).

The intention was to provide infrastructure and services in the areas in order to encourage investment and employment, thereby reducing the drift of population to the white towns and generating revenue for the government through taxes and other levies (Rambanapasi, 1990:121). These programme were all only implemented for 2 years.

6.2.3 The post independence period of the 1980s

The policies used in the previous time period (transition to independence: 1978-1979 period) were generally unsuccessful (Conyers, 2001:179). This can be attributed to period of implementation that was very short (only two years). Development planning has mainly continued the 1979 program rather than introduction of radical change partly due to financial and manpower constrains (Davies, 1988: 142). The policies of the previous time period were therefore not abandoned but simply adapted.

In 1980, the new government introduced what might be called a state socialist approach or statist approach to development (Conyers, 2001:177). In that approach, the government played a major role, both by direct involvement in economic production (e.g. through parastatals) and by regulating actions of the private sector. During this period, the government adopted the dual objectives of increasing economic growth and reducing the inherited racial inequalities. This strategy, which was introduced in 1981, was generally referred to as the “growth with equity strategy” resulted in a number of policies designed specifically to reduce regional and spatial inequalities (Conyers, 2001:178). Included in the strategy was the introduction of more growth points. In 1980, a growth pole or centre was designated in almost every district of the country (Conyers, 2001:178). Some of the growth points established at this time were Nyika, Gutu-Mupandawana, Murambinda and Murehwa.

One of the most important policies, which the government adopted during the 1980s to tackle the spatial inequalities, was that of resettlement. The resettlement programme of the 1980s was more massive than the earlier programmes. By

1989, 61 000 households had been resettled on former commercial farmland (Whiteside, 1998: 44), resulting in the creation of a small but significant new category of rural household and, therefore a new type of rural region with improved conditions.

Another important method that the newly independent government used to reduce spatial inequalities was the provision of infrastructure and services in predominantly black areas, which had been seriously neglected during the colonial era. The target areas were the high-density urban suburbs and in particular the communal areas. The facilities provided included roads, schools, health services, domestic water supplies and (in rural areas) crop marketing depots. This has probably been the government's most successfully attempt to reduce regional inequalities. There were substantial improvements in infrastructure and service provision during the 1980s especially in the communal areas and this not only improved the quality of life in the areas but also facilitated agriculture production (Conyers, 2001:181)

6.2.4 The period from 1990 up to present.

In the late 1980s, there was increasing dissatisfaction with the effects of the policies to reduce spatial inequalities and the rate of economic growth of the country as a whole (Conyers, 2001:178). In 1990, due partly to this dissatisfaction but also to the influence of international agencies such as the IMF (International monetary Fund) and the World Bank, the government abandoned its original policies in favour of a conventional neoliberal approach to economic development (Conyers, 2001: 178). In this approach the private sector was the major actor and the role of the government was to create an atmosphere conducive for private investment. It was intended that by the end of 1995, the main adjustments would have been made and the country would have begun to reap the anticipated benefits in terms of economic growth and prosperity. However, things did not work out quite like that. Implementation of some components of the programme, including the deregulation of the domestic economy, the removal of restrictions on foreign trade, and increases in user

charges for public services, went more or less according to plan. However, as in many other countries, attempts to reduce public expenditure and the sale of parastatals moved more slowly. Furthermore, the adjustments that were made did not have the desired effects in terms of economic growth.

In 1996 the government, again with encouragement and assistance from the IMF, World Bank and other international agents, began to prepare a second phase of reforms, which would be known as the Zimbabwe Programme for Economic and Social Transformation (ZIMPREST) and would cover the period 1996-2000. For various reasons, however, this process suffers major delays and the final document was released in April 1998, half way through the "plan" period.

The launch of the Economic Structural Adjustment Programme (ESAP) in 1991 and the Zimbabwe Programme for Economic and Social Transformation (ZIMPREST) in 1998, are clear evidence of the adoption of the conventional neoliberal approach to economic development by the government of Zimbabwe. The main components of the ESAP, and its successor the ZIMPREST, are very similar. The programmes include the removal of restrictions on foreign trade and currency transactions, the privatization of parastatals, the deregulation of the domestic economy (including the removal of price controls and subsidies and the revision of labour laws) and various measures to reduce public expenditure (Conyers, 2001: 178).

The ESAP and the ZIMPREST had significant effects on regional development. Firstly, because of the removal of subsidies on basic commodities and an increase in charges for government services (e.g. school fees and hospital charges), inflation hit the poorest sector of the population hardest and the poorest regions suffered most. Secondly, the removal of the government monopoly over the marketing of basic crops mostly benefited the large scale commercial farmers who were able to shop around and get good prices, but it had a negative impact on small scale farmers especially in the remote areas. The poor areas (with the majority of poor small scale farmers) were, therefore, made poorer and this exacerbated spatial inequality. Finally, the main beneficiary of trade

liberalization and increasing globalization was Harare, since its existing advantages in terms of infrastructure and services, made it the country's obvious international centre. This means that Harare, being part of the core region, had accelerated growth and this widened the gap between the core and the periphery even further.

Another policy measure, introduced in conjunction with the ESAP, was the introduction of export processing zones (EPZs) in Zimbabwe. The idea of introducing export processing zones was first discussed when the ESAP was launched, but owing to disagreements over their desirability and their location, the necessary legislation was only promulgated in 1997 (Conyers, 2001: 185). Zimbabwe's concept of export processing zones is somewhat unusual. In most other countries the government designated one or more areas as export processing zones and industries, which intend to produce entirely, or primarily for export, then applied to locate in these areas in order to take advantage of the financial and other incentives available to them. In Zimbabwe the government did not designate specific areas as export processing zones, probably because there was so much competition among politicians and other influential people all wanting their own areas designated as export processing zones (Conyers, 2001:186). In Zimbabwe, any individual industrial enterprise or any industrial area, which is producing primarily for export purposes, can apply to be designated as an export-processing zone. Neither the ESAP, the export processing zones nor the ZIMPREST, introduced in the 1990s, targeted or had a major effect on the reduction of spatial inequalities in the national space economy.

6.3 Evaluation of the spatial strategies

It is clear from the discussion above that over time different policies were introduced in Zimbabwe in an attempt to reduce spatial inequalities and spatial development problems in general. Despite the multiplicity of such policies, regional inequalities have persisted and the anticipated spatial integration of the economy failed to materialize. Conyers (2001:186) argues that efforts to reduce

regional inequalities have been piecemeal and most of the policies concentrated on racial rather than spatial inequalities. She further argues that although some progress has been made in reducing interracial inequalities, the inherited inequalities between urban areas and rural areas, and between the various districts in the space economy continue to exist. The progress that has been made occurred in the 1980s but since the introduction of the structural adjustment programme in 1991, there has been less concern with spatial inequalities and regional inequalities in the national economy have increased (Conyers, 2001:186).

The failure of the various policies, implemented to facilitate spatial economic development in Zimbabwe and to reduce spatial inequalities, can be attributed to a number of factors. Davies (1988:143) argued that the persistence of severe dualism and the general failure of past strategies in Zimbabwe are, in the first place, due to a lack of reference to spatial studies and analytical methods or spatial policy. He continues to argue that progress towards the application of spatial analysis is hesitant or piecemeal at best. Spatial analysis and planning have not received the attention they deserve even in circumstances highly favouring them (Davies, 1988:143). The irony here is that development planning in Zimbabwe has had major spatial implications, but there was no explicit reference to spatial policy. Davies (1988: 143), in support of this view holds that, up to the late 1980s, national development planning contained the major spatial implications but no explicit reference to spatial studies and analytical methods or to spatial policy.

According to Conyers (2001:178) the implementation of development plans were hampered by local political factors and conflicts between various government agencies involved. Bloch and Robertson (1996:73-74) hold that Zimbabwe has a number of problems that can arguably make the effective implementation of spatial development strategies very difficult. These problems include, amongst others, limited entrepreneurial talent, limited skills, limited capital resources, high population growth, high unemployment, high government spending, high taxes, excessive debt burdens, high levels of corruption and large budget deficits.

Against the above background, there is a need for new strategies to be formulated or adjustments to be made to the existing strategies to realise effective spatial development planning in Zimbabwe. In the next section, some of the existing policies and strategies are investigated and some suggestions are made on how they can be made more effective. The failure of previous and existing policies has resulted in continued and severe dualism in the spatial economy of Zimbabwe. Something needs to be done and an obvious place to start is to re-evaluate previous and existing policies and strategies for the reduction of spatial inequalities.

6.4 Proposal for adjustments to previous regional development strategies

As indicated in the introduction to this chapter, this section deals with a re-evaluation of some existing policies and strategies for the development of a national spatial economy (chapter 2, section 2.5). Some of these policies and strategies have, in the past, been applied on an ad hoc basis in Zimbabwe but they have generally been ineffective. An attempt will be made to highlight how these policies and strategies can be made more effective for reducing spatial inequalities in Zimbabwe.

6.4.1 The growth pole strategy

As discussed in section 2.2.5.1 of Chapter 2, the concept of a growth pole can be traced back to the work of Perroux (1955). This is one of the best-known strategies for the development of stagnant or underdeveloped rural areas in a national spatial system. In Zimbabwe the concept of growth poles (also known as growth points) was introduced before independence in 1978 (refer to section 6.2.2). After independence in 1980, the new government also subscribed to the concept of growth points and a number of additional growth points were designated. Some of the growth points, established in Zimbabwe after independence, are Nyika, Gutu Mupandawana, Murehwa and Jerera. Figure 6.1 below shows the growth points in Zimbabwe.

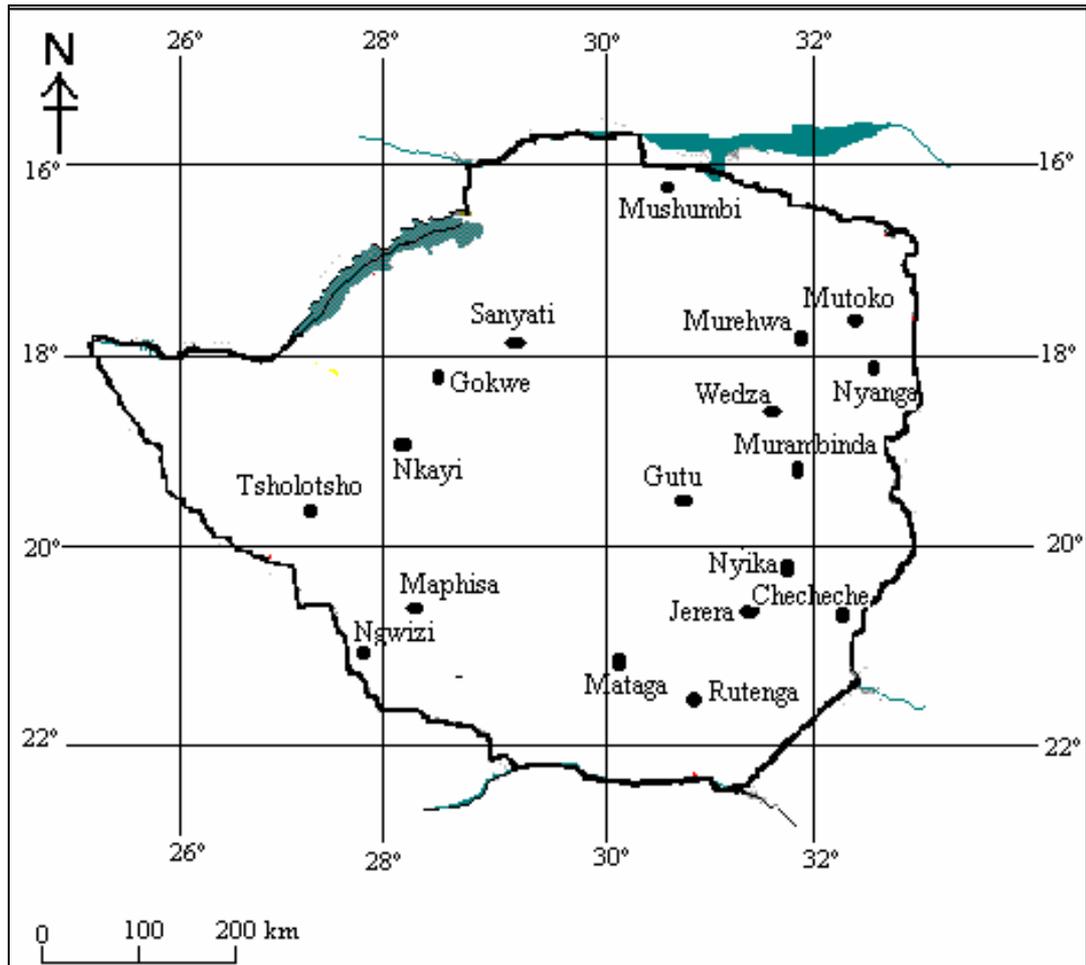


Figure 6.1 Growth Points in Zimbabwe
(Adapted from Conyers, 2001:182)

The issue here is not about introducing new growth points, since there are quite a large number of designated growth points in Zimbabwe. Almost every rural district in Zimbabwe has a designated growth point. What is of concern in this research is how the growth pole strategy can be reapplied, given the scenario that in Zimbabwe (like in many other countries) the strategy was implemented but to a large extent has failed. There are very few instances in which any economic benefits have diffused from designated growth pole into the surrounding area.

It is often said that it is not wise to throw away the baby with the bath water. The relevance of this saying in relation to the growth pole strategy is that despite its failure and the difficulties experienced in its application, the strategy may still be a useful tool in attempts to reduce spatial inequalities in Zimbabwe. To make the growth pole strategy in Zimbabwe more effective, certain resource-based and

agro-based industries suitable for particular growth points must be encouraged. The saw milling and furniture industries could, for example, flourish at growth points such as Tsholotsho in Matebeleland north and Nyanga in the eastern highlands of the country where there are a lot of timber available. Agro-based industries, including food processing industries and cotton processing, may be suitable for some rural growth points where specific agricultural resources are available. Most agro-based industries are labour intensive that will help with the alleviations of unemployment. Growth points in rural areas such as Nyika, Jerera and Mataga, where maize is grown, may for example be suitable for the establishment of agro-based industries.

6.4.2 The basic needs approach

The basic needs strategy is directed at people and their needs. The argument in this strategy is that people must come before things. Chambers (1983:39) maintains that the object of development should be the welfare of the people and not only economic growth. As indicated in section 2.5.3 of chapter 2, a basic needs strategy should give attention to specific human problems such as malnutrition, disease, shelter, access to land and basic human needs. In Zimbabwe, problems surrounding the provision of basic needs are enormous. This implies that the government, and other institutions that take part in development planning, should make a concerted effort to address problems associated with malnutrition, diseases, shelter problems and the satisfaction of people's basic needs. One way to alleviate these problems is through the improvement of agriculture by applying green revolution methods. An improvement in the provision of housing (shelter), especially in urban areas will also contribute to the better satisfaction of basic needs. An improvement in educational facilities, especially in rural areas, will also contribute to the satisfaction of basic needs and the elimination of spatial inequalities in levels of development.

6.4.3 Employment creation strategy

There has been very limited application of a strategy aimed at the creation of employment in Zimbabwe. As indicated in section 6.2.2, development planning concentrated on the development of the seven largest urban areas and numerous rural growth points. Bloch and Robertson (1996:62) showed that about 60 to 65 percent of the employable population of Zimbabwe was unemployed in 1996. They further estimate that the average cost of creating a single job, within the formal sector of the Zimbabwean economy, is \$130000.00. In 1996 Zimbabwe would have needed \$340 billion to cater for unemployed at that time. That is almost 20 times the annual gross domestic product of Zimbabwe in 1996. Since 1996 the situation have progressively worsened, as each year about another 300 000 school leavers enter the job market, while only about 40 000 people leave the workplace each year. In recent years only approximately 10 000 new jobs are created each year in the Zimbabwean economy (Bloch and Robertson, 1996:62).

The situation, as sketched above, means that unemployment is a very serious problem in Zimbabwe. The country can attempt to address this problem by establishing and promoting labour intensive industries and by promoting the expansion of the informal sector. Bloch and Robertson (1996: 620) argue that the facilitation and establishment of small and micro-scale enterprises within both the formal and informal sectors of the country can contribute to the alleviation of the unemployment problem. If such measures are put in place, Zimbabwe's unemployment problem may be reduced and the country may experience more development.

6.4.4 Industrial decentralization

As mentioned in Chapter 2, historical developments in Zimbabwe resulted in a disparity in levels of development between the urban areas and the lagging rural areas. These inequalities are viewed as socially unjust from a sociological perspective or viewpoint. Due to a lack of industrialization in the rural areas, incomes in these areas are too low with severe unemployment and

underemployment. Hunger, diseases and poverty invariably prevail in such rural areas.

The fact that the rural areas of Zimbabwe generally have few industries, means that the establishment of such industries can contribute to higher levels of development. It is generally held that rural industrialization can bring about political or social equity in development between the urban and rural areas (Ncube 1991:159). An industrial decentralization policy was adopted in Zimbabwe in the first five-year development plan introduced in 1980 (after independence). Industrialist were encouraged to locate their industries outside Harare, Bulawayo and other urban industrial cores, and locate at designated centres or growth points in the rural areas. According to Conyers (2001: 269) this strategy was to a large extent a failure because of among other things, a lack of markets, insufficient government support and inadequate infrastructure at designated centres. The issue is therefore not simply one of encouraging the dispersion of industries from Harare and Bulawayo but such a dispersion should be accompanied by the development of supporting infrastructure and marketing services and the offering of government support such as subsidies and tax concession. If a more conducive environment is not provided, the decentralisation of industries will fail again just as it had failed when it was first introduced. If however the government created a more conducive environment at a few of the growth points some industries may decentralise to rural areas where employment and development is needed.

6.4.5 The development of secondary cities

As mentioned in section 2.5.2 of chapter 2, the development of secondary cities as a strategy involves the selection of a smaller city in the periphery and targeting it as a growth centre so that development can be attracted to the smaller city. The smaller city can then develop into a larger city and ultimately form part of the core region in the national space economy. The development of such subcentres or subcores in the periphery could result in the creation of an interdependent system of cities and a reduction in the size of the periphery.

The major urban centres of Zimbabwe are mainly located along the central highveld that extends from the east to west. This is the area of the country that is relatively more developed. The southern low-veld and northern low-veld areas have lower levels of development and that is where most of the peripheral regions of Zimbabwe are located. It would therefore be necessary to choose urban centres, for example Chiredzi town in the south and Kariba town in the north, and earmark them for development as secondary cities. The development of these centres may lead to a more balanced distribution of development in the Zimbabwean space economy.

6.5 Development planning for specific regions

It is clear from section 4.2 of chapter 4 that each type of development region in Friedmann's model (the core, upward transitional, downward transitional, resource frontier region and special problem region) has different characteristics and encounter different problems. This means that in terms of development planning, each region may demand a specific approach suitable to its specific conditions. Friedmann (1966:66-98) proposed an integrative regional development approach in which he gave specific guidelines for the development of each of the regional types he identified. This research depends heavily on the ideas raised by Friedmann (1966) since he developed the model of development regions that was used to demarcate the development regions in Chapter 5. The guidelines proposed by Friedmann (1966:66-98) for the development of each regional type will be discussed and thereafter the policies and strategies, proposed by him, will be applied to the regions demarcated in the Zimbabwean space economy.

6.5.1 The core region

6.5.1.1 Friedmann's guidelines

Friedmann provided a number of guidelines for the development of the core region. The first stressed the need to plan ahead. Where economic growth is expected to occur, there is no special virtue in "imbalance" (Friedmann, 1966:70). Friedmann maintained that the principal failures are shortsightedness and an unwillingness to act on reasonable expectations. These ideas all point to the need to plan for the future. Another guideline proposed by Friedmann (1966:74) for the development of the core region is that physical planning and development planning must be linked. According to this guideline there should be planning-programming staff in each core region that includes urban designers, city planners and development economists. The aim is to integrate physical and economic (development) planning and programming in the core region. The role of the economists will be to study the questions of financial feasibility while the urbanists will operate with design criteria derived from image studies and professional judgments.

Friedmann (1966:75) also emphasized that controls are needed before planning can be implemented. Both a capital budget and a development map can be used for this purpose. It is essential to adhere to the budget and the map. For the public investment, it is easy to insist on the use of these documents but for private investment, it is problematic because there are no capital budgets although there are development maps.

Finally, there is a need for an adequate regional form. This guideline, as part of the strategy for the development of the core region, includes the need for programming regions, regional development maps and an optimal size for the region. In the case of the programming region, it is clear that core regions are areas where development criteria for regional boundaries coincide with those for programming. In capital budgeting, the entire core region should therefore be

treated as a single subsystem of the economy. This is because its parts are too closely interdependent to allow for their consideration apart from each other.

In the case of regional development maps, Friedmann (1966:72) maintains that there is need for a device that will enable the planners to evaluate the spatial inconsistency of projects that are included in the regional capital budget. The map would include projected information on roads, railways, airports, power supply, water facilities, housing conditions, industrial and commercial facilities and waste disposal. In terms of optimal size of region, there is no consensus on what size is actually suitable. What does appear feasible, however, is a measure of the total cost of servicing an area whose size is given but whose internal spatial structure is viable (Friedmann, 1966:74). It is therefore clear that, the question of the optimal size of a region should thus be reinterpreted as a question regarding the efficiency of the internal spatial organization.

6.5.1.2 Strategies for Zimbabwe

In Zimbabwe, as indicated in Table 5.6 in Chapter 5, Harare, Bulawayo and Chitungwiza constitute the core region. The problems experienced in the core region include, amongst others (refer to section 2.4.2.1 in Chapter 2), how to sustain growth, how to absorb new comers into the local labour force and provide for their needs, how to organize a liveable space (physical environment) that is also efficient and how to manage the increasingly complex affairs of a metropolitan society (Friedmann, 1966:4). A development problem, very specific to Zimbabwe, is that although the core is the most developed region in the space economy, there is also a high degree of inequality within the core region. There are severe spatial inequality in development within the cities of Harare, Bulawayo and Chitungwiza.

Quite a number of the strategies proposed by Friedmann (1966) and described in the previous section, can be adopted for the development of the core region of Zimbabwe (Harare, Bulawayo and Chitungwiza). One of the strategies that can be applied is the strategy that addresses the problem of spatial inequality within

the core region. An example of such a strategy is the effort by the government and other organisations involved in development to support the informal economic activities, as well as upgrading the informal housing zones such as Epworth in Harare. By targeting the informal economic activities and the squatter camps, the government or any other organisation involved in development would be targeting the poor and this may reduce the urban inequalities or inequalities in the core regions. Supporting the informal economic activities in the core region can also solve the unemployment problem in that region. The informal sector tends to be labour intensive and since the workers own the means of production, it means that the benefits accrue to them (Ncube, 1991:9), unlike the formal sector where the benefits accrue to the people providing the capital.

Informal housing zones should also be improved rather than being demolished. The upgrading of informal housing zones have been successfully implemented in Morogoro, Tanzania (Materu 1986) and in Lusaka, Zambia (Mutsvangwa, 1989). The governments of those countries have succeeded in reducing the housing problems and the core regions of Zimbabwe can also benefit from a similar strategy. The development of the whole informal sector is very crucial if inequality within the core is to be addressed.

The setting up of an effective planning-programming staff in the core region can also be an effective strategy. The main aim is to integrate physical and economic development planning and programming in the core region. Development planning offices, however, already exist in Zimbabwe but they have been largely ineffective. This can be mainly attributed to the existence of under qualified personnel holding senior positions in the offices. There is therefore need to restructure the department as a whole if effective development planning is to be realised.

Another strategy that can be implemented for the development of the core region of Zimbabwe is the creation of regional development maps. It is even possible and recommended for the city planners to use Geographical Information Systems (GIS) technology in planning the spatial development of the region. The major

obstacle in the use of this technology is however the lack of the necessary expertise among the city planners in Zimbabwe. In-service training should therefore accompany the use of the GIS technology. Good regional development maps (produced by means of the GIS technology) can enable planners to plan ahead since such maps can contain projected information on various forms of infrastructure such as roads, railways, airports, power supply, water facilities, housing conditions, industrial and commercial facilities and waste disposal

Another possible strategy would be to determine the optimal size of the core region. Since there is no consensus on what size is suitable, a development strategy for the core regions should focus on the efficiency of the internal spatial organization of the core region of Zimbabwe. Harare for example is currently experiencing many problems including shortage of housing, transport services, poor waste disposal and severe unemployment. The fact that these problems are not unique to Harare alone but, are also being experienced in Bulawayo and Chitungwiza, means that the whole of the core region has exceeded the efficiency of its spatial organisation. There is therefore need to limit the growth of the districts of the core region.

There should be encouragement of decentralisation of development from the core region to other regions. The government and other organisations involved in development must encourage investment in other regions.

6.5.2 Strategies for the upward transitional region.

Friedmann (1966) did not provide specific guidelines for the development of the upward transitional region in a national space economy.

In Zimbabwe, as indicated in table 5.1 of Chapter 5 of this research, Zvishavane, Marondera, Gweru, Shurugwi, Kwekwe, Gwanda, Goromonzi, Chegutu, Masvingo, Makoni, Mutare, Umguza, Kadoma, Umzingwane and Bindura districts constitute the upward transitional region. The problems of the upwards transitional region (refer to section 2.4.3.2 of Chapter 2) are associated with rapid

economic growth, agricultural adjustment to more capital intensive farming, improvements in marketing organization, improvements in transportation, urbanization and industrial development (Friedmann, 1966:42). These problems occur because the pace of economic development is usually faster than the region's adjustment to the new conditions. An example would be the sudden inflow of a huge volume of immigrants who have a high demand of several basic amenities and which the region does not have the capacity to provide immediately.

The fact that the problems of the upward transitional region, however, mainly emanate from rapid economic growth means that such economic growth must be carefully regulated. Rapid immigration, for example, should be controlled or regulated in conjunction with the needs of the region. This can be done through stimulation of development in the source region from which the migrants come so that fewer people would be attracted to the upward transitional region. Agricultural transformation to capital-intensive practices could be regulated and not allowed to happen too quickly.

Hou (2000:13) suggests what he calls spill-over development for the upward transitional region. Spill-over development can be defined as development that takes place as a result of excessive development of the neighboring more developed region. There would be diffusion of development from the core region to the nearby upward transitional region. Hou (2000:13) gives as example the development of the Taoyuan County, located between the Taipei Metropolitan area and Hsinchu, the core of Taiwan. In this case, Taoyuan could experience diffusion of development from the nearby core region.

The spill-over development strategy can be applied in the upward transitional region of Zimbabwe. The upward transitional region can take advantage of the advanced economies of the neighbouring core region districts (Harare, Bulawayo and Chitungwiza) and they can develop. This is possible because most of the districts of the upward transitional region are located near the core region and

any diffusion of development from the core region can easily be swallowed by the upward transitional region.

6.5.3 The resource frontier region.

6.5.3.1 Friedmann's guidelines

Friedmann (1966: 76-86) proposed a strategy for the development of the resource frontier region consisting of a number of elements. It is imperative, in the first place, that a regional authority for development should be established in the region (Friedmann, 1966: 83). Such an authority would be responsible not only for general planning and project programming, but also for implementing major phases of such a program. The regional development authority should also lay the basis for mobilizing additional private resource on a large-scale. For this to happen it would be necessary to create an environment competitive with other locational matrices in the national economy (Friedmann, 1966: 84).

Friedmann (1966: 84) also proposes that a minimum critical size should be achieved as quickly as possible. Every economic activity has a threshold size determined by the minimum economic size of the enterprise. The threshold depends on conditions such as market size and the costs the enterprise has to absorb. He therefore proposes that an agglomeration be created of a size that will provide both a fair-sized internal market and sufficient external economies to push regional growth to a point where it can sustain, without detriment to itself, a reduction of public inputs and expenditure (Friedmann, 1966: 84-85). It is rare for private firms to assume this role and this requirement therefore imposes a heavy initial financial burden on the government.

Another element of the strategy for the development of the resource frontier region is to reduce the physical isolation (Friedmann, 1966: 85) of these regions. This can be achieved through the introduction of multiple transport and communication linkages that will provide access to the rest of the world economy. This is necessary because one of the greatest obstacles to resource

frontier development is the isolation of the region from other parts of the national and world economy.

The cost of living should also be reduced in these regions since high living costs are typical of resource frontier regions (Friedmann, 1966: 85). High living costs are usually the result of insufficient local supply of basic commodities and services. People should be encouraged to develop adequate local supplies of these basic commodities and services especially food, internal transport housing and specialized consumer services.

Another element in the strategy is the diversification of the economic base of the region. The economic bases in these regions are the natural resources and the intermediate products produced by the initial industries. To diversify, a detailed programme must be worked out for industries to promote development geared to the possibilities and needs of the region. An effort must be made to create a larger number of functional linkages in the region in order to set a process of cumulative development in motion.

The last element in Friedmann's (1966: 86) strategy for the development of the resource frontier is to create a viable regional community. The government must encourage development that overcomes the dualism between the educated and the non-educated, the elite and the masses and the cosmopolitans and the locals. This all implies a transfer of authority from national public organisations to local communities and a legal structure that will enable local leaders to be legitimate.

6.5.3.2 Strategies for Zimbabwe

As indicated in section 2.4.3.3 of Chapter 2, resource frontier regions are zones of new settlement in which virgin territory is occupied and made productive. In Zimbabwe, as indicated in Table 5.6 of Chapter 5 in this research, the districts that constitute the resource frontier region are Chiredzi district and Hwange district. One way to develop the resource frontier region is to reduce the physical

isolation of the region. One of the greatest obstacles to the development of the Chiredzi and Hwange districts is the isolation of these districts from other parts of the national and world economy. The districts are at the borders of the country and they are not well served in terms of transport and telephone services. There is therefore need to introduce more effective transport and telephone services in these districts in order to reduce the physical isolation of the districts.

To develop the Chiredzi district, it will be necessary to put in place incentives for the development of agriculture and tourism that are already flourishing in that region. In Hwange district the expansion of coal mining and tourism is important, because coal is abundant there and tourism facilities have already been set up in the district.

The resource frontier districts have high costs of living because the districts are situated in hot and dry areas. The high temperatures have led to the prevalence of malaria and tsetse fly related diseases. All these factors give rise to the high cost of living in the districts. It is therefore necessary on the part of government and other organisations involved in development, to take efforts in subsidising investments in these districts. Such subsidising is justified because the inhabitants of these districts are at a comparative disadvantage. The primary economic activities that are predominant in these districts need to be subsidised. Once this happens, local supplies are likely to improve and the cost of living is likely to fall.

6.5.4 The downward transitional region

6.5.4.1 Friedmann's guidelines

Friedmann (1966:87-98) proposed two major guidelines for the development of the downward transitional regions. One of the approaches concerns measures that must be taken primarily outside the region, while the other concerns those measures that focus primarily on structural changes within the region. As far as the approaches outside the region are concerned, the main measures are firstly to

identify function or influence regions both for programming and for creating an identity of interests between core regions and downward transitional regions. Secondly, encourage the return flow of capital from the core regions to downward transitional regions. The enlargement of the absorptive capacity of potential core regions along the perimeter of the downward transitional regions through carefully staged programs of investment is another element of the strategy. Finally, large-scale rural resettlement schemes must be undertaken by extending the agricultural frontier along the edges of the downward transitional region. It is implicit from the above measures that the downward transitional region's development is influenced from outside the region (from the core region) because the two regions strongly interact and influence each other's development. For the above measures to be effective, accessibility between the downward transitional region and the outside world should be improved.

The strategy that focuses primarily on structural changes within the region also includes a number of different measures (Friedmann, 1966: 93-98). In the first place, those urban regions of intermediate size that have a high capacity for future growth must be identified as major growth points. Secondly, the adequacy of central services at the selected growth points must be calculated. The central services at growth points must also be brought to performance levels that are adequate for the population-service ratios in the area. The internal road network of the region must be expanded and improved, with a focus on the selected growth points. A network of bus routes must be planned to improve the accessibility of the rural population to the growth points as well as to points outside the region. Storage and warehouse facilities based on growth points must be developed. The possibility of developing light processing and labour intensive manufacturing industries at growth points must be also explored. A major regional university that will concentrate on regional research, technical education and adult education, including agriculture extension and leadership training centres, must be established in the region. Measures must be taken to effect a change from subsistence to commercial farming. Finally, areas of low agricultural productivity must be transformed into national park reserves (Friedmann, 1966:98).

6.5.4.2 Strategies for Zimbabwe

The districts that make up the downwards-transitional regions in Zimbabwe (as indicated in Table 5.6 of Chapter 5) are Insiza, Mutasa, Chirumanzi, Matobo, Chikomba, Makonde, Hurungwe, Mazoe, Seke, Gutu, Hwedza, Zvimba, Chimanimani, Nyanga, Mberengwa, Shamva, Murehwa, Bulilimangwe, Beitbridge, Kariba, Chivi, Bubi, Centenary, Mutoko, Zaka, Nkayi and Bikita. These are essentially old established settlements whose predominantly rural economies are stagnant or in decline and have poor resource endowment. Obsolescence and overpopulation, relative to the existing possibilities for development, characterize these districts in Zimbabwe.

Most districts of the downward transition have severe population pressure. Such population pressures unfortunately occurs in environments that have very low resilience level. Resilience is the ability of an ecosystem to return to some state of equilibrium after a stress (Manjengwa and Styles, 1999:67). It is therefore necessary for resettlement of people from some parts of the downward transitional region. Currently, there is large scale resettlement in Zimbabwe, but it can be argued that that resettlement is politically driven since some of the allocations of land (and indeed the majority of them) are not well planned and well coordinated. This is not the sort of resettlement encouraged here. It must be properly planned and coordinated.

Related to the resettlement proposal is the commercialisation of agriculture. Farmers in the downward transitional region should be encouraged to change from subsistence to commercial farming so that the farmers are able to take advantage of modern farming techniques that are already practised in some parts of the country and improve their incomes. The introduction of more agro-based industries should also accompanying the commercialisation of agriculture. The agro-based industries should be light industries (that are cheap to develop) and they should be labour intensive (to curb the high unemployment rate in the downward transitional region).

For all the measures (suggested in the above paragraphs) to be effective, accessibility between the downward transitional region and the outside world should be improved. This is because the districts of the downward transitional region of Zimbabwe are poorly served as far as transport is concerned. The improvement of transport will facilitate intra-regional interaction, as well as interaction of the region with other region especially the core region. The internal road network of the region must be expanded and improved, with a focus on the selected growth points. A network for bus routes must be planned to improve the accessibility of the rural population to the growth points, as well as to points outside the region.

According to Lihua (2000:73) the Indonesian government encouraged a broad-based plan focused on agriculture, education, health and transport sectors, between 1969 and 1994, as part of a rural development strategy. This program was quite successful in achieving the stated outcomes. Such a program can be applied in the downward transitional region of Zimbabwe to stimulate development there since the region is stagnant in terms of socio-economic conditions.

Hou (2000:13) argues that the backward areas (downward transitional region) have no immediate connection to the regional growth centres but have only inexpensive land to offer, heavy industries are often welcomed by the local officials as a quick fix for their stagnant economy. This means that districts that constitute the downward transitional region need heavy industries as a quick fix for their stagnant economies. This, according to Hou (2000:13), has been successful in Yunlin county in Taiwan. In Zimbabwe, the districts of the downward transitional region also need heavy industries as a quick fix, because they have inexpensive land to offer and that the connection to the regional growth centres can be improved.

6.5.5 Strategies for the special problem region

Friedmann (1966) did not provide specific guidelines or strategies for the development of the special problem regions.

In Zimbabwe Mount Darwin, Lupane, Chipinge, Rushinga, Buhera, Gokwe, Tsholotsho, Mwenezi, UMP, Binga and Mudzi districts constitute the special problem region. These districts belong to the category of area that, because of the peculiarity of the resource or location demands a specialized development approach. These districts are in the hot, dry and tsetse fly infested part of the country. Although Friedmann (1966) did not provide any guidelines it can be suggested that the development planner should act eclectically when recommending guidelines for development of this type of region. This is because special problem regions the world over, are not the same and therefore each demands a specialized development approach. The guidelines or approach depends on the prevailing circumstances.

In Zimbabwe tourism development is recommended for the special problem region because the districts in this regional type have a lot of tourism resources. In addition, there are no competing major land uses in these districts since they are located in peripheral marginal areas. Development of agriculture can also be encouraged because agriculture can contribute to general development with the use of irrigation. As alluded to in section 6.5.4, a broad-based plan that focused on agriculture, education, health and transport sectors can be applied as part of a development strategy for the special problem region.

6.6 Conclusion

It is clear from the discussions in the first part of this chapter that there were many different policies that were introduced to reduce regional inequalities in Zimbabwe over the years. Despite the multiplicity of such policies, Zimbabwe continues to be characterized by severe inequalities and many development problems. The devised strategies failed to achieve their intended goals. In the

second part of this chapter proposals were made to adjust some of the old policies in order to make them more effective. In the last part of this chapter the development strategies proposed by Friedmann (1966) for the development of the different regional types in his model of development regions were evaluated. An attempt was made to apply some of the elements of Friedmann's development strategy to the development regions demarcated in the Zimbabwean space economy.

CHAPTER 7

SYNTHESIS AND CONCLUSIONS

7.1 Introduction

Zimbabwe is a developing country within Southern Africa and its spatial economy, like that of so many other developing countries, is characterised by an uneven spatial pattern of economic activities. In Chapter 1 it was mentioned that most national systems show a spatially unbalance pattern of economic development and that the core-periphery model and the model of development regions of Friedmann (1966), as discussed in detail in Chapter 2, can be used to show the spatial patterns of inequalities in a national system. In Chapter 5 the Zimbabwean space economy was demarcated into development regions according to the model of development regions and in Chapter 6 some proposal were made in terms of regional development strategies and planning which can be used to lessen the disparities in spatial economic development in Zimbabwe.

7.2 Problems in research

Even with careful and effective planning for research, certain problems are inevitable during the research process. Such problems can be experienced in obtaining the required literature, during data collection, in the use models or techniques formerly used by other researchers and in the analysis of data. This research project is no exception and a few of the problems encountered during the research is mentioned in the following section.

The researcher fully supports the remarks by Benso (1979:11) that there is a dearth of statistical information on most developing countries. Zimbabwe is no exception. Information on some important development indicators is either totally unavailable or if there is data available it is often incomplete and

outdated. For example, information on indicators such as income per capita per administrative district and gross domestic product per administrative district was not available for the Zimbabwean space economy.

Another problem is the nature of the data that are available. In many instances, although censuses and surveys were done, the necessary data were either not yet readily available or such data was not available for the administrative district of Zimbabwe. For example, in the 1992 census reports for Zimbabwe, information on indicators such as infant mortality rate, percentage of economically active population and percentage of population who has completed secondary or tertiary education, were provided per sex but not per administrative district. Such information is very important in the measurement of the level of socioeconomic development of the administrative districts of Zimbabwe. The fact that such information was not given per particular spatial unit means that such information could be of limited use in geography, because the spatial unit (administrative district) is the basic analytical tool of the geographer.

Although the use of Friedmann's (1966) model of development regions for regional demarcation was quite successful, as will be indicated in a later section of this chapter, it also presented the researcher with certain problems. When Friedmann (1966) demarcated development regions in Venezuela, he used characteristics that were qualitative in nature. Most of these qualitative characteristics could be identified in some districts in Zimbabwe, but the methods of regional demarcation chosen required the use of indicators for which quantitative data could be gathered. It was necessary to rephrase Friedmann's (1966) qualitative characteristics into quantitative measurements to accurately demarcate the country into development regions. The lack of specific quantitative values to demarcate the development regions by Friedmann (1966: 41-44) made the use of the model difficult.

The composite index method used for regional demarcation, although an effective method for ranking the administrative districts of Zimbabwe in a hierarchy according to their levels of socio-economic development, also proved

to have specific deficiencies. The problem with this method was that it assumed that all the indicators in each of the components of development had an equal weight in the measurement of the composite index of socio-economic development. In reality, some indicators are more effective than others in the measurement of the level of socioeconomic development of the administrative districts. A method whereby certain indicators carried more weight than other would have contributed to a better explanation of the spatial distribution in levels of overall socioeconomic development in Zimbabwe.

7.3 Results obtained

The main objective of this research was to apply the model of development regions of Friedmann (1966), which is an extended core-periphery model, to Zimbabwe and to demarcate development regions in the Zimbabwean space economy. It is clear from the results obtained in Chapter 5 that Friedmann's (1966) model of development regions can be successfully applied to the Zimbabwean space economy.

7.3.1 Spatial patterns of components of socio-economic development

It was projected that the administrative districts in Zimbabwe can be ranked hierarchically, according to their level of socio-economic development, by calculating composite indices based upon indicators and components of socio-economic development. This proved to be achievable. Simple and composite indices were calculated for the 59 administrative districts in Zimbabwe and the districts were ranked hierarchically in terms of the calculated composite indices for each component, as well as according to the composite index of overall socio-economic development.

The indices showed a very wide variation and confirmed that great inequalities exist in all the components of socio-economic development in Zimbabwe. Certain administrative districts in Zimbabwe have relatively high levels of development while others have low levels of development or no development at

all. This spatial pattern of unequal levels of development and the uneven distribution of economic activities in Zimbabwe, is not a random pattern or distribution but is the result of specific processes operating in space and over time.

Quartile values were calculated for the composite index values of each component of socio-economic development and the composite index of overall socio-economic development. The quartile values were then used to compile choropleth maps. The maps give an overview of the spatial variation in population, education, economic prosperity and health in Zimbabwe.

An interpretation of the map, reflecting the spatial variation in the composite indices of the population, reveals some striking patterns. Districts lying close to each other tend to form blocks that have the same population features. The western part of the country shows the lowest levels of development in terms of the population features and the highest level of development of population features is mainly found in the central high-veld of the country. As one moves away from the central high-veld region the level of development of population features tends to decline outwards. There is also a tendency for districts with high levels of development in terms of population features to be surrounded by districts with progressively lower levels of development of population features. Low levels of development in population features are found in the districts near the borders of the country.

The spatial variation in the economic prosperity component reveal that the central part of the country, as well as the Hwange district in the west, are generally characterized by high levels of economic prosperity. Districts lying to the north of the country and south of the country have the second highest level of development of economic prosperity. Districts with the lowest level of economic prosperity are scattered all over the country.

The map of the composite indices of the education component of socio-economic development for Zimbabwe reveals that low levels of educational

development mainly occur in the southern, northern, northwest and northern eastern part of Zimbabwe. High levels of educational development generally occur in the central high-veld of Zimbabwe. The map of the composite indices of the health component of socio-economic development for Zimbabwe shows that the districts showing the highest level of development of health services are scattered almost all over the country, but there is a concentration along the central axis (which extends from east to west).

The spatial distribution of the composite indices for overall socio-economic development for Zimbabwe reveals that the districts with the highest levels of overall socio-economic development are mostly urban districts such as Chitungwiza, Bulawayo and Harare. These are the three biggest cities in Zimbabwe. The most developed districts are found in the central high-veld of the country. Districts with the second and third highest levels of developed are often adjacent to the districts with the highest levels of developed. Districts displaying the lowest level of overall socio-economic development are mainly found in the low-veld of the country. This is possibly because the areas are hot, dry and have a lot of pests.

7.3.2 Regional demarcation

The assumption was made that the calculated socio-economic indices can be used to demarcate development regions in Zimbabwean space economy according to an extended core-periphery model or model of development regions formulated by Friedmann (1966). It was however, not possible to demarcate the administrative regions according to Friedmann's (1966) model of development regions by simply making use of only the calculated composite indices.

The calculated composite indices served as a guideline for regional demarcation, but the socio-economic and physical characteristics of the districts were also used in the demarcation of the country according to Friedmann's (1966) model of development regions. The determination of cut-off points for the different regional types was determined more by socio-economic and physical

characteristics of the regions than through the direct use of the ranked composite indices.

Only three districts were demarcated as part of the core region. The core districts in the Zimbabwean space economy are Bulawayo, Chitungwiza and Harare. These three districts have the highest composite indices for overall socio-economic development. The core region is not a single continuous area but it forms a non-continuous region and the Zimbabwean space economy can be characterised as a multi-core system.

In Friedmann's (1966) model of development regions, the upward transitional region ranks second in the hierarchy. Fifteen (15) administrative districts were classified as part of the upward transitional region. These districts have composite indices that are the second highest in the country. These administrative districts are generally found around the core region or on the development axis between two core regions and show evidence of upward development. The districts forming the upward transitional region of Zimbabwe are generally smaller urban concentrations which are less urbanized than the districts classified as part of the core region. These districts are characterised by rapid economic and social development and relatively high population growth rates. Most of the districts forming the upward transitional region are located in the central watershed (highveld) of Zimbabwe.

The special problem region belongs to the category of area that, because of the peculiarity of its resources or location, demands a specialized development approach (Friedmann, 1966:43). Eleven districts in the Zimbabwean space economy were demarcated as part of the special problem region. These districts are generally located along national boundaries and are suited to the intensive development of tourism. In Zimbabwe the populations, of the districts that fall in this category, still predominantly follow a traditional way of life and are dependent for their income on subsistence farming. These districts are regarded as part of the special problem region on account of the very depressed socio-

economic conditions and the high rate of population growth. The level of education of the inhabitants is also very low.

A resource frontier region is a zone of new settlement in which virgin territory is occupied and made productive (Friedmann, 1966:42). In Zimbabwe two districts, Hwange and Chiredzi satisfy the characteristics of the resource frontier region. The composite indices of these districts are 51.68 for Hwange and 40.89 for Chiredzi. Hwange is primarily concerned with mining while Chiredzi is primarily concerned with agriculture. Both these districts lie in the remote areas of the periphery. They are zones of relatively new settlement in which new virgin territory has been occupied and made productive.

Friedmann (1966:42) defines the downward transitional region as old, established settlement areas whose essentially rural economies are stagnant or in decline, and whose peculiar resource combination suggests as optimal a less intensive development than in the past. There are twenty-seven (27) districts that satisfy the characteristics of the downward transitional region in Zimbabwe. These districts are either stagnant or declining as far as development is concerned. The composite indices of these regions range from 52.07 to 34.02. These districts are characterized by very low socio-economic development and they make up the greater part of the spatial economy of Zimbabwe. These districts represent the rural areas of Zimbabwean spatial economic system.

The spatial as well as the socio-economic inequalities in the Zimbabwe economy is very evident from the demarcation of development regions. The non-contiguous core region dominates the system in socio-economic and political terms. The relatively weak and unintegrated outer periphery takes up the largest part of the system. Although the downward transitional and special problem regions are much larger in terms of area than the core and the upward transitional regions, their contribution to the total income of the country is very low. The limited number of economic activities in the downward transitional and special problem regions evidences this.

The demarcation of the spatial economy of Zimbabwe into core, upward transitional, downward transitional, resource frontier and special problem regions was quite effective. The demarcation confirms that there is an unbalanced core-periphery structure in the Zimbabwean economy. The persistence of the core-periphery structure in the Zimbabwean economy confirms that the country is in the second phase of the space-time development of the national system (Friedmann, 1966:36). The composite index method was quite effective for the demarcation of the different regional types.

The unequal spatial pattern of socio-economic development in Zimbabwe can be explained by quite a number of factors. Health facilities contribute to the level of socio-economic development. Unequal socio-economic development can also be ascribed to different levels of economic prosperity in the country. The unemployment rate, percentage of households that use electricity, percentage of households above the poverty datum line and severity of poverty strongly influenced the level of development of a district. Educational factors also had an influence on the levels of socio-economic development in Zimbabwe. Finally population features such as the death rate, life expectancy, birth rate and population density also have a bearing on the different levels of socio-economic development.

7.3.3 Spatial development planning

It is very evident from the regional demarcation that the Zimbabwean space economy is very unequal in terms of socio-economic development and it has severe spatial development problems. Over the years the Zimbabwean government, like other governments in countries with severe spatial inequalities in development, has adopted various policies and strategies to obtain a more equal spatial distribution of economic development in the national space economy.

The second objective of this thesis was to propose some spatial development policies that can be used to reduce regional inequalities in the Zimbabwean

space economy. From Chapter 6 it has become clear that it is possible to propose guidelines for the development of the demarcated development regions of Zimbabwe.

Over the years there have been many strategies and policies, which have been formulated to reduce the imbalances existing within the Zimbabwean national space economy. The strategies can be divided into four time periods: spatial planning in the pre-independence period (up to 1977), the transition to independence: 1978-1979, the post independence period of the 1980s and the post independence period in the 1990s and up to the present.

During the period before 1978 spatial planning policy concentrated on development of agriculture, especially in the African owned areas, and to a lesser extent on attempting to curb the excessive growth capital city, Salisbury (present day Harare). There was no overall spatial planning policy aimed at achieving an integrated national space economy. Shortly before independence the transitional government squarely faced the basic national planning problems of rapid population growth, looming urbanization and regional disparities and in 1978 growth points or growth centres were introduced as part of a policy document called “Integrated plan for Rural Development”. The intention was to provide infrastructure and services in the areas in order to encourage investment and employment, thereby reducing the drift of population to the white towns and generating revenue for the government through taxes and other levies. The programme was however only implemented for 2 years.

In 1980, the government introduced what might be called a state socialist approach or statist approach to development. Dual objectives of increasing economic growth and reducing the inherited racial inequalities were adopted. The strategy introduced in 1981 was generally referred to as the “growth with equity strategy” and it resulted in a number of policies designed specifically to reduce regional and spatial inequalities. One of the most important policies, which the government adopted during the 1980s to tackle the spatial inequalities, was that of resettlement. The government also provided facilities such as roads,

schools, health services, domestic water supplies and crop marketing depots in rural and underdeveloped areas. This has probably been the government's most successful attempt to reduce regional inequalities. There were substantial improvements in infrastructure and service provision during the 1980s especially in the communal areas and this not only improved the quality of life in the areas but also facilitated agriculture production

In the 1990s, due partly to dissatisfaction but also to the influence of international agencies such as the IMF and the World Bank, the government abandoned its original policies in favour of a conventional neoliberal approach to economic development. This programme was intended to end in 1995 and in 1996 the government, again with encouragement and assistance from the IMF, World Bank and other international agents, began to prepare a second phase of reforms, which would be known as ZIMPREST. For various reasons the process suffered major delays and the final document was released in April 1998 - halfway through the "plan" period.

The ESAP and the ZIMPREST had significant effects on regional development. Firstly, because of the removal of subsidies on basic commodities and an increase in charges for government services (e.g. school fees and hospital charges), inflation hit the poorest sector of the population hardest and the poorest regions suffered most. Secondly, the removal of the government monopoly over the marketing of basic crops mostly benefited the large scale commercial farmers who were able to shop around and get good prices, but it had a negative impact on small scale farmers especially in the remote areas. The poor areas (with the majority of poor small scale farmers) were, therefore, made poorer and this exacerbated spatial inequality. Finally, the main beneficiary of trade liberalization and increasing globalization was Harare, since its existing advantages in terms of infrastructure and services, made it the country's obvious international centre. This means that Harare, being part of the core region, had accelerated growth and this widened the gap between the core and the periphery even further.

It is clear from the discussion above that over time different policies were introduced in Zimbabwe in an attempt to reduce spatial inequalities and spatial development problems in general. Despite the multiplicity of such policies, regional inequalities have persisted and the anticipated spatial integration of the economy failed to materialize.

It has emerged that in Zimbabwe, efforts to reduce regional inequalities have been piecemeal and have concentrated on those based on race. Although some progress has been made in reducing inter-racial inequalities, the inherited inequalities between the urban and the rural areas, within urban and rural areas and between administrative districts, continue to exist. The progress that has been made occurred in the 1980s. Since the introduction of the structural adjustment programme in 1991, there has been less concern with inequality and most regional and socio-economic inequalities increased. The main reason for overall lack of progress is the inherited inequalities, which were deeply entrenched and have been reinforced by the combined effects of local, national and international power structures and relationships. According to Wekwete (1997:347), a well-known Zimbabwean regional scientist, the history of regional policy in African countries, including Zimbabwe, is closely linked to the evolution of their political economies from the colonial period to the present day.

7.4 A re-evaluation of regional policies and strategies

In Chapter 6 a re-evaluation was made of some existing policies and strategies for the development of a national spatial economy. Some of these policies and strategies have, in the past, been applied on an ad hoc basis in Zimbabwe but they have generally been ineffective. An attempt was made to highlight how these policies and strategies for regional development can be made more effective for reducing spatial inequalities in Zimbabwe.

Despite the failure of the growth pole strategy and the difficulties experienced in its application, the strategy may still be a useful tool in attempts to reduce spatial

inequalities in Zimbabwe. To make the growth pole strategy in Zimbabwe more effective, certain resource-based and agro-based industries suitable for particular growth points must be encouraged.

In Zimbabwe, problems surrounding the provision of basic needs are enormous. One way to alleviate these problems is through the improvement of agriculture by applying green revolution methods. An improvement in the provision of housing (shelter), especially in urban areas will also contribute to the better satisfaction of basic needs. An improvement in educational facilities, especially in rural areas, will also contribute to the satisfaction of basic needs and the elevation of spatial inequalities in levels of development. Another strategy that is worthwhile pursuing is an employment creation strategy. The facilitation and establishment of small and micro-scale enterprises within both the formal and informal sectors of the country can contribute to the alleviation of the unemployment problem.

Due to a lack of industrialization in the rural areas, incomes in these areas are too low with severe unemployment and underemployment. Hunger, diseases and poverty invariably prevail in such rural areas. If the government created a more conducive environment at a few of the growth points some industries may decentralise to rural areas where employment and development is needed.

The development of secondary cities as a strategy involves the selection of a smaller city in the periphery and targeting it as a growth centre so that development can be attracted to the smaller city. The smaller city can then develop into a larger city and ultimately form part of the core region in the national space economy. The major urban centres of Zimbabwe are mainly located along the central high-veld that extends from the east to west. The southern low-veld and northern low-veld areas have lower levels of development and that is where most of the peripheral regions of Zimbabwe are located. Some of the smaller cities in the North and in the South can be earmarked for development as secondary cities. The development of these centres may lead to

a more balanced distribution of development in the Zimbabwean space economy.

7.5 Development planning for specific regions

Each type of development region in Friedmann's model has different characteristics and encounter different problems. This means that in terms of development planning, each region demands a specific approach suitable to its specific conditions

A development problem, very specific to Zimbabwe, is that although the core is the most developed region in the space economy, there is also a high degree of inequality within the core region. Although Harare is part of the core region we find severe spatial inequality in development within the city. The same is true in Bulawayo and Chitungwiza. One of the strategies that can be applied in the core region is the strategy that addresses the problem of spatial inequality within the core region. An example of such a strategy is the effort by the government and other organisations involved in development to support the informal economic activities as well as upgrading the informal housing zones such as Epworth in Harare. Informal housing zones should also be improved rather than being demolished.

The setting up of an effective planning-programming staff and the creation of regional development maps in and for the core region can also be effective strategies for the development of the core region. The optimal size of the core region must be determined and if necessary decentralisation of development from the core region to other regions should be encouraged.

The fact that the problems of the upward transitional region mainly come from rapid economic growth means that such economic growth must be carefully regulated. Rapid immigration for example should be controlled or regulated in conjunction with the needs of the region. The spill-over development strategy can also be applied in the upward transitional region of Zimbabwe. The upward

transitional region can take advantage of the advanced economies of the neighbouring core region districts.

The district Chiredzi and Hwange district constitute the resource frontier region and a strategy for its development is to reduce the physical isolation of the region. The districts are on the borders of the country and are well served in terms of transport and telephone services. There is therefore a need to introduce more effective transport and telephone services in these districts in order to reduce the physical isolation of the districts.

Most districts of the districts in the downward transition have severe population pressure. Such population pressure unfortunately occurs in environments that have very low resilience level. It is therefore necessary for resettlement of people from some parts of the downward transitional region. Currently, there is large scale resettlement in Zimbabwe but it can be argued that that resettlement is politically driven since some of the allocations of land (and indeed the majority of them) are well planned and well coordinated. This is not the sort of resettlement encouraged here. It must be properly planned and coordinated. Related to the resettlement proposal is the commercialisation of agriculture.

For all the above measure to be effective, accessibility between the downward transitional region and the outside world must be improved. The districts in the downward transitional region of Zimbabwe are poorly served as far as transport is concerned. An improvement of transport will facilitate intra-regional interaction as well as interaction of the region with other region especially the core region.

The districts in the special problem region in Zimbabwe are situated in an area that, because of the peculiarity of the resource or location, demands a specialized development approach. These districts are in the hot, dry and tsetse fly infested part of the country. In Zimbabwe tourism development is recommended for the special problem region because the districts in this regional type have a lot of tourism resources. In addition, there are no competing major land uses in these

districts since they are located in peripheral marginal areas. Development of agriculture can also be encouraged because agriculture can contribute to general development with the use of irrigation.

7.6 Further recommendations

The fact that there was another population census conducted in Zimbabwe in 2002 mean that as soon as the census reports are published, an analysis can be done of the spatial distribution of the composite indices of socio-economic development using the 2002 data. The present research is based on data that is already more than eight years old and a significant number of things have in all probability changed over time. An analysis, using the new 2002 data, would provide a more complete picture of the temperospatial development situation of Zimbabwe.

7.7 Conclusions

The analysis performed in this research resulted in the satisfactory demarcation of development regions. The demarcation would have benefited from the inclusion of more indicators of development, but due to the nature of the data availability in Zimbabwe data on such indicators were not available.

The analysis of the indicators by means of multivariate statistical analysis would perhaps have proven a fast and more objective process, but it is in doubt if pattern of the spatial distribution of the levels of development in the country would have been much different if these more sophisticated techniques were used.

Certain recommendations were made in terms of the reapplication of spatial development strategies in Zimbabwe and specific strategies were recommended for the different regional types demarcated. It can only be hoped that the political and economic situation in Zimbabwe will improve over the next few

years and that there will be an opportunity to perhaps apply some of these recommendations to the Zimbabwean space economy.

APPENDIX A

Table 4.1.1 Data for the population component

Districts	Crude birth rate (A1)	Crude death rate (A2)	Life expectancy at birth (A3)	Crude rate of natural increase (A4)	Population density (A5)
Beitbridge	37.4	10.1	61	27.3	12.00
Bikita	32.4	10.4	59	22	30.00
Bindura	42.4	13.1	61	29.3	52.00
Binga	47.7	7.9	60	39.8	7.00
Bubi	33.9	8.1	68	25.8	7.00
Buhera	34.2	13.3	57	20.9	38.00
Bulawayo	33.3	6.7	65	26.6	1298.00
Bulilimangwe	37	9.1	67	27.9	11.00
Centenary	46.5	18.3	55	28.12	16.00
Chegutu	34.7	9.4	62	25.3	35.00
Chikomba	28.7	11.6	62	27.1	19.00
Chimanimani	34.1	10.4	59	23.7	32.00
Chipinge	37.6	29.9	52	24.7	62.00
Chiredzi	36.7	11.8	57	24.9	10.00
Chirumanzi	31.5	10.2	62	21.3	15.00
Chitungwiza	34.7	7.9	62	26.8	1703.00
Chivi	31.2	11.5	61	19.7	45.00
Gokwe	38.6	10.3	57	28.3	22.00
Goromonzi	36.2	5.5	64	30.7	59.00
Guruve	48.1	18.5	56	29.6	18.00
Gutu	30	11	59	19	28.00
Gwanda	33.7	7.8	66	25.9	30.00
Gweru	33.1	7.8	65	25.3	35.00
Harare	34.1	6.1	64	28	1703.00
Hurungwe	32.4	7.5	64	24.9	13.00
Hwange	32.3	6.3	65	26	4.00
Hwedza	30.3	11.2	61	19.1	27.00
Insiza	34.8	8.8	67	26	12.00
Kadoma	34	8.6	60	25.4	23.00
Kariba	38.7	9.2	58	29.5	6.00
Kwekwe	34.8	9.1	61	25.7	29.00
Lupane	38.6	7.7	66	30.9	12.00

Districts	Crude birth rate (A1)	Crude death rate (A2)	Life expectancy at birth (A3)	Crude rate of natural increase (A4)	Population density (A5)
Makonde	35.7	8.9	60	26.8	18.00
Makoni	33.2	9.9	62	23.3	33.00
Marondera	33.4	10.3	62	23.1	41.00
Masvingo	32.9	8.3	61	24.6	35.00
Matobo	32.3	9.4	69	22.9	13.00
Mazoe	40.4	9.7	61	30.7	45.00
Mberengwa	34.8	11.1	62	23.7	37.00
Mount Darwin	46.3	14.8	60	31.5	37.00
Mudzi	36.4	12	60	24.4	26.00
Murehwa	32.6	11.1	62	21.5	43.00
Mutare	35	10.6	59	24.4	59.00
Mutasa	34.9	10.9	57	24	60.00
Mutoko	33.8	10.9	63	22.9	30.00
Mwenezi	37	11.5	57	25.5	8.00
Nkayi	36.8	8.4	66	28.4	21.00
Nyanga	36.2	10	59	26.2	22.00
Rushinga	51.7	19.8	57	31.9	32.00
Seke	34.2	10.8	62	23.4	29.00
Shamva	45.9	16.2	57	29.7	35.00
Shurugwi	34.7	10.3	61	24.4	24.00
Tsholotsho	38.6	9.8	67	28.8	15.00
Umguza	32.6	8.8	64	23.8	11.00
UMP	34.5	11	62	23.5	33.00
Umzingwane	32.8	9.6	67	23.2	15.00
Zaka	33.8	10.6	60	23.2	61.00
Zvimba	33.7	9	59	24.7	37.00
Zvishavane	34.2	10.3	62.5	23.9	37.00

Table 4.1.2 Data for the component economic prosperity

Districts	Percentage of households above the poverty line (B1)	Unemployment rate (B2)	Percentage of households that use electricity (B3)	Poverty measured by Foster-Green-Tharbecke Measure (B4)
Beitbridge	49	50.53	4.71	0.16
Bikita	11	29.28	1.11	0.48
Bindura	46	21.73	25.59	0.19
Binga	8	27.55	0.58	0.58
Bubi	26	29.31	3.2	0.35
Buhera	11	23.78	0.91	0.48
Bulawayo	62	27.84	82.44	0.09
Bulilimangwe	33	43.38	2.93	0.3
Centenary	19	6.26	1.91	0.26
Chegutu	40	21.31	22.6	0.19
Chikomba	25	7.7	2.36	0.37
Chimanimani	28	25.22	1.49	0.37
Chipinge	19	30.03	1.86	0.42
Chiredzi	54	38.85	7.86	0.2
Chirumanzi	43	6.59	7.73	0.19
Chitungwiza	55	24.33	52.57	0.1
Chivi	18	41.91	0.71	0.42
Gokwe	30	10.96	0.33	0.31
Goromonzi	31	18.48	11.91	0.27
Guruve	29	5.85	1.05	0.31
Gutu	17	33.14	1.42	0.43
Gwanda	34	38	22.84	0.25
Gweru	49	23.34	33.85	0.18
Harare	56	19.79	29.98	0.1
Hurungwe	22	20.59	20.49	0.36
Hwange	33	27.76	39.14	0.31
Hwedza	25	13.99	2.2	0.33
Insiza	35	37.95	10.6	0.32
Kadoma	37	23.36	22.92	0.24
Kariba	24	21.85	18.24	0.49
Kwekwe	49	23.09	41.77	0.19
Lupane	18	3.35	0.45	0.45
Makonde	36	20.23	25.11	0.21

Districts	Percentage of households above the poverty line (B1)	Unemployment rate (B2)	Percentage of households that use electricity (B3)	Poverty measured by Foster-Green-Tharbecke Measure (B4)
Makoni	24	22.7	21.64	0.38
Marondera	39	21.92	21.88	0.26
Masvingo	39	25.58	27.35	0.3
Matobo	32	39.36	33.18	0.3
Mazoe	35	16.98	8.36	0.2
Mberengwa	21	13.04	2.89	0.33
Mount Darwin	25	15.99	1.56	0.34
Mudzi	11	14.32	0.01	0.59
Murehwa	16	17.34	1.87	0.4
Mutare	33	26.21	16.01	0.32
Mutasa	32	21.25	3.99	0.3
Mutoko	12	12.09	1.09	0.52
Mwenezi	14	31.88	2.19	0.57
Nkayi	24	6.8	0.95	0.39
Nyanga	37	13.13	1.97	0.34
Rushinga	21	9.71	0.39	0.5
Seke	28	24.58	2.79	0.3
Shamva	34	14.2	4.01	0.29
Shurugwi	48	9.96	17.11	0.21
Tsholotsho	24	63.93	0.23	0.38
Umguza	59	30.85	21.13	0.15
UMP	21	11.23	0.01	0.44
Umzingwane	48	35.47	11.66	0.18
Zaka	22	19.49	0.58	0.41
Zvimba	31	19.95	8.71	0.21
Zvishavane	38	25.46	18.89	0.28

Table 4.1.3 Data for the education component

Districts	Illiteracy rate (C1)	Percentage of children aged 8-14 years not at school (C2)	Percentage of the population older than 15 years who have not completed grade 7 (C3)
Beitbridge	37.83	7	61.84
Bikita	22.96	6	48.78
Bindura	20.2	14	37.3
Binga	50.71	13	76.31
Bubi	23.74	10	45.81
Buhera	18.36	8	44.09
Bulawayo	10	7	16.25
Bulilimangwe	24.68	3	49.05
Centenary	40.7	17	68.4
Chegutu	15.41	8	32.27
Chikomba	12.7	5	31.01
Chimanimani	25.86	10	52.12
Chipinge	46.5	14	74.55
Chiredzi	38.76	8	62.61
Chirumanzi	17.39	11	35.74
Chitungwiza	5.44	6	17.61
Chivi	22.8	3	47.23
Gokwe	25.14	12	52.3
Goromonzi	12.85	10	26.4
Guruve	36	9	61.3
Gutu	13.67	3	33.75
Gwanda	12.26	3	25.72
Gweru	11.92	6	27.32
Harare	11	7	23.34
Hurungwe	20.25	12	36.6
Hwange	16.81	13	29.78
Hwedza	12.98	10	33.12
Insiza	19.13	1	40.69
Kadoma	15.61	10	32.46
Kariba	27.66	17	46.67
Kwekwe	11.37	10	26.63
Lupane	25.83	6	51.02
Makonde	22.02	25	40.47

Districts	Illiteracy rate (C1)	Percentage of children aged 8-14 years not at school (C2)	Percentage of the population older than 15 years who have not completed grade 7 (C3)
Makoni	12.1	7	20.06
Marondera	11.91	3	26.93
Masvingo	12.3	9	27.62
Matobo	18.54	3	40.61
Mazoe	27.7	19	51.6
Mberengwa	24.61	6	49.86
Mount Darwin	36.5	11	61.9
Mudzi	38.14	16	62.97
Murehwa	17.73	8	38.65
Mutare	11.69	9	29.4
Mutasa	21.64	5	45.09
Mutoko	27.38	6	50.56
Mwenezi	39.12	12	65.87
Nkayi	23.96	11	49.72
Nyanga	32.09	6	57.53
Rushinga	46.2	4	71.6
Seke	16.34	7	34.93
Shamva	29.8	14	53.4
Shurugwi	14.13	6	29.39
Tsholotsho	27.16	6	51.33
Umguzu	13.38	6	31.6
UMP	26.76	6	51.51
Umzingwane	14.72	5	34.57
Zaka	25.89	7	52.31
Zvimba	28.42	18	51.36
Zvishavane	13.59	1	29.21

Table 4.1.4 Data for the health component

Districts	Percentage of the population without toilet facilities (D1)	Percentage households with safe drinking water, sanitation and adequate housing D2
Beitbridge	57.25	99
Bikita	62.25	96
Bindura	21.4	97
Binga	83.87	94
Bubi	61.03	99
Buhera	72.91	88
Bulawayo	1	99
Bulilimangwe	67.89	99.4
Centenary	53.45	99
Chegutu	20.77	98
Chikomba	34.28	97
Chimanimani	19.31	98
Chipinge	26	97
Chiredzi	32.52	98
Chirumanzi	42.64	98
Chitungwiza	1	99
Chivi	55.85	84
Gokwe	81.9	77
Goromonzi	18.55	98
Guruve	58.27	98
Gutu	35.73	95
Gwanda	27.1	95
Gweru	24.13	99
Harare	5.59	99
Hurungwe	28.45	86
Hwange	16.85	99
Hwedza	49.8	98
Insiza	36.56	92
Kadoma	24.33	96
Kariba	34.61	70
Kwekwe	20.68	97
Lupane	85.65	80

Districts	Percentage of the population without toilet facilities (D1)	Percentage households with safe drinking water, sanitation and adequate housing D2
Makonde	27.06	97
Makoni	23.25	95
Marondera	21.34	95
Masvingo	20.06	80
Matobo	47.77	88
Mazoe	28.43	99
Mberengwa	64.12	84
Mount Darwin	53.69	91
Mudzi	71.3	96
Murehwa	59.64	91
Mutare	19.11	97
Mutasa	17.03	98
Mutoko	56.54	91
Mwenezi	53.52	81
Nkayi	83.44	80
Nyanga	46.2	99
Rushinga	39.3	98
Seke	40.62	98
Shamva	40	99
Shurugwi	17.39	99
Tsholotsho	76.64	99
Umguzo	31.18	99
UMP	66.84	95
Umzingwane	28.66	97
Zaka	69.86	91
Zvimba	41.02	97
Zvishavane	18.94	92

Table 5.2.1: Calculation of simple and composite indices for the population component (I_A)

District	A1	A2	A3	A4	A5	A1!	A2!	A4!	I _{A1}	I _{A2}	I _{A3}	I _{A4}	I _{A5}	I _A
Beitbridge	37.4	10.1	61	27.3	12	26.74	99.01	36.63	94.79	97.30	99.38	92.73	11.29	62.58
Bikita	32.4	10.4	59	22	30	30.86	96.15	45.45	109.42	94.50	96.12	115.06	28.23	79.76
Bindura	42.4	13.1	61	29.3	52	23.58	76.34	34.13	83.61	75.02	99.38	86.40	48.93	76.59
Binga	47.7	7.9	60	39.8	7	20.96	126.58	25.13	74.32	124.40	97.75	63.60	6.59	51.96
Bubi	33.9	8.1	68	25.8	7	29.50	123.46	38.76	104.58	121.33	110.79	98.12	6.59	61.90
Buhera	34.2	13.3	57	20.9	38	29.24	75.19	47.85	103.66	73.89	92.86	121.12	35.76	79.02
Bulawayo	33.3	6.7	65	26.6	1298	30.03	149.25	37.59	106.46	146.68	105.90	95.17	1221.40	180.62
Bulilimangwe	37	9.1	67	27.9	11	27.03	109.89	35.84	95.81	108.00	109.16	90.73	10.35	63.84
Centenary	46.5	18.3	55	28.12	16	21.51	54.64	35.56	76.24	53.70	89.61	90.02	15.06	54.87
Chegutu	34.7	9.4	62	25.3	35	28.82	106.38	39.53	102.16	104.55	101.01	100.06	32.93	81.32
Chikomba	28.7	11.6	62	27.1	19	34.84	86.21	36.90	123.52	84.72	101.01	93.41	17.88	70.69
Chimanimani	34.1	10.4	59	23.7	32	29.33	96.15	42.19	103.96	94.50	96.12	106.81	30.11	78.79
Chipinga	37.6	29.9	52	24.7	62	26.60	33.44	40.49	94.29	32.87	84.72	102.49	58.34	69.05
Chiredzi	36.7	11.8	57	24.9	10	27.25	84.75	40.16	96.60	83.28	92.86	101.66	9.41	59.00
Chirumanzi	31.5	10.2	62	21.3	15	31.75	98.04	46.95	112.54	96.35	101.01	118.85	14.11	71.26
Chitungwiza	34.7	7.9	62	26.8	1703	28.82	126.58	37.31	102.16	124.40	101.01	94.46	1602.50	181.01
Chivi	31.2	11.5	61	19.7	45	32.05	86.96	50.76	113.63	85.46	99.38	128.50	42.34	87.91
Gokwe	38.6	10.3	57	28.3	22	25.91	97.09	35.34	91.84	95.41	92.86	89.45	20.70	68.49
Goromonzi	36.2	5.5	64	30.7	59	27.62	181.82	32.57	97.93	178.68	104.27	82.46	55.52	96.46
Guruve	48.1	18.5	56	29.6	18	20.79	54.05	33.78	73.70	53.12	91.23	85.52	16.94	55.31
Gutu	30	11	59	19	28	33.33	90.91	52.63	118.17	89.34	96.12	133.23	26.35	81.35
Gwanda	33.7	7.8	66	25.9	30	29.67	128.21	38.61	105.20	126.00	107.53	97.74	28.23	82.97
Gweru	33.1	7.8	65	25.3	35	30.21	128.21	39.53	107.10	126.00	105.90	100.06	32.93	86.02
Harare	34.1	6.1	64	28	1703	29.33	163.93	35.71	103.96	161.11	104.27	90.41	1602.50	190.82
Hurungwe	32.4	7.5	64	24.9	13	30.86	133.33	40.16	109.42	131.03	104.27	101.66	12.23	71.43
Hwange	32.3	6.3	65	26	4	30.96	158.73	38.46	109.76	155.99	105.90	97.36	3.76	58.14
Hwedza	30.3	11.2	61	19.1	27	33.00	89.29	52.36	117.00	87.75	99.38	132.53	25.41	80.76
Insiza	34.8	8.8	67	26	12	28.74	113.64	38.46	101.87	111.68	109.16	97.36	11.29	67.15
Kadoma	34	8.6	60	25.4	23	29.41	116.28	39.37	104.27	114.27	97.75	99.66	21.64	75.86
Kariba	38.7	9.2	58	29.5	6	25.84	108.70	33.90	91.61	106.82	94.49	85.81	5.65	53.73
Kwekwe	34.8	9.1	61	25.7	29	28.74	109.89	38.91	101.87	108.00	99.38	98.50	27.29	78.28
Lupane	38.6	7.7	66	30.9	12	25.91	129.87	32.36	91.84	127.63	107.53	81.92	11.29	65.06
Makonde	35.7	8.9	60	26.8	18	28.01	112.36	37.31	99.30	110.42	97.75	94.46	16.94	70.28
Makoni	33.2	9.9	62	23.3	33	30.12	101.01	42.92	106.78	99.27	101.01	108.64	31.05	81.57
Marondera	33.4	10.3	62	23.1	41	29.94	97.09	43.29	106.14	95.41	101.01	109.58	38.58	84.57
Masvingo	32.9	8.3	61	24.6	35	30.40	120.48	40.65	107.75	118.40	99.38	102.90	32.93	84.46
Matobo	32.3	9.4	69	22.9	13	30.96	106.38	43.67	109.76	104.55	112.41	110.54	12.23	70.52
Mazoe	40.4	9.7	61	30.7	45	24.75	103.09	32.57	87.75	101.32	99.38	82.46	42.34	79.04
Mberengwa	34.8	11.1	62	23.7	37	28.74	90.09	42.19	101.87	88.54	101.01	106.81	34.82	80.54
Mount Darwin	46.3	14.8	60	31.5	37	21.60	67.57	31.75	76.57	66.40	97.75	80.36	34.82	67.40
Mudzi	36.4	12	60	24.4	26	27.47	83.33	40.98	97.39	81.90	97.75	103.75	24.47	72.33
Murehwa	32.6	11.1	62	21.5	43	30.67	90.09	46.51	108.75	88.54	101.01	117.74	40.46	85.74
Mutare	35	10.6	59	24.4	59	28.57	94.34	40.98	101.29	92.71	96.12	103.75	55.52	87.74
Mutasa	34.9	10.9	57	24	60	28.65	91.74	41.67	101.58	90.16	92.86	105.48	56.46	87.28
Mutoko	33.8	10.9	63	22.9	30	29.59	91.74	43.67	104.89	90.16	102.64	110.54	28.23	78.75
Mwenezi	37	11.5	57	25.5	8	27.03	86.96	39.22	95.81	85.46	92.86	99.27	7.53	56.35
Nkayi	36.8	8.4	66	28.4	21	27.17	119.05	35.21	96.33	117.00	107.53	89.13	19.76	73.43

District	A1	A2	A3	A4	A5	A1!	A2!	A4!	I _{A1}	I _{A2}	I _{A3}	I _{A4}	I _{A5}	I _A
Nyanga	36.2	10	59	26.2	22	27.62	100.00	38.17	97.93	98.28	96.12	96.62	20.70	71.36
Rushinga	51.7	19.8	57	31.9	32	19.34	50.51	31.35	68.57	49.63	92.86	79.35	30.11	59.65
Seke	34.2	10.8	62	23.4	29	29.24	92.59	42.74	103.66	91.00	101.01	108.18	27.29	77.59
Shamva	45.9	16.2	57	29.7	35	21.79	61.73	33.67	77.24	60.66	92.86	85.23	32.93	65.67
Shurugwi	34.7	10.3	61	24.4	24	28.82	97.09	40.98	102.16	95.41	99.38	103.75	22.58	74.34
Tsholotsho	38.6	9.8	67	28.8	15	25.91	102.04	34.72	91.84	100.28	109.16	87.90	14.11	65.95
Umguzu	32.6	8.8	64	23.8	11	30.67	113.64	42.02	108.75	111.68	104.27	106.36	10.35	67.43
UMP	34.5	11	62	23.5	33	28.99	90.91	42.55	102.76	89.34	101.01	107.72	31.05	79.13
Umzingwane	32.8	9.6	67	23.2	15	30.49	104.17	43.10	108.08	102.37	109.16	109.11	14.11	71.43
Zaka	33.8	10.6	60	23.2	61	29.59	94.34	43.10	104.89	92.71	97.75	109.11	57.40	90.15
Zvimba	33.7	9	59	24.7	37	29.67	111.11	40.49	105.20	109.20	96.12	102.49	34.82	83.00
Zvishavane	34.2	10.3	62.5	23.9	37	29.24	97.09	41.84	103.66	95.41	101.82	105.92	34.82	82.03
Average	36	10.7	61.4	25.76	106.3	28.21	101.75	39.50						

Table 5.2.2: Calculation of simple and composite indices for the economic prosperity component (I_B)

District	B1	B2	B3	B4	B2!	B4!	I_{B1}	I_{B2}	I_{B3}	I_{B4}	I_B
Beitbridge	49	50.53	4.71	0.16	19.79	6250.00	157.12	32.66	37.90	165.89	75.37
Bikita	11	29.28	1.11	0.48	34.15	2083.33	35.27	56.37	8.93	55.30	31.48
Bindura	46	21.73	25.59	0.19	46.02	5263.16	147.50	75.96	205.89	139.69	133.98
Binga	8	27.55	0.58	0.58	36.30	1724.14	25.65	59.91	4.67	45.76	23.93
Bubi	26	29.31	3.2	0.35	34.12	2857.14	83.37	56.31	25.75	75.83	55.02
Buhera	11	23.78	0.91	0.48	42.05	2083.33	35.27	69.41	7.32	55.30	31.55
Bulawayo	62	27.84	82.44	0.09	35.92	11111.11	198.80	59.29	663.29	294.91	219.13
Bulilimangwe	33	43.38	2.93	0.3	23.05	3333.33	105.82	38.05	23.57	88.47	53.83
Centenary	19	6.26	1.91	0.26	159.74	3846.15	60.92	263.67	15.37	102.08	70.85
Chegutu	40	21.31	22.6	0.19	46.93	5263.16	128.26	77.45	181.83	139.69	126.04
Chikomba	25	7.7	2.36	0.37	129.87	2702.70	80.16	214.36	18.99	71.73	69.56
Chimanimani	28	25.22	1.49	0.37	39.65	2702.70	89.78	65.45	11.99	71.73	47.41
Chipinge	19	30.03	1.86	0.42	33.30	2380.95	60.92	54.96	14.97	63.20	42.18
Chiredzi	54	38.85	7.86	0.2	25.74	5000.00	173.15	42.49	63.24	132.71	88.64
Chirumanzi	43	6.59	7.73	0.19	151.75	5263.16	137.88	250.46	62.19	139.69	131.61
Chitungwiza	55	24.33	52.57	0.1	41.10	10000.00	176.36	67.84	422.96	265.42	191.44
Chivi	18	41.91	0.71	0.42	23.86	2380.95	57.72	39.38	5.71	63.20	30.10
Gokwe	30	10.96	0.33	0.31	91.24	3225.81	96.20	150.60	2.66	85.62	42.60
Goromonzi	31	18.48	11.91	0.27	54.11	3703.70	99.40	89.32	95.82	98.30	95.63
Guruve	29	5.85	1.05	0.31	170.94	3225.81	92.99	282.15	8.45	85.62	66.00
Gutu	17	33.14	1.42	0.43	30.18	2325.58	54.51	49.81	11.42	61.73	37.20
Gwanda	34	38	22.84	0.25	26.32	4000.00	109.02	43.44	183.76	106.17	98.04
Gweru	49	23.34	33.85	0.18	42.84	5555.56	157.12	70.72	272.35	147.46	145.34
Harare	56	19.79	29.98	0.1	50.53	10000.00	179.57	83.40	241.21	265.42	175.97
Hurungwe	22	20.59	20.49	0.36	48.57	2777.78	70.54	80.16	164.86	73.73	91.05
Hwange	33	27.76	39.14	0.31	36.02	3225.81	105.82	59.46	314.91	85.62	114.12
Hwedza	25	13.99	2.2	0.33	71.48	3030.30	80.16	117.98	17.70	80.43	60.58
Insiza	35	37.95	10.6	0.32	26.35	3125.00	112.23	43.49	85.28	82.94	76.66
Kadoma	37	23.36	22.92	0.24	42.81	4166.67	118.64	70.66	184.41	110.59	114.35
Kariba	24	21.85	18.24	0.49	45.77	2040.82	76.96	75.54	146.75	54.17	82.45
Kwekwe	49	23.09	41.77	0.19	43.31	5263.16	157.12	71.48	336.07	139.69	151.53
Lupane	18	3.35	0.45	0.45	298.51	2222.22	57.72	492.70	3.62	58.98	49.64
Makonde	36	20.23	25.11	0.21	49.43	4761.90	115.43	81.59	202.03	126.39	124.53
Makoni	24	22.7	21.64	0.38	44.05	2631.58	76.96	72.71	174.11	69.85	90.82
Marondera	39	21.92	21.88	0.26	45.62	3846.15	125.05	75.30	176.04	102.08	114.06
Masvingo	39	25.58	27.35	0.3	39.09	3333.33	125.05	64.53	220.05	88.47	111.95
Matobo	32	39.36	33.18	0.3	25.41	3333.33	102.61	41.93	266.96	88.47	100.40
Mazoe	35	16.98	8.36	0.2	58.89	5000.00	112.23	97.21	67.26	132.71	99.34
Mberengwa	21	13.04	2.89	0.33	76.69	3030.30	67.34	126.58	23.25	80.43	63.19
Mount Darwin	25	15.99	1.56	0.34	62.54	2941.18	80.16	103.22	12.55	78.06	53.36
Mudzi	11	14.32	0.01	0.59	69.83	1694.92	35.27	115.26	0.08	44.99	11.01
Murehwa	16	17.34	1.87	0.4	57.67	2500.00	51.30	95.19	15.05	66.35	46.99
Mutare	33	26.21	16.01	0.32	38.15	3125.00	105.82	62.97	128.81	82.94	91.86
Mutasa	32	21.25	3.99	0.3	47.06	3333.33	102.61	77.67	32.10	88.47	68.98
Mutoko	12	12.09	1.09	0.52	82.71	1923.08	38.48	136.52	8.77	51.04	39.16
Mwenezi	14	31.88	2.19	0.57	31.37	1754.39	44.89	51.77	17.62	46.56	37.16

District	B1	B2	B3	B4	B2!	B4!	I_{B1}	I_{B2}	I_{B3}	I_{B4}	I_B
Nkayi	24	6.8	0.95	0.39	147.06	2564.10	76.96	242.73	7.64	68.06	55.83
Nyanga	37	13.13	1.97	0.34	76.16	2941.18	118.64	125.71	15.85	78.06	65.54
Rushinga	21	9.71	0.39	0.5	102.99	2000.00	67.34	169.99	3.14	53.08	37.16
Seke	28	24.58	2.79	0.3	40.68	3333.33	89.78	67.15	22.45	88.47	58.82
Shamva	34	14.2	4.01	0.29	70.42	3448.28	109.02	116.24	32.26	91.52	78.21
Shurugwi	48	9.96	17.11	0.21	100.40	4761.90	153.91	165.72	137.66	126.39	145.14
Tsholotsho	24	63.93	0.23	0.38	15.64	2631.58	76.96	25.82	1.85	69.85	22.51
Umguzu	59	30.85	21.13	0.15	32.41	6666.67	189.18	53.50	170.01	176.95	132.10
UMP	21	11.23	0.01	0.44	89.05	2272.73	67.34	146.98	0.08	60.32	14.80
Umzingwane	48	35.47	11.66	0.18	28.19	5555.56	153.91	46.53	93.81	147.46	99.77
Zaka	22	19.49	0.58	0.41	51.31	2439.02	70.54	84.69	4.67	64.74	36.65
Zvimba	31	19.95	8.71	0.21	50.13	4761.90	99.40	82.73	70.08	126.39	92.38
Zvishavane	38	25.46	18.89	0.28	39.28	3571.43	121.85	64.83	151.98	94.79	103.29
Average	31.2	23.064	12.429	0.318	60.59	3767.62					

Table 5.2.3: Calculation of simple and composite indices for the education component (I_C)

District	C1	C2	C3	I _{C1}	I _{C2}	I _{C3}	I _C
Beitbridge	37.83	7	61.84	166.52	80.19	142.63	123.96
Bikita	22.96	6	48.78	101.07	68.74	112.51	92.11
Bindura	20.2	14	37.3	88.92	160.39	86.03	107.05
Binga	50.71	13	76.31	223.22	148.93	176.00	180.20
Bubi	23.74	10	45.81	104.50	114.56	105.66	108.15
Buhera	18.36	8	44.09	80.82	91.65	101.69	90.99
Bulawayo	10	7	16.25	44.02	80.19	37.48	50.96
Bulilimamangwe	24.68	3	49.05	108.64	34.37	113.13	75.03
Centenary	40.7	17	68.4	179.16	194.76	157.76	176.56
Chegutu	15.41	8	32.27	67.83	91.65	74.43	77.35
Chikomba	12.7	5	31.01	55.90	57.28	71.52	61.18
Chimanimani	25.86	10	52.12	113.83	114.56	120.21	116.17
Chipinga	46.5	14	74.55	204.69	160.39	171.94	178.05
Chiredzi	38.76	8	62.61	170.62	91.65	144.40	131.19
Chirumanzi	17.39	11	35.74	76.55	126.02	82.43	92.64
Chitungwiza	5.44	6	17.61	23.95	68.74	40.62	40.59
Chivi	22.8	3	47.23	100.36	34.37	108.93	72.16
Gokwe	25.14	12	52.3	110.66	137.48	120.62	122.43
Goromonzi	12.85	10	26.4	56.56	114.56	60.89	73.35
Guruve	36	9	61.3	158.47	103.11	141.38	132.19
Gutu	13.67	3	33.75	60.17	34.37	77.84	54.40
Gwanda	12.26	3	25.72	53.97	34.37	59.32	47.92
Gweru	11.92	6	27.32	52.47	68.74	63.01	61.02
Harare	11	7	23.34	48.42	80.19	53.83	59.35
Hurungwe	20.25	12	36.6	89.14	137.48	84.41	101.13
Hwange	16.81	13	29.78	74.00	148.93	68.68	91.13
Hwedza	12.98	10	33.12	57.14	114.56	76.39	79.37
Insiza	19.13	1	40.69	84.21	11.46	93.85	44.90
Kadoma	15.61	10	32.46	68.71	114.56	74.87	83.84
Kariba	27.66	17	46.67	121.76	194.76	107.64	136.66
Kwekwe	11.37	10	26.63	50.05	114.56	61.42	70.62
Lupane	25.83	6	51.02	113.70	68.74	117.67	97.25
Makonde	22.02	25	40.47	96.93	286.41	93.34	137.35
Makoni	12.1	7	20.06	53.26	80.19	46.27	58.25
Marondera	11.91	3	26.93	52.43	34.37	62.11	48.19
Masvingo	12.3	9	27.62	54.14	103.11	63.70	70.85
Matobo	18.54	3	40.61	81.61	34.37	93.66	64.05
Mazoe	27.7	19	51.6	121.93	217.67	119.01	146.72
Mberengwa	24.61	6	49.86	108.33	68.74	115.00	94.96
Mount Darwin	36.5	11	61.9	160.67	126.02	142.76	142.45
Mudzi	38.14	16	62.97	167.89	183.30	145.23	164.72
Murehwa	17.73	8	38.65	78.05	91.65	89.14	86.07
Mutare	11.69	9	29.4	51.46	103.11	67.81	71.12
Mutasa	21.64	5	45.09	95.26	57.28	103.99	82.79
Mutoko	27.38	6	50.56	120.52	68.74	116.61	98.86
Mwenezi	39.12	12	65.87	172.20	137.48	151.92	153.21

District	C1	C2	C3	I_{C1}	I_{C2}	I_{C3}	I_C
Nkayi	23.96	11	49.72	105.47	126.02	114.67	115.08
Nyanga	32.09	6	57.53	141.26	68.74	132.69	108.81
Rushinga	46.2	4	71.6	203.37	45.83	165.14	115.45
Seke	16.34	7	34.93	71.93	80.19	80.56	77.46
Shamva	29.8	14	53.4	131.18	160.39	123.16	137.35
Shurugwi	14.13	6	29.39	62.20	68.74	67.78	66.18
Tsholotsho	27.16	6	51.33	119.55	68.74	118.39	99.09
Umguza	13.38	6	31.6	58.90	68.74	72.88	66.57
UMP	26.76	6	51.51	117.79	68.74	118.80	98.71
Umzingwane	14.72	5	34.57	64.80	57.28	79.73	66.64
Zaka	25.89	7	52.31	113.96	80.19	120.65	103.31
Zvimba	28.42	18	51.36	125.10	206.21	118.46	145.11
Zvishavane	13.59	1	29.21	59.82	11.46	67.37	35.87
Average	22.718	8.729	43.358				

Table 5.2.4: Calculation of simple and composite indices for the health component (I_D)

District	D1	D2	D1!	I_{D1}	I_{D2}	I_D
Beitbridge	57.25	99	17.47	26.88	105.35	53.22
Bikita	62.25	96	16.06	24.72	102.16	50.26
Bindura	21.4	97	46.73	71.91	103.22	86.16
Binga	83.87	94	11.92	18.35	100.03	42.84
Bubi	61.03	99	16.39	25.22	105.35	51.54
Buhera	72.91	88	13.72	21.11	93.64	44.46
Bulawayo	1	99	1000.00	1538.97	105.35	402.65
Bulilimamangwe	67.89	99.4	14.73	22.67	105.78	48.97
Centenery	53.45	99	18.71	28.79	105.35	55.08
Chegutu	20.77	98	48.15	74.10	104.29	87.90
Chikomba	34.28	97	29.17	44.89	103.22	68.07
Chimanimani	19.31	98	51.79	79.70	104.29	91.17
Chipinge	26	97	38.46	59.19	103.22	78.17
Chiredzi	32.52	98	30.75	47.32	104.29	70.25
Chirumanzi	42.64	98	23.45	36.09	104.29	61.35
Chitungwiza	1	99	1000.00	1538.97	105.35	402.65
Chivi	55.85	84	17.91	27.56	89.39	49.63
Gokwe	81.9	77	12.21	18.79	81.94	39.24
Goromonzi	18.55	98	53.91	82.96	104.29	93.02
Guruve	58.27	98	17.16	26.41	104.29	52.48
Gutu	35.73	95	27.99	43.07	101.09	65.99
Gwanda	27.1	95	36.90	56.79	101.09	75.77
Gweru	24.13	99	41.44	63.78	105.35	81.97
Harare	5.59	99	178.89	275.31	105.35	170.30
Hurungwe	28.45	86	35.15	54.09	91.52	70.36
Hwange	16.85	99	59.35	91.33	105.35	98.09
Hwedza	49.8	98	20.08	30.90	104.29	56.77
Insiza	36.56	92	27.35	42.09	97.90	64.20
Kadoma	24.33	96	41.10	63.25	102.16	80.39
Kariba	34.61	70	28.89	44.47	74.49	57.55
Kwekwe	20.68	97	48.36	74.42	103.22	87.64
Lupane	85.65	80	11.68	17.97	85.13	39.11
Makonde	27.06	97	36.95	56.87	103.22	76.62
Makoni	23.25	95	43.01	66.19	101.09	81.80
Marondera	21.34	95	46.86	72.12	101.09	85.38
Masvingo	20.06	80	49.85	76.72	85.13	80.82
Matobo	47.77	88	20.93	32.22	93.64	54.93
Mazoe	28.43	99	35.17	54.13	105.35	75.52
Mberengwa	64.12	84	15.60	24.00	89.39	46.32
Mount Darwin	53.69	91	18.63	28.66	96.84	52.69
Mudzi	71.3	96	14.03	21.58	102.16	46.96
Murehwa	59.64	91	16.77	25.80	96.84	49.99
Mutare	19.11	97	52.33	80.53	103.22	91.17
Mutasa	17.03	98	58.72	90.37	104.29	97.08
Mutoko	56.54	91	17.69	27.22	96.84	51.34
Mwenezi	53.52	81	18.68	28.76	86.20	49.78

District	D1	D2	D1!	I_{D1}	I_{D2}	I_D
Nkayi	83.44	80	11.98	18.44	85.13	39.63
Nyanga	46.2	99	21.65	33.31	105.35	59.24
Rushinga	39.3	98	25.45	39.16	104.29	63.90
Seke	40.62	98	24.62	37.89	104.29	62.86
Shamva	40	99	25.00	38.47	105.35	63.67
Shurugwi	17.39	99	57.50	88.50	105.35	96.56
Tsholotsho	76.64	99	13.05	20.08	105.35	45.99
Umguza	31.18	99	32.07	49.36	105.35	72.11
UMP	66.84	95	14.96	23.02	101.09	48.25
Umzingwane	28.66	97	34.89	53.70	103.22	74.45
Zaka	69.86	91	14.31	22.03	96.84	46.19
Zvimba	41.02	97	24.38	37.52	103.22	62.23
Zvishavane	18.94	92	52.80	81.26	97.90	89.19
Average	41.0944	93.973	64.98			

Table 5.2.5: Calculation of the composite indices for overall socio-economic development (I_{OED})

District	I _A	I _B	I _C	I _D	I _{C'}	I _{OED}
Beitbridge	62.58	75.37	123.96	53.22	8.07	37.72
Bikita	79.76	31.48	92.11	50.26	10.86	34.21
Bindura	76.59	133.98	107.05	86.16	9.34	53.61
Binga	51.96	23.93	180.20	42.84	5.55	23.32
Bubi	61.90	55.02	108.15	51.54	9.25	35.69
Buhera	79.02	31.55	90.99	44.46	10.99	33.22
Bulawayo	180.62	219.13	50.96	402.65	19.63	132.98
Bulilimamangwe	63.84	53.83	75.03	48.97	13.33	38.70
Centenery	54.87	70.85	176.56	55.08	5.66	33.18
Chegutu	81.32	126.04	77.35	87.90	12.93	58.42
Chikomba	70.69	69.56	61.18	68.07	16.34	48.36
Chimanimani	78.79	47.41	116.17	91.17	8.61	41.38
Chipinga	69.05	42.18	178.05	78.17	5.62	33.63
Chiredzi	59.00	88.64	131.19	70.25	7.62	40.91
Chirumanzi	71.26	131.61	92.64	61.35	10.79	49.92
Chitungwiza	181.01	191.44	40.59	402.65	24.64	136.17
Chivi	87.91	30.10	72.16	49.63	13.86	36.73
Gokwe	68.49	42.60	122.43	39.24	8.17	31.10
Goromonzi	96.46	95.63	73.35	93.02	13.63	58.48
Guruve	55.31	66.00	132.19	52.48	7.56	34.70
Gutu	81.35	37.20	54.40	65.99	18.38	43.77
Gwanda	82.97	98.04	47.92	75.77	20.87	59.89
Gweru	86.02	145.34	61.02	81.97	16.39	64.01
Harare	190.82	175.97	59.35	170.30	16.85	99.08
Hurungwe	71.43	91.05	101.13	70.36	9.89	46.12
Hwange	58.14	114.12	91.13	98.09	10.97	51.70
Hwedza	80.76	60.58	79.37	56.77	12.60	43.25
Insiza	67.15	76.66	44.90	64.20	22.27	52.08
Kadoma	75.86	114.35	83.84	80.39	11.93	53.70
Kariba	53.73	82.45	136.66	57.55	7.32	36.96
Kwekwe	78.28	151.53	70.62	87.64	14.16	61.94
Lupane	65.06	49.64	97.25	39.11	10.28	33.76
Makonde	70.28	124.53	137.35	76.62	7.28	47.01
Makoni	81.57	90.82	58.25	81.80	17.17	56.80
Marondera	84.57	114.06	48.19	85.38	20.75	64.30
Masvingo	84.46	111.95	70.85	80.82	14.11	57.31
Matobo	70.52	100.40	64.05	54.93	15.61	49.64
Mazoe	79.04	99.34	146.72	75.52	6.82	44.84
Mberengwa	80.54	63.19	94.96	46.32	10.53	39.69
Mount Darwin	67.40	53.36	142.45	52.69	7.02	33.96
Mudzi	72.33	11.01	164.72	46.96	6.07	21.83
Murehwa	85.74	46.99	86.07	49.99	11.62	39.11
Mutare	87.74	91.86	71.12	91.17	14.06	56.69
Mutasa	87.28	68.98	82.79	97.08	12.08	51.55
Mutoko	78.75	39.16	98.86	51.34	10.12	35.57
Mwenezi	56.35	37.16	153.21	49.78	6.53	28.72

District	I_A	I_B	I_C	I_D	I_{C'}	I_{OED}
Nkayi	73.43	55.83	115.08	39.63	8.69	34.47
Nyanga	71.36	65.54	108.81	59.24	9.19	39.95
Rushinga	59.65	37.16	115.45	63.90	8.66	33.28
Seke	77.59	58.82	77.46	62.86	12.91	43.87
Shamva	65.67	78.21	137.35	63.67	7.28	39.28
Shurugwi	74.34	145.14	66.18	96.56	15.11	62.99
Tsholotsho	65.95	22.51	99.09	45.99	10.09	28.81
Umguzu	67.43	132.10	66.57	72.11	15.02	55.73
UMP	79.13	14.80	98.71	48.25	10.13	27.51
Umzingwane	71.43	99.77	66.64	74.45	15.01	53.12
Zaka	90.15	36.65	103.31	46.19	9.68	34.86
Zvimba	83.00	92.38	145.11	62.23	6.89	42.58
Zvishavane	82.03	103.29	35.87	89.19	27.87	67.75

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