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THE 6TH RESEARCH SEMINAR SERIES PROCEEDINGS



REPORT ON THE 6TH SOCIAL SCIENCES RESEARCH SEMINAR SERIES HELD ON 11 SEPTEMBER 2009 IN THE GREAT HALL

Opening Remarks

The seminar started at 09:37 hours. The Acting Executive Dean, Mr. S.R. Mhlahlo gave the welcome remarks. The key note address came from the Acting Pro Vice Chancellor Mr C.N. Gwatidzo who welcomed Mr E. Mupfiga (The Registrar) Dr Moyo (Acting Director of Research and Postgraduate Studies), Mr. Chitanana (Research Board Chairperson) and colleagues present. He stated that he was standing in for the Vice Chancellor, Professor N. Bhebe who was attending some business outside Gweru and thus could not attend the seminar.

The Acting Vice Chancellor was a bit worried about the slow turnout of academics for the seminar. He reiterated the importance of making publications for tenure and knowledge generation. He highlighted that the Midlands State University is the only one paying US\$20 for a journal publication. This honorarium reflects the support the university has for research. The A/V.C commended the support and the leadership in the faculty of Social Sciences in its effort to promote research.

The presentations came in the following order;

- 1. “KASHAURA KARIMBA” TECHNOLOGICAL DEVELOPMENT IN MBIRA CONSTRUCTION – THE BIRTH OF KARIMBA SHAURO . Presented by Mr. P. Matiure**
- 2. THE CONTRIBUTION OF VEGETABLE FARMING TO HOUSEHOLD FOOD SECURITY AND RURAL LIVELIHOODS IN UZUMBA MARAMBA PFUNGWE COMMUNAL LANDS OF ZIMBABWE: Presented by Mr. T. Marambanyika, Mr. T Mutekwa, Mr. C. Mutsiwegota and Mr. M. Matsa**
- 3. RESEARCH PUBLICATION AS A REQUIREMENT FOR TENURE; CHALLENGES FACED BY UNTENURED LECTURERS IN ZIMBABWE: Presented by : Mr D Mawere**
- 4. DISASTER, RISK MANAGEMENT AND THE VULNERABILITY CONTEXT IN RURAL ZIMBABWE PROSPECTS FOR DEVELOPMENT: Presented by : Dr P.P Bongo**
- 5. WOMEN IN POLITICS IN ZIMBABWE : REAL EMPOWERMENT OR A POLITICAL GIMMICK: Presented by : Mrs D Goredema and Mrs M King**
- 6. INSTITUTIONAL RESPONSE TO CHALLENGES FACED BY WORKERS WITH FAMILY RESPONSIBILITIES. THE CASE OF MIDLANDS STATE UNIVERSITY: Presented by : Ms. R. Mwanza and Ms S. Tirivanhu**
- 7. DELIMITING SPHERES OF INFLUENCE OF GWERU AND THEIR ROLE IN DEVELOPMENT PLANNING OF THE MIDLANDS PROVINCE OF ZIMBABWE: Presented by : Mr S. Jerie**
- 8. THE PATTERNS AND DEVELOPMENTAL IMPACT OF PUBLIC SECTOR CORRUPTION IN ZIMBABWE SINCE 2000: Presented by Mr I. Jeko, and Mr. C. Manyumwa**
- 9. SUSTAINABLE SOIL MOISTURE CONSERVATION TILLAGE TECHNOLOGY ADOPTION. EVALUATION OF THE NO TILL TIE RIDGING TECHNIQUE IN CROP PRODUCTION AMONG SMALL HOLDER FARMERS IN MANICALAND: Presented by Mr J.B. Chivizhe and Mr. C.T.F. Murewi**
- 10. THE ROLE OF ENVIRONMENTAL FACTORS IN THE DISTRIBUTION OF POLLUTANTS AROUND THE CITY OF GWERU’S DUMPSITE: Presented by Mr.M. Matsa and V. Mutekwa**

“KASHAURA KARIMBA” INNOVATION AND HYBRIDIZATION OF MBIRA INSTRUMENT IN ZIMBABWE. THE BIRTH OF KARIMBASHAURO MBIRA HYBRID

By

Perminus Matiure¹

Department of Music and Musicology
Midlands State University
P.Bag 9055
Gweru, Zimbabwe

Abstract

Innovation has enabled mbira makers to produce various hybrids of mbira by adding keys of the choice. Consequently this led to the birth of several types of mbiras that we find distributed in and around Zimbabwe. These include hera, munyonga, mbira dzavadzimu, njari, karimba, ndimba, dzvaNdau, matepe just to mention but a few. Although these mbiras differ in the number of keys and the arrangement, they still retain the core keys of karimba which proves that they are all hybrids of karimba. Any additional key/s to a mbira gives birth to a new hybrid which assumes a new flavor in its resultant sound. Several mbira researchers like Andrew Tracey (1963) and Berliner (1993) as well as mbira players like Sam Mujuru maintain that the need for the mbira player to improve the efficacy and proficiency of his/ her mbira is the driving force behind innovation of mbira hybrids. It is against this background that the writer, was prompted to research on the existing karimba, analyze its sound range and improve on it in order to play the lead, kushaura in a more elaborate and linear manner giving birth to a hybrid called karimbashauro. The writer carried an ethnographic research in Hwedza district in which participant observation method was used to collect empirical data on the layout of keys on mbira dzavadzimu and kwanongoma karimba also called nyunganyunga. This article seeks to present this new hybrid by tracing its genealogy, analyzing the layout of its keys and presenting transcriptions of songs that can be played on the hybrid as well as the part it plays when played together with other mbiras like kwanongoma karimba and dzavadzimu.

Introduction

The world in which we are living is fast growing technologically due to the tirelessness of scholars and inventors who are innovating more and more sophisticated machines and instruments to the satisfaction of their social, economic and technological needs. Innovation has cut across all levels of development in many countries and Zimbabwe is no exception. In Zimbabwe we have not only noticed innovation in the fields on agriculture, sciences, industry and technology, but also in the field of instrument construction especially in the *mbira* family. Innovation in the *mbira* family has culminated in the creation of several different types of *mbira*. Such a move has brought in the theory of hybridization, a term that has entered the discourse of ethnomusicology to mean the amalgamation of certain sonic features of two or more instruments. *Mbira* makers and players add keys to an existing *mbira* to come up with a hybrid whose resultant sound assumes a new flavor because of the added keys. To support this stance Tracy (1972: 85) confirms that what differentiates one *mbira* from another is the arrangement of the keys which may be altered by the addition or subtraction of a few notes, or more rarely by transposition of a note or two. Such a move has been in operation since the creation of the supposedly first *mbira* in Africa.

¹*Perminus Matiure, Lecturer, Department of Music and Musicology, Midlands State University, P.Bag 9055, Gweru, Zimbabwe, e-mail mtiurep@msu.ac.zw*

The *mbira* instrument has become the center of attraction in several African countries and of these countries Zimbabwe has the most concentration of *mbira* instruments in their varieties. The *mbiras* found in Zimbabwe are *njari*, *matepe*, *mbira dzavadzimu*, *munyonga*, *karimba*, *mana embudzi* and *hera*. According to Tracy (1972) “...all the *mbiras* of Africa are descended from one another, and that all stem from one particular type, which can then be assumed to be the form of the instrument as it was originally invented.”

This is evidenced by the fact that each of the *mbiras* mentioned above has its own descendents, for example *njari* gave birth to *njari huru* and *njari dza maNjanja*, *Karimba* gave birth to *Kwanongoma karimba*, and *dzavadzimu* produced *matepe*. This is a clear justification that innovation has been in place and has resulted in the creation of several types of *mbira* we see not only in Zimbabwe but in Africa as a whole especially countries like Malawi, Zambia, Mozambique and north of South Africa.

Tracy’s 1972 article on, The original African *mbira* clearly demonstrates how all the *mbiras* we have in Africa descended from *kalimba*. His accession is drawn from the fact that all these *mbiras* bear the basic core notes of *kalimba*. All the *mbiras* above are believed to have originated from *kalimba* because Tracy (1972) confirms that they all contain the basic *karimba* core. Tracy even demonstrated that to me when I visited ILUM in South Africa. This is a clear indication that *mbira* makers continued to add some keys on the basic *karimba* core to produce different other types of *mbiras* played in Africa today. The writer is no exceptional for that. For him the notes were added to *Kwanongoma karimba* which is also a descendent of *kalimba*. Let me describe the structure and give a brief history of *kwanongoma karimba* or *nyunanyunga* by presenting my hybrid *karimbashauro*.

The structure of Kwanongoma karimba/ nyunganyunga.

Karimba comprise of a wooden soundboard called *gwariva* with an aggregate of metal keys called *mbira* laid on it. The soundboard is normally made out of special wood called *mufenje* or *mubvamaropa* also called *mukwirambira* whose log is shown below. The keys are forged from any high carbon iron wire which has high tension.



Fig 1. Mubvamaropa

Like any other *mbira kwanongoma karimba* has cross bar or *mutanda*, bridge, and *danhiko* as shown below;

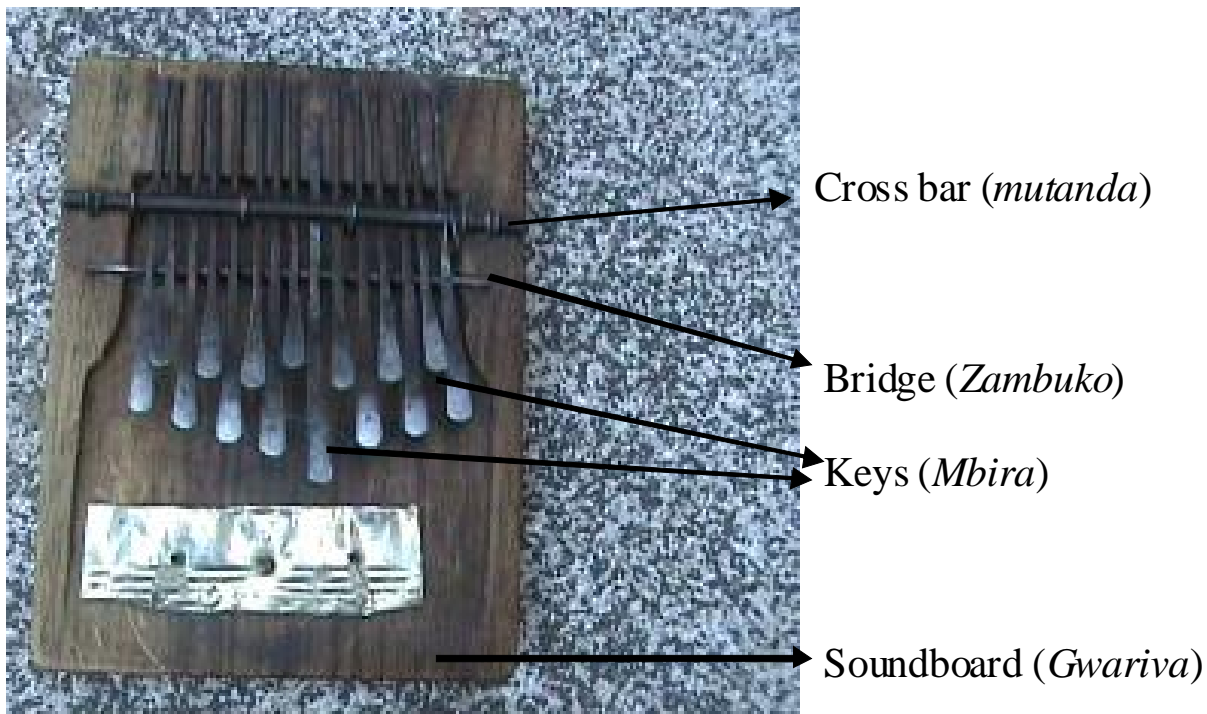


Fig 2. Parts of *karimba*.

Playing technique.

Kwanongoma karimba is played by plucking the keys using thumbs and the right index finger. The technique combines chordal and splitting which produce a web of sounds that criss-cross as well as push and pull. The resultant sound produces what Berliner (1993) calls inherent sounds. That is sounds that are produced as a result of clashes of sounds of different keys. The music can be described as being, interwoven, intertwined, highly polyphonic and highly polyrhythmic. The sound is rich in many voices which makes the instrument unique in its own right.

The birth of *kwanongoma karimba*.

The birth of *Kwanongoma karimba* commonly known as *nyunganyunga* came as a result of its introduction at Kwanongoma College in Bulawayo where Jege Tapera was invited to teach *karimba mbira* which he brought from Mozambique. This development is attributed to technological development which enabled the college to have a well equipped workshop in which several innovations were made not only on *mbira* but on several indigenous instruments. *Kwanongoma karimba*'s innovation came as a result of combined efforts by Jege Tapera, Hugh Tracy, Andrew Tracy, and Eliot Ndlovu. The team added two keys to the original thirteen key *karimba* to produce fifteen key instruments. In other words the keys were added to the core *karimba* keys which are common in any type of *mbira* in Africa as previously alluded to. In order to make the instrument more audible, the college introduced a wooden resonator in which the *mbira* was permanently fixed with screws. This is in line with Malinowski 1945's theory of diffusion which postulates that music of a culture can be diffused with elements of another culture. In this case the changes on the instrument employed were influenced by the west. These are the tuning system, use of wooden resonator instead of gourd, use of bottle tops to replace the see shells and even the use of chain guides to hold the cross bar instead of wire. The new hybrid produced at Kwanongoma can be in F or in F sharp. The instrument is given recognition worldwide and was introduced in America by Dummy Maraire, a product of Kwanongoma who is also responsible for coining the name *nyunganyunga* for the same instruments. Below is the layout of keys of the instrument as they look right now showing lowest and highest notes.

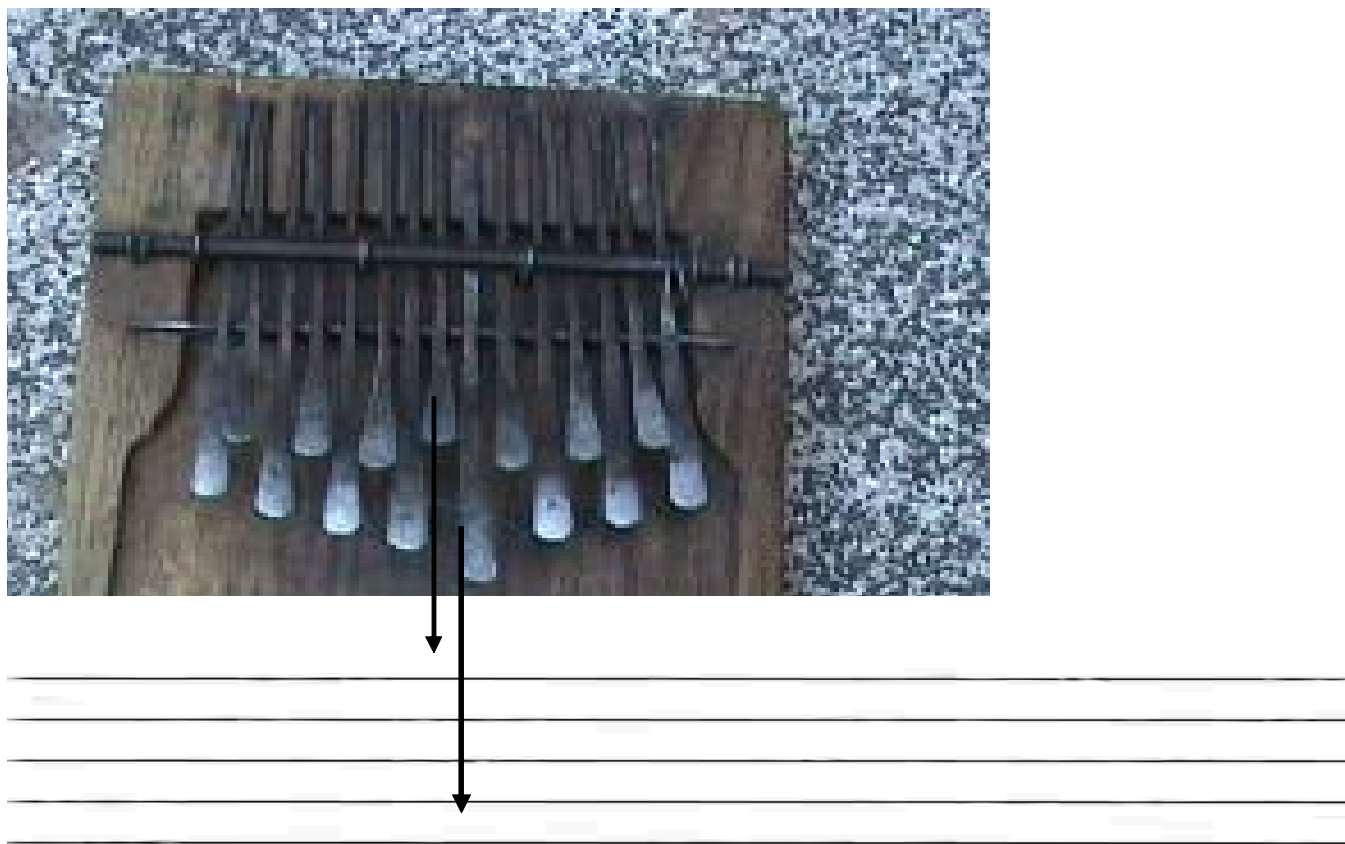
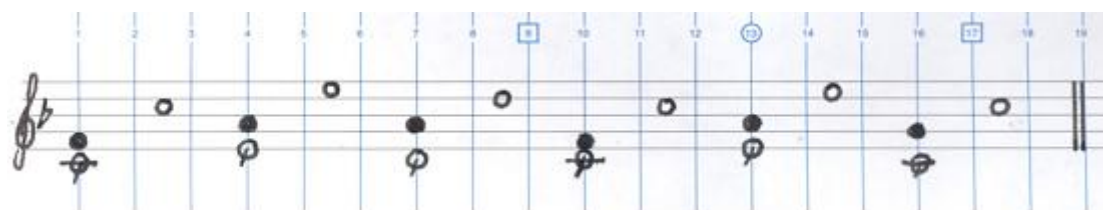


Fig 3. Layout of notes on *karimba*

Note that the top manual has notes; E D C F' C D E with C, D, and E duplicated to allow a quick repetition of the same note, *hwindimbi*. The bottom manual has notes A G F A, F, C, D, E,. The notes added onto the original *karimba*, widened its sound range hence enabling the players to add more flavor to the resultant sound. The modes that are commonly played on this *mbira* are *kukaiwa*, *chemutengure*, *nhemamusasa*, *bungautete* and *chembere dzemusango*. The sound range is from F, to F' and there is no B Flat. Below are the transcriptions of *kukaiwa* and *chemutengure*;

Kukaiwa on kwanongoma karimba



Chemutengure on kwanongoma karimba



***Kwanongoma karimba* and its subsequent hybrids**

Kwanongoma karimba appeared to play a limited number of songs as compared to other *mbiras*. This weakness is attributed by lack of certain notes on the scale as well as a limited register ranging from F, to F⁷ producing only two registers. Because of this weakness *mbira* player like Chawasarira and Marizani added some more keys to widen the upper register. This enabled the instrument to play more songs than before. Just like the other two *mbira* player mentions above the writer discovered the same weakness which then prompted him to research on the instrument resulting in the innovation of a *karimba* hybrid with an extended upper register,

The birth of *karimbashauro*

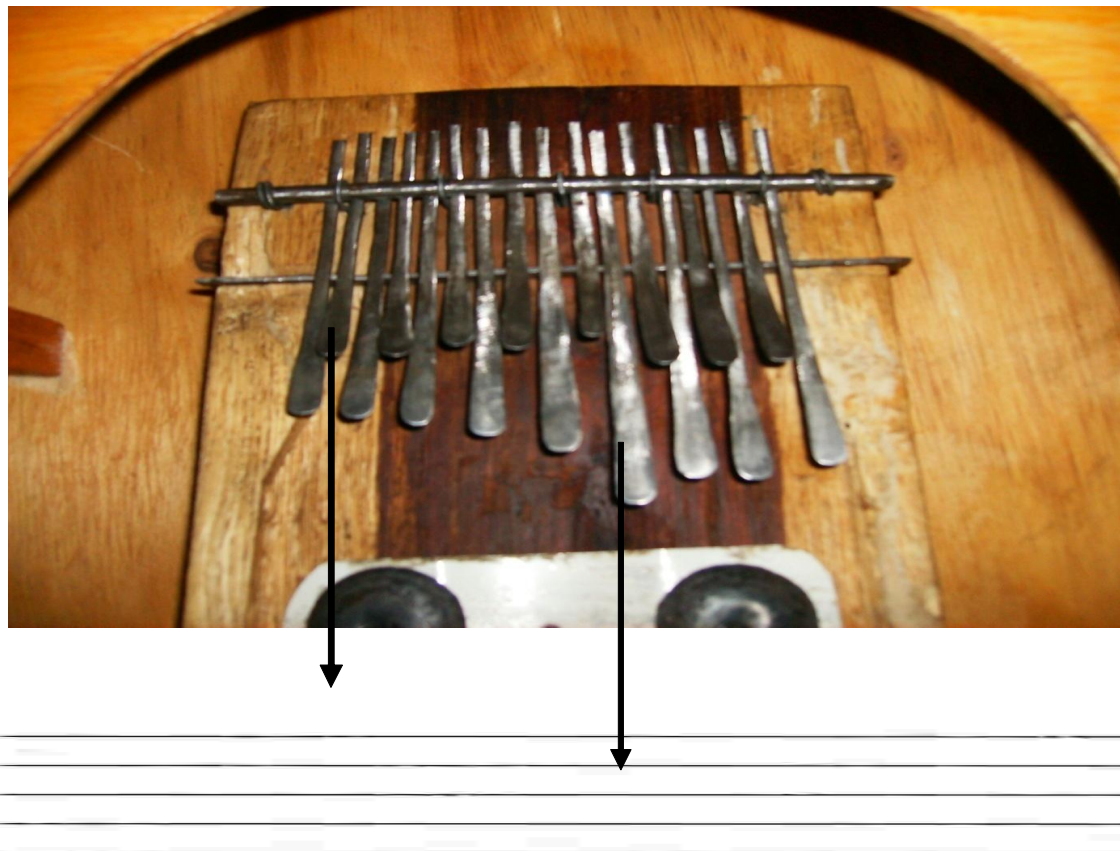
As a Zezuru by descent the writer grew up in a village where *mbira* music was the heart of all the cosmological activities. Like any other shona dialect the Zezuru believe that there is a very strong relationship between the living the dead, ancestors or *vadzimu* to such an extent that the living can communicate with the ancestors through spirit mediums, *masvikiro* who get possessed by the spirits of the ancestors during a *bira* ceremony. This is in line with Placide Tempels' 1959 theory of cosmology. It is only after the spirits have been evoked by the meditative and soothing music of *mbira* that communication between the living and the dead can take place. In this case the *mbira* can be *dzavadzimu*, *matepe* of *njari*. For the shona both the *mbira* and the songs belong to the ancestors. The writer performed in *mapira* ceremonies as a *mbira dzavadzimu* player since the age of twelve. His experiences juxtaposed with the findings of his 2008 unpublished thesis on the relationship between *mbira dzavadzimu* modes and zezuru spirit possession drew me closer to the intricacy and efficacy of not only *mbira dzavadzimu*, but also *kwanongoma karimba*.

The writer was introduced to *Kwanongoma karimba* by S Matiure who was my lecture at the University of Zimbabwe in 2004. From that time the writer played and studied the instrument closely and enjoyed the high and clear voice of the *kwanongoma karimba* and its flexibility, softness and ability to articulate notes clearly in both horizontal and vertical form. For him it is more harmonic than *dzavadzimu*. However he had a problem with *Kwanongoma karimba*'s inability in producing a surrogative lead line, *kushauro*. In an attempt to solve this problem the writer innovated *nyunganhare* in 2006 which only proved to be good at fusing *nhare* and *karimba* but still did not please him. He was then forced to reconsider the sound range of *karimba* which is F, to F⁷. That is two octaves apart. The note B was added to the middle register which is missing in *kwanongoma karimba* in F major and G⁷ A⁷ B⁷ C⁷ in the top register to extend the scale of C major up to C⁷. These five notes created wonders. It is now possible to surrogate and produce a descending lead line common in songs like *karigamombe*, *nhemamusasa*, *taireva*, *chipembere* and *nyamaropa*. Without these notes it has been impossible to produce this common descending melody which characterizes the lead line not only in *mbira* music but in most of the shona traditional songs which employs yodeling, *huro*. Because of this break through on *karimba* which came after six years of several attempts, I decided to coin the *mbira* the name *karimbashauro*. The name bears both its original name and its role in an ensemble, *mhuri*.

Layout of notes on *karimbashauro*

The notes on the new hybrid are such that they retain all the notes of *karimba* but accommodates a B and this extends the scale of C up to C⁷. In other words the number of keys are now 17 and the range is from F, to C⁷ instead of F, to F⁷. This development allows the instrument to produce higher notes thereby giving the player chances to surrogate any song played on any other *mbira*.

Below is the diagram of *karimbashauro* showing the lowest and highest notes.



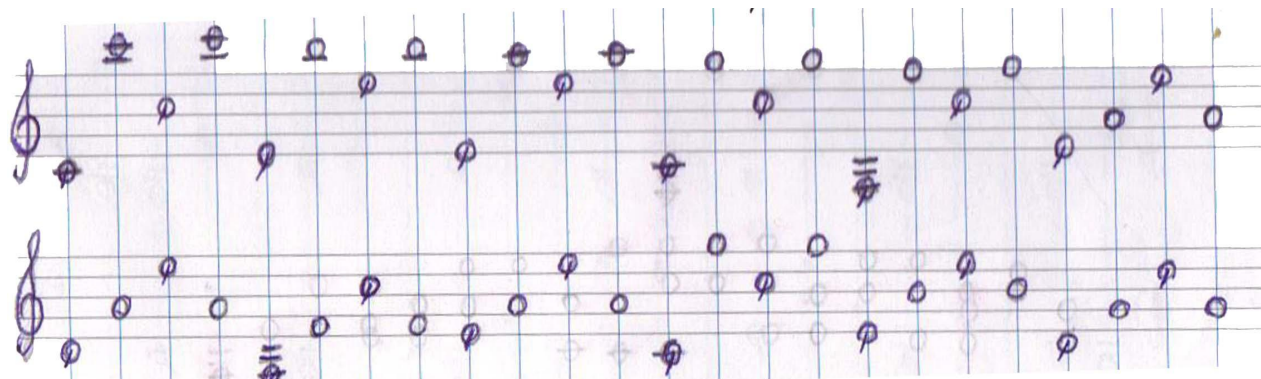
Note that the top manual is now having the following notes from left to right; C' B' A' G' F' C D E different from the usual *karimba* which are E D C F' C D E. The bottom notes are BA

G F A F C D E. Also note that only one note, B was added on the bottom.

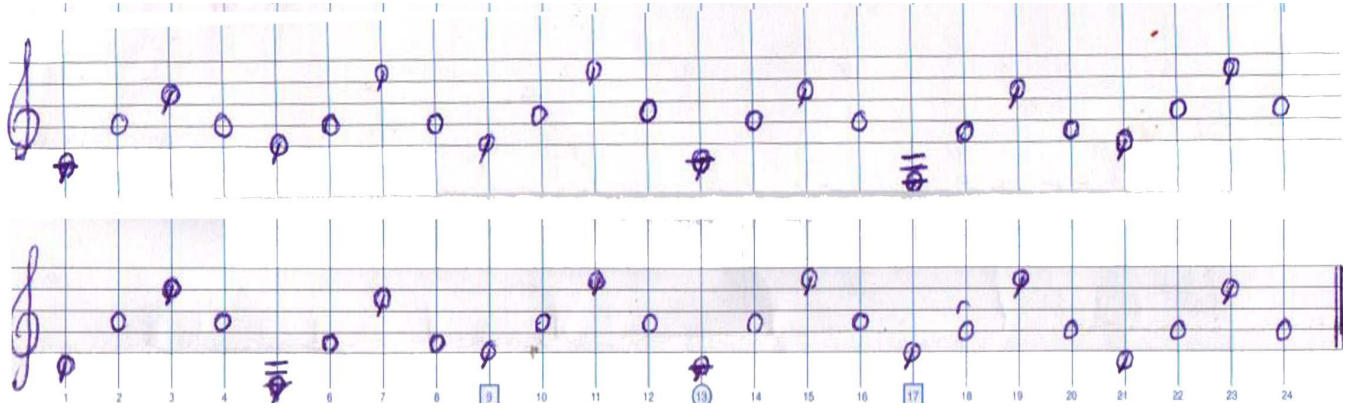
Songs played on *karimbashauro*.

Karimbashauro can play all the songs that are played on *kwanongoma karimba* and some that are played on *dzavadzimu*. Because of its extended register the instrument is able to surpass any other *mbira* in terms of high notes, *nhetete*. Below are some transcriptions of songs for *karimbashauro* alongside *kwanongoma karimba* written on a pulse notation system adopted Tracy pulse notation for the transcriptions. This is meant to show the high notes articulated by the hybrid but are not found on *kwanongoma karimba*.

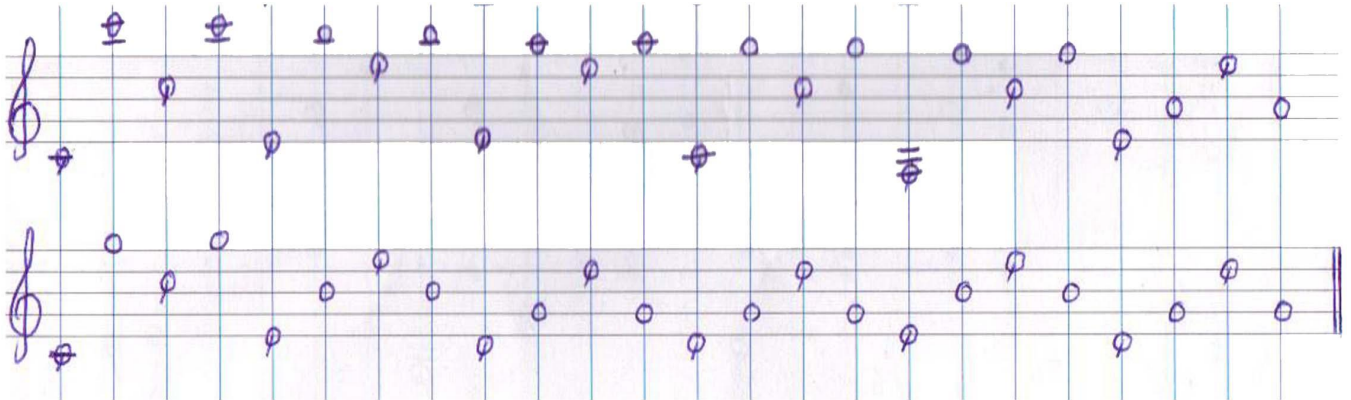
Nhemamusasa on *karimbashauro*



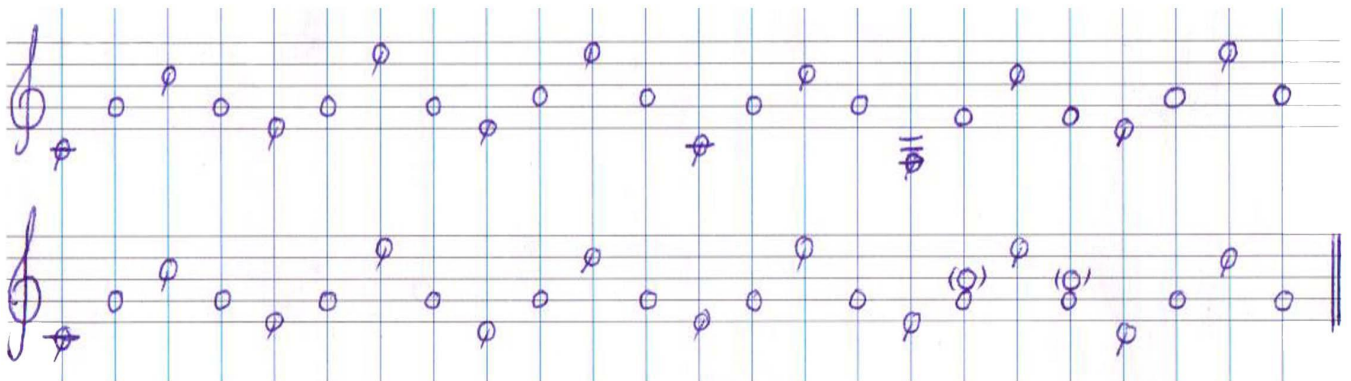
Nhemausasa on karimba



Taireva on karimbashauro



Taireva on karimba



Karimbashauro in an ensemble.

It is fascinating to note that *karimbashauro* can produce a very distinct melodic lead line when played together with *kwanongoma karimba* and *dzavadzimu*. It is also able to surrogate descending melody line common in most of the *mbira* songs. The alternation of the left thumb which plays the high notes and the right index finger and right thumb produces a more polyphonic structure which when interwoven with the rhythm of *kwanongoma karimba*

and the bass line, *mazembera* from *dzavadzimu* makes the whole performance a complete whole. Below are the three *mbira* with their sound ranges shown below. Note that *karimbashauro* has the highest note C'' and lowest note F, *karimba* has highest note F' and lowest note F, and *dzavadzimu* has the highest note G' and lowest note G. The implication is that *karimbashauro* has the advantage of producing high notes typical of notes needed for *kushaura* and *dzavadzimu* produces very low notes for *mazembera*. Then *karimba* lies in between. The combination of this family produces a highly polyphonic and well intertwined resultant sound as shown by the scores below. The introduction of the hybrid *karimbashauro* adds a lot of value to the resultant sound produced by the three instruments. Below are the three *mbiras* that can be played as an ensemble with each instrument playing its own role.



Karimba (Rhythm 1)

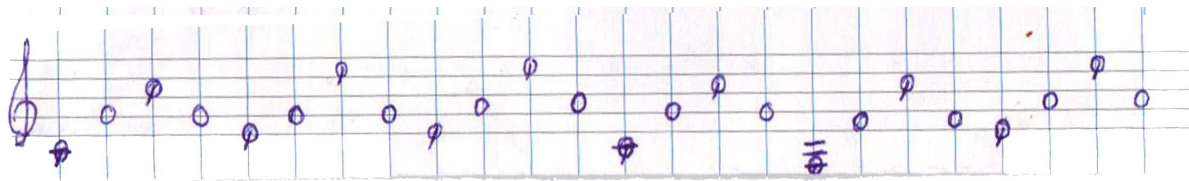


Karimbashauro (Kushaura)

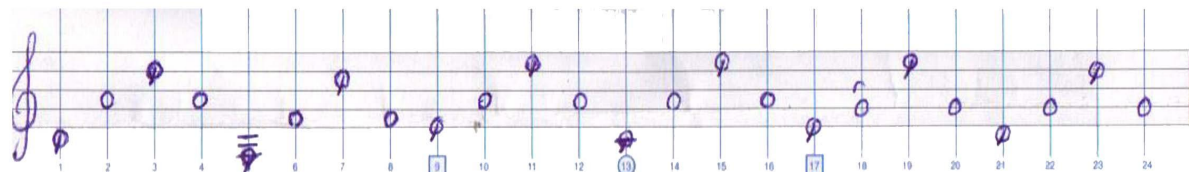


Mbira dzavadzimu

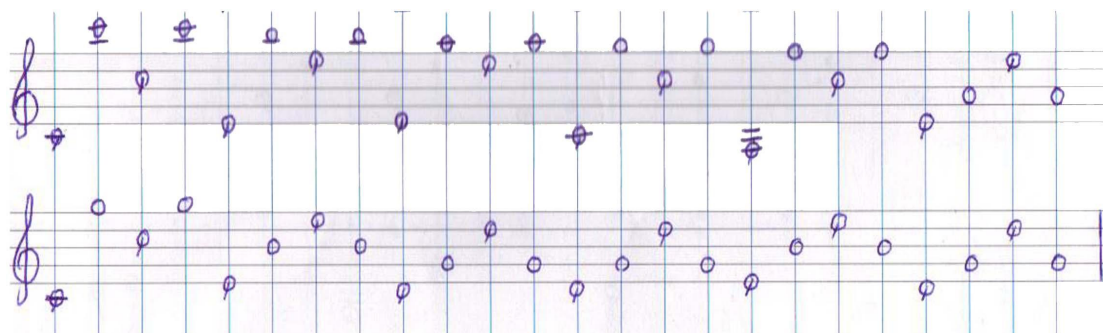
The song *taireva* played by the three *mbiras* each *mbira* playing its own role.



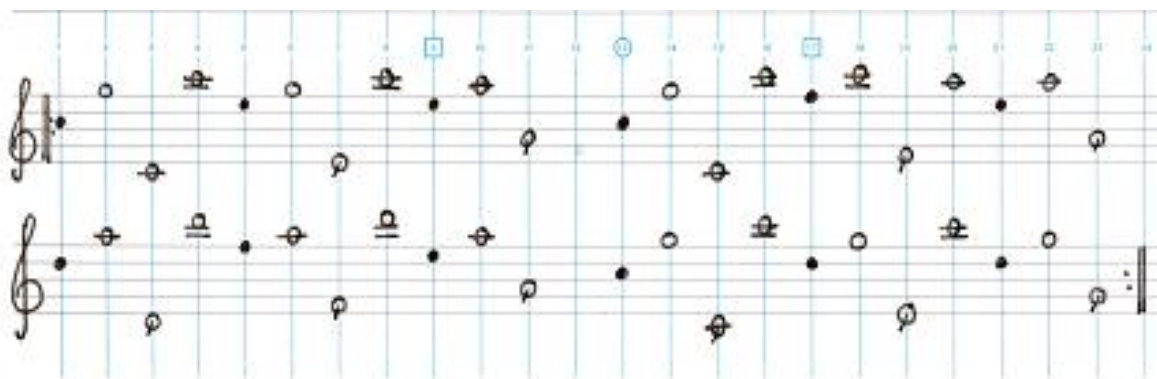
Karimba:



Karimbashauro:



Dzavadzimu:



Conclusion

Innovation and hybridization of *mbira* instrument has been in progress since the creation of the mother *mbira*, *karimba*. It is highly commendable that ethnomusicologists and ethnographers are taking chance to lift the field of *mbira* music *mbira* construction and playing to greater height Hats off for the good works of *mbira* researchers like Hugh Tracey, Andrew Tracey whom I had a chance to interact with in August 2008 at Grahams town and Paul Berliner who started the journey of the scholarly research on *mbira* and its music in Zimbabwe. To date we have a good reliable source of not only knowledge about *mbira* but also an archive of the instruments themselves which are housed at the music archive of ILAM in SA. Not forgetting the works of our fellow *mbira* player who worked hard to preserve our heritage as well putting Zimbabwe on the map by performing and teaching not only locally but

also internationally. Innovation on *mbira* has been attributed by technological development as well as the desire by the *mbira* makers and player to improve on the resultant sound of the instrument. Further studies on the instrument by the writer, based on an emic view may one day give birth to a totally unique creation of a *mbira* which from an epistemological premises will contribute significantly to our indigenous heritage as well as fitting perfectly well in this world of ever changing technology.

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DELIMITING SPHERES OF INFLUENCE OF GWERU AND THEIR ROLE IN THE DEVELOPMENT PLANNING OF THE MIDLANDS PROVINCE OF ZIMBABWE

By

Steven Jerie¹

Department of Geography and Environmental Studies
Midlands State University
P.Bag 9055
Gweru, Zimbabwe

Abstract

This study aims at identifying the service areas of Gweru the provincial capital of the Midlands province of Zimbabwe. This is because a close relationship exists between any settlement and the countryside around it. The delimitation of service areas is based on the study of the economic, social and administrative functions offered by the central places. Questionnaires and interviews were used to gather data from the authorities of these functions. Secondary data sources were also used and these included topographic maps, bus timetables, daily and weekly newspapers, published papers and reports from the Central Statistical Office (CSO). Reilly's Law of Retail Gravitation was also employed as a statistical method to test against the empirical method. It was established that the sphere of influence of Gweru is mostly concentrated about the Midlands Province and it is not hexagonal in shape as predicted by Walter Christaller for most service areas. The distortions in shape are due to several factors that include competition from other centres, elongation along transport routes, the impact of administrative boundaries and other truncation factors. The hierarchy of settlements formed is an unbalanced one with two dominant grade 6 centres, Gweru and Kwekwe and it shows lack of settlements in the middle orders. This situation is typical of a primate settlement hierarchy that is typified by the lack of development in the middle orders and the limited service provision in those settlements. Service area study is vital in development planning of the Midlands Province as it assists in identifying those areas of the region that are lacking in terms of service provision.

Key words: Sphere of influence, Service area, Central Place Theory, Hierarchy, Reilly's Law of Retail Gravitation, Range of good or service, Threshold population, Isotropic plain, Development planning

Introduction

There is a close relationship between a central place and its environs otherwise known as its sphere of influence or service area. The central place owes much of its sustenance on the patronage of the surrounding area, its sphere of influence, which supplies it with a proportion of its visitors or customers who wish to benefit from its economic, social and recreational services (Hudson, 1981; Heath, 1991; Carter, 1995; Heath, 1978; Harvey, 1978). The central place is thus the collecting and marketing centre for a wider area than it covers. It is an epitome of the social and economic character of the whole region under its influence. The central place is also the main agency through which external influences are disseminated to the smaller settlements within its influence (Hudson, 1981; Daniel and Hopkin, 1984; Haggett, 1983; Johnstone, 1994; Whyne, 1990).

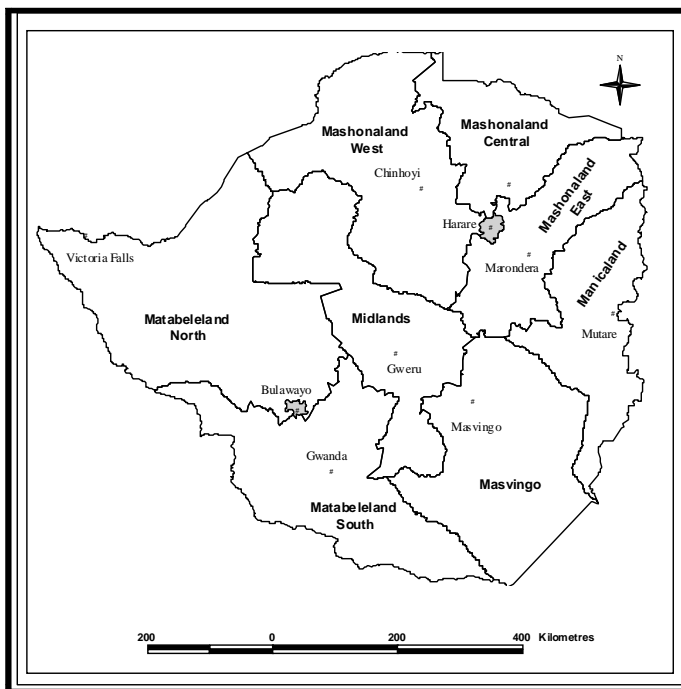
¹Steven Jerie, Lecturer, Department of Geography and Environmental Studies, Midlands State University, P.Bag 9055, Gweru, Zimbabwe, e-mail:jerie@msu.ac.zw

Analysis of central places and their service areas is a vital tool for development planning (Barke and O'Hare, 1984; Hanratty and Heath, 1984; Carter, 1995; Heath, 1991; Wekwete, 1988). The study of the entire urban system enables a rational understanding of the spatial relationships or linkages that exist. Development planning requires an understanding or appraisal of the regional settlement system and the role of each settlement within the provincial framework. Studying a single settlement in isolation is incomplete in that it does not provide linkages that exist within a network of settlements nor does this show rural areas that interact economically and socially with central places.

This study aims at determining the spheres of influence of Gweru, the largest urban settlement in the Midlands Province of Zimbabwe (Fig. 1). It is an attempt to determine the socio-economic and administrative linkages of the areas served by Gweru thereby examining if there is a close relationship between the linkages established and those embodied in Walter Christaller's economic model. Gweru as the provincial capital is a strategic centre in so far as the mapping of the spatial structure of the Midlands Province is concerned. In Zimbabwe, attempts were made in 1977 by Harvey and in 1978 by Heath to test certain aspects of the Central Place Theory. Heath undertook her study on a national scale while Harvey confined her study to a specific communal area. A province provides the basis for regional development and planning since it is a vital horizon in the planning process emanating from the national planning platform of central government.

It is therefore vital to examine in depth the social and economic linkages of the Midlands region so as to come up with a sustainable planning strategy for the development of the Midlands region.

Fig. 1 The Location of the Midlands Province in Zimbabwe



Theoretical Framework

Settlements vary in sizes and provide different goods and services (i.e. functions). A settlement that provides goods and services to the surrounding population is referred to as the central place. In 1933 Walter Christaller attempted to provide a model that described the ordering of central places according to the number of functions they offered and their functional complexity. He developed his ideas based on central places in Southern Germany and the ideas were summarised in a publication entitled *Die Zentralen Orte in Suddeutschland* (i.e. Central Places in Southern

Germany). In his model describing the size and shape of central places Christaller (1933) noted that the central place provides among other services obtainable in the smaller centres, relatively complex services like wholesaling, specialised retailing, large banking tertiary education and specialised medical services (Dicken and Lloyd, 1990; Harmse,1995). A hierarchy that develops among the centres results chiefly from the degree of complexity attained by different centres. The lowest order settlements perform simple functions which are limited in number and kind by the population within usual range of the centre. A centre of the next higher order furnishes all the functions of the lower order plus a number of goods and services that it can furnish as a result of its greater range (Daniel and Hopkinson, 1994; Hartshorne, 1992; McBride, 1991; Yeates and Garner, 1976). This phenomenon continues until the highest order with the most complex functions is attained.

Two economic principles underlie the Central Place Theory and these appear to apply in the real world (Briggs, 1982; Bradford and Kent, 1982; Dicken and Lloyd, 1990 Harmse, 1995). The first principle is that of the range of a good or service. The range is the maximum distance a customer is prepared to travel to obtain a good or a service (Bradford and Kent, 1982; Briggs, Waugh, 1995). The further a person is from a central place, the more costly it will be to obtain the good or service. This is because of the extra costs involved in obtaining a low order commodity such as bread. However, a customer would be prepared to travel longer distances to obtain a higher order good such as a new car or for a higher order service such as university education.

The second principle is that of threshold. In order to provide a particular good or service profitably, there is a minimum population required. This is called the threshold population. Functions depend on different threshold populations e.g. butchery will have a smaller threshold than a supermarket. It means that a population that supports several butcheries may support only a single supermarket. In order to maximise his/her profit an entrepreneur will aim at obtaining a range of good that is larger than the threshold. In developing the concepts of the central place theory a number of assumptions were made to simplify reality and these included the following (Bradford and Kent, 1982; Heath, 1991):

- There is an unbounded uniform plain and there is ease of transport in all directions and transport costs are proportional to distance with only one form of transport
- Population is evenly distributed over the plain
- Central places are located on the plain to provide goods, services and administration services to their surroundings
- Consumers visit the nearest central place that provides the function in demand to minimise distance travelled
- Suppliers of functions act as economic persons in that they maximise their profits by locating on the plain such that they benefit from the largest possible market.
- High order centres supply high order functions not offered by low order centres and all functions offered in low order centres
- All consumers have the same income and the same demand for goods and services.

These assumptions are too simplified to hold true in the real world and were made as the starting point in the development of the central place theory. The principles of range and threshold, however, seem to hold true in the real world and give some credence to Christaller's ideas.

Conceptual Framework

The basis for regional development should be the development of small settlements that have few functions so as to provide the platform for rural development. This can be achieved through marrying the ideas imbedded in the central place theory postulated by Christaller (perception of settlements having geographical space and population) with those of the typical regional development policy(growth point policy). The typical growth point policy sees development emanating from key nodes from which developmental impulses spread to the surrounding areas. The key nodes could be denoted by developing small scale industries in the smaller settlements so as to stimulate growth though backward forward linkages. This conceptual framework is visualised in this inter-married nature

because economic space is closely tied to geographical space through functional transformations which describe relevant properties of economic processes as noted by Boudeville (1966).

Methodology

The research approach employed in this study is based on both the qualitative and quantitative paradigms. The delimitation of the service areas was made chiefly from a study of socio-economic functions of a divergent character (Table 1). Two methods were used in the establishment of the extent of influence of the functions. One method was whereby the customers of the service areas were interviewed to determine the purposes of their visits to Gweru. The other method is whereby the areas served by the functions were provided by the authorities of the functions for example sales managers in the case of retail shops. Areas served by the functions were then demarcated using single lines following administrative boundaries.

Table 1 Functions used in the delimitation of service areas

Economic functions	Social functions	Administrative functions
Retail shops	Educational institutions	Provincial administration
Departmental shops	Libraries	District administration
General dealers	Police	Council/Municipal
Restaurants/ delicatessens	Hotels	Government ministry departments
Financial e.g. banks/ insurances	Other places of entertainment	
Specialist e.g. chemists, opticians	Churches	
Professional offices	Museums	
Service trades		
Wholesaling		
Warehousing		
Automotive/ service garages		

The empirical method is tested against the statistical method that uses Reilly’s Law of Retail Gravitation. The law of retail gravitation states that all things being equal, two cities will attract retail trade from any intermediate smaller city or town approximately in direct proportion to the populations of the two cities and in inverse proportion to the distances of the two cities to the intermediate city or town. The general formula for the law of retail gravitation is as follows:

$$B_a/B_b = P_a/P_b \times (D_b/D_a)^2$$

where B_a is business which city A draws from intermediate town T

B_b is business which city B draw from intermediate town T

P_a is population of town/city A

P_b is population of town/city B

D_a is distance of city/town A from intermediate town T

D_b is distance of city/town B from intermediate town T

The law of retail gravitation can be restated and hence the number of kilometres from trading centre A to the breaking point computed between straight line AB is:

$$\frac{\text{Distance AB}}{1 + \sqrt{\frac{\text{population of town B}}{\text{population of town A}}}}$$

Results and Discussion

The service areas based on the type of customer visit and frequency of customer trips are shown in Figs. 2 and 3 respectively. The more frequent visits to Gweru were those on a weekly basis rather than monthly because of the limitations imposed by transport costs and availability as indicated by Fig3. This clearly reflects the impact of the concept of distance decay and range of a good or service whereby with distance from a central place a customer becomes less willing to travel to obtain it.

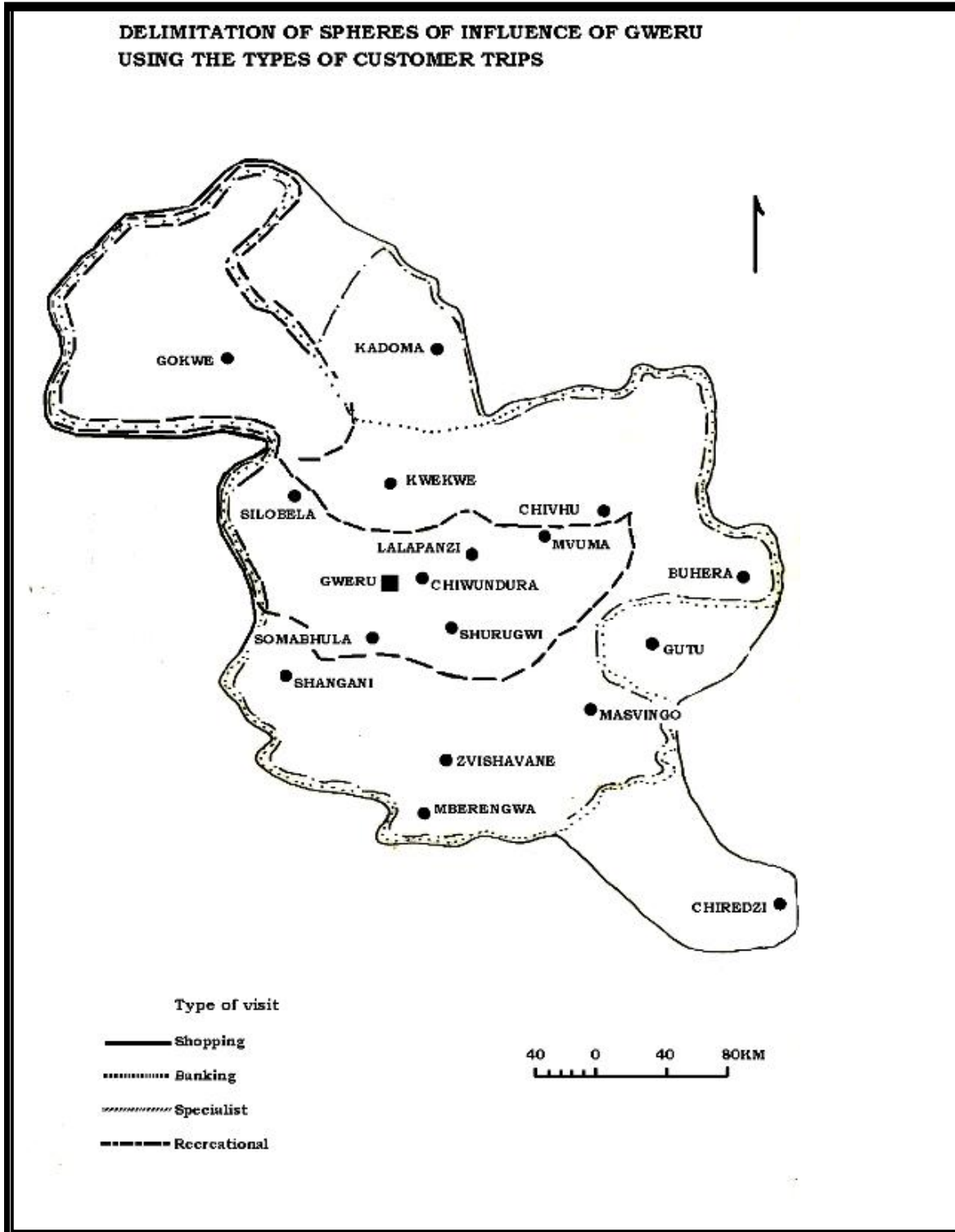


Figure 2. Service areas based on type of customer trips

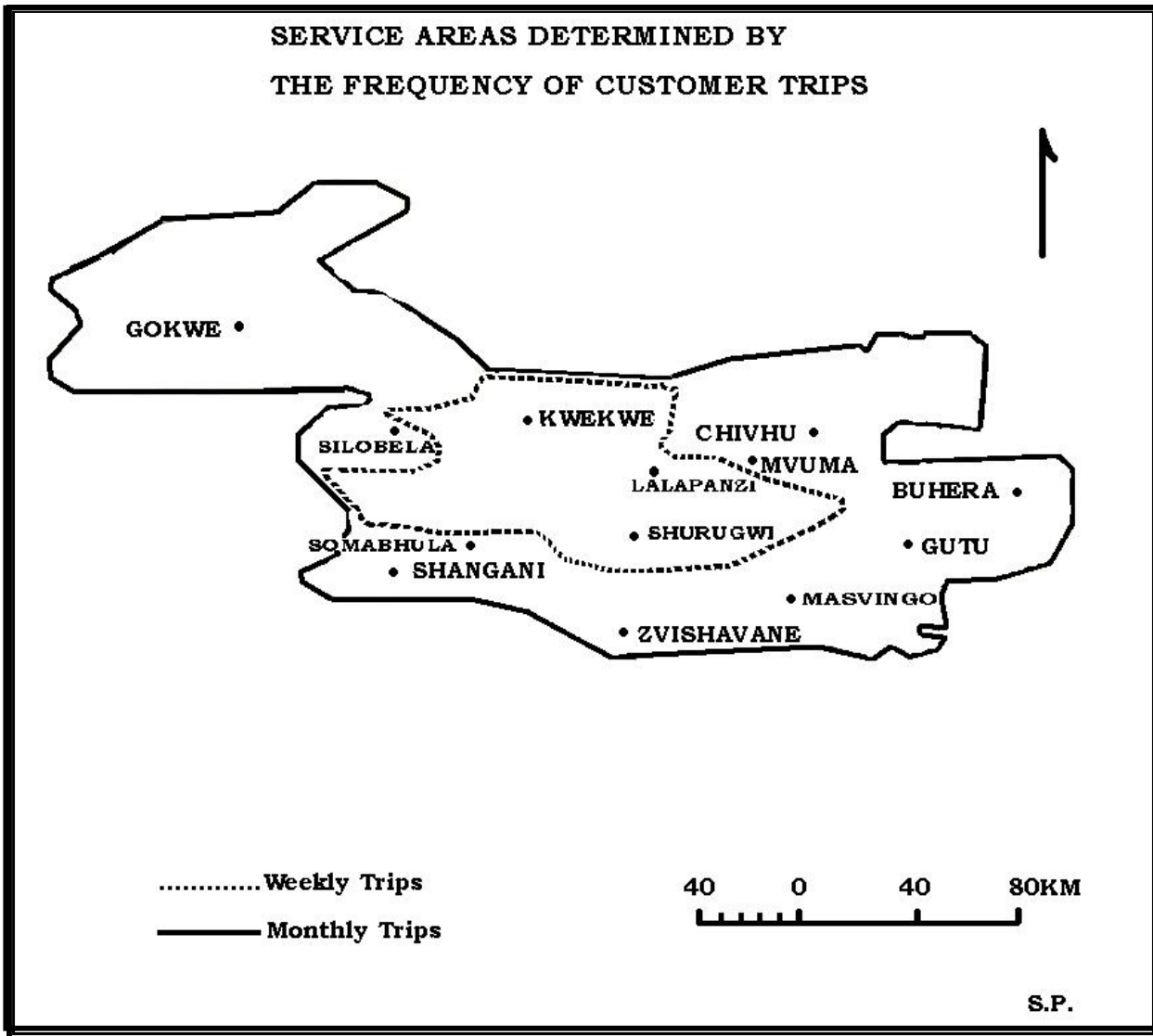


Fig. 3 Service areas based on the frequency of customer trips

The use of Reilly's Law of Retail Gravitation in Delimiting Service Areas

Break points were calculated using the law of retail gravitation and these were based on Gweru as the main centre. The break points were thus calculated between Gweru and three other competing centres namely Bulawayo, Kwekwe and Masvingo. Bulawayo, a seventh order centre and the second largest centre in Zimbabwe, is a serious competitor to Gweru and it would be very interesting to establish how its place on the hierarchy of centres influences the extent of its trade area. The other two competitors are Kwekwe and Masvingo, both sixth order centres like Gweru. The service area delimited for Gweru is shown in Fig.4 and shows a triangular pattern which is very much different from the hexagonal pattern postulated by Christaller. This is a result of a number of limitations inherent in the use of this statistical method. Firstly, the use of only three competing towns, namely Bulawayo, Kwekwe and Masvingo right away leaves out places such as Gokwe, Chivhu, Mberengwa and Shangani which are included in the service area of Gweru delimited using the empirical method. Furthermore, the break-point formula envisages sharp breaks of the service area boundaries and this is not a true reflection of reality. One would expect a gradational break in retail trade boundaries to the centre. However, this statistical model would be very useful in areas that are characterised by low mobility between places.

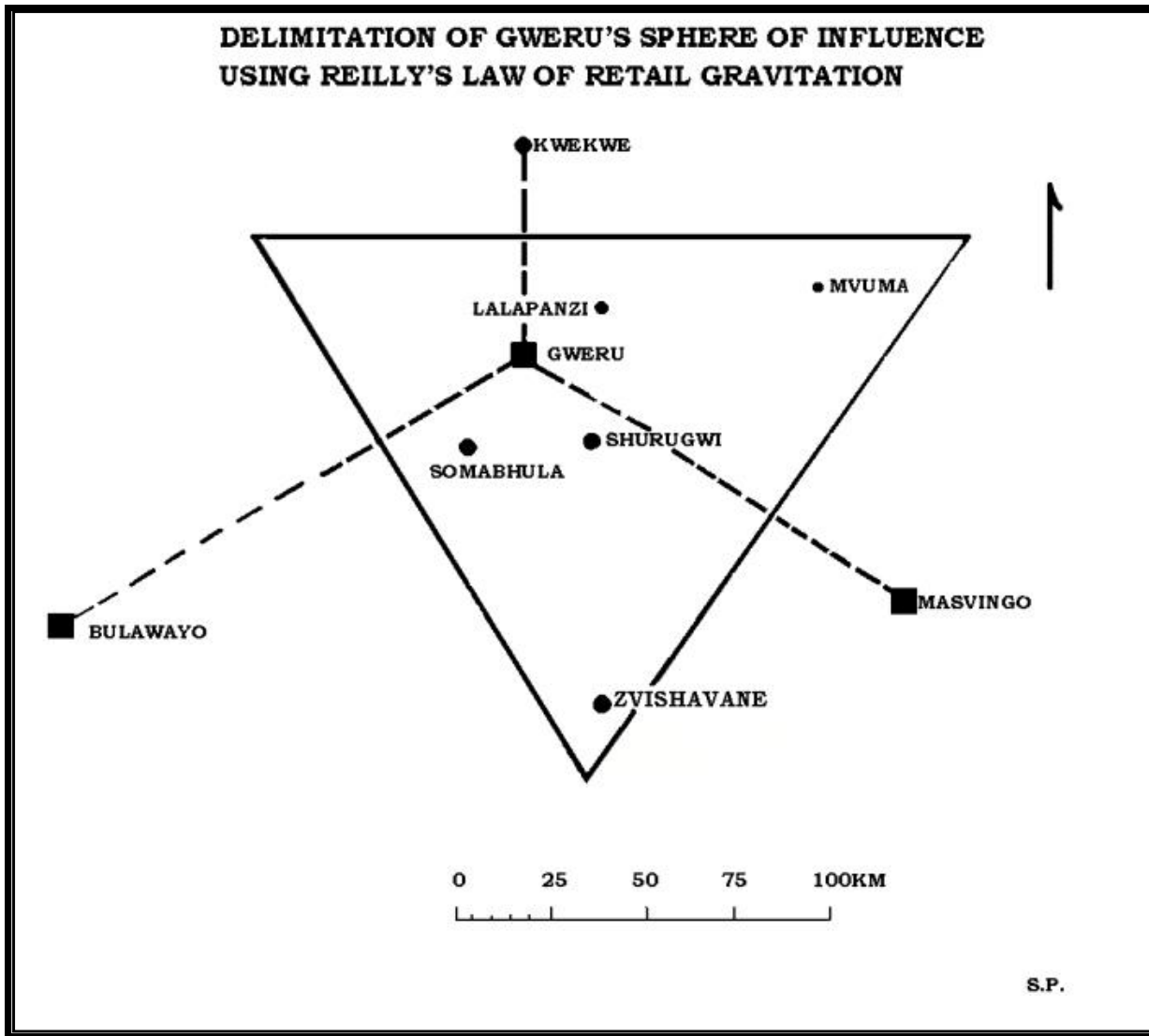


Figure 4 Service area of Gweru using Reilly's Law of Retail Gravitation

Analysis of service areas

Central places in the Midlands can be ranked into a hierarchy with Gweru and Kwekwe as the main centres in Group 6 and these are the highest order centres in the province. The overall service area of Gweru shown in Fig. 5 takes on an oval shape. Within it there is some degree of nesting among the other centres. The grade 6 centres i.e. Gweru and Kwekwe are dominant and link directly with the lower order centres in grade 2 namely Crossroads, Tongogara, Siyahokwe, Mberengwa, Zhombe, Lalapanzi, Munyati, Somabhula and those in grade 1 such as Donga, Mataga, Chegato, Njelele, Battlefields and Insukamini. However, this direct link with lower order centres is a reflection of a primate distribution whereby the middle order centres are by-passed by customers as they search for most goods and services in Gweru and Kwekwe instead of simply visiting centres such as Zvishavane, Shurugwi and Gokwe Centre. This confirms the findings made by Heath in 1986 that it is in the middle levels of the functional hierarchy that Zimbabwean central places are least developed and nesting occurs within service areas of higher order centres. These smaller centres only provide lower order services such as clinics, schools, shops, barbours, simple repair facilities and marketing and therefore look to the higher order centres for services such as referral hospital services, higher education, luxury shopping, high quality entertainment and banking. The hierarchy is an unbalanced one as more centres are concentrated in the lower orders and these are dominated by the provincial capital Gweru and Kwekwe the second largest settlement in the Midlands. This hierarchy or spatial

organisation is heavily influenced the $k = 7$ administrative principle. Christaller developed a 'k' value that reflected the number of lower order centres dominated by the higher order centres. In this case the sphere of influence of Gweru covers the entire Midlands in terms of administrative functions because of its status as the prime city of the province. The administrative principle is thus defined as follows:

$$k = (6 + 1) + 1 = 7$$

This means that the central place dominates wholly all the central places within its jurisdiction and serves its own population as it provides administrative services to them.

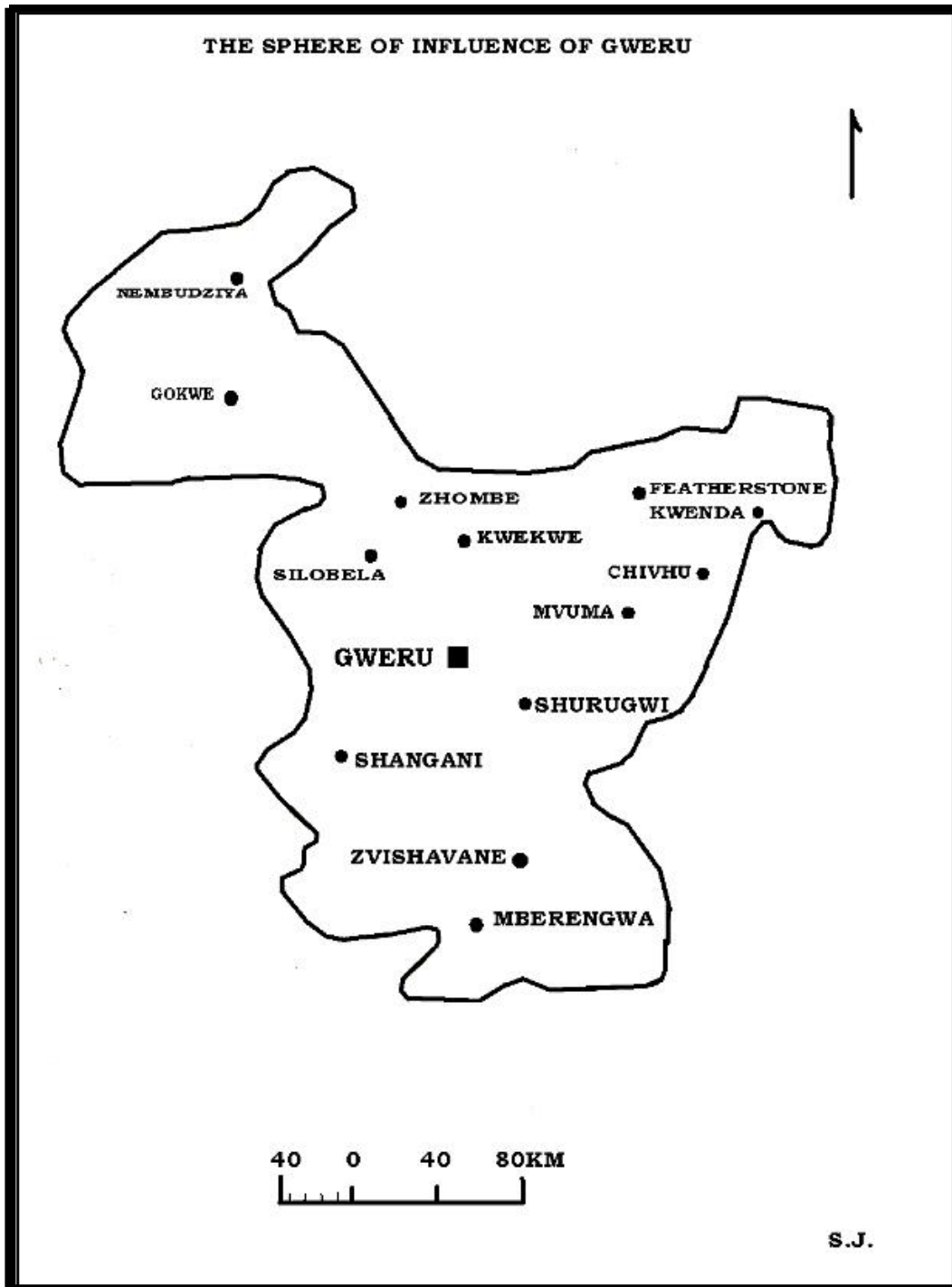


Figure 5. The overall sphere of influence of Gweru

Table 2 The Hierarchy of Central Places in the Sphere of Influence of Gweru

Grade of Centre	Number of Functions	Centres
6	61 and above	Gweru, Kwekwe/Redcliff
5	49-60	Zvishavane
4	41-48	Shurugwi
3	28-40	Mvuma
2	13-27	Crossroads, Tongogara, Siyahokwe, Sesame, Chinyenyetu, Mberengwa, Zhombe, Lalapansi, Somabhula, Zhombe, Munyati, Empress Mine, Mataga
1	1-12	Donga, Chinyemba, Mataga, Insukamini, Masase, Musipane, Mutambi, Bonda, Chegato, Makuva, Mabasa, Matarusa, Mapanzure, Mwembe, Matenda, Mahonde, Muchakata, Njelele, Nyama, Komera, Maboleni, Dendera, Zomba, Manoti, Chireya, Nembudziya, Gwanyika, Goredema, Runyararo, Battlefields, Kurimirana, Mavorombondo, Mwenezi.

It was also noted that there is a complex relationship between the quality/order of functions offered by a central place and its population size. In Zimbabwe in general, centres in grades 6,7 and 8 (Harare, Bulawayo, Gweru, Mutare, Kwekwe, Kadoma and Masvingo) attain high ranks according to both population and functional complexity. However, the situation becomes complex in the middle and lower orders, for example, in the central place hierarchy of Zimbabwe the Midlands town of Mvuma is ranked 38 according to population, but is ranked 31 according to functional rank. This is attributed to the fact that the town concentrates more on servicing a population inclined towards the commercial sector rather than the rural sector. There are also centres that are associated more with the mining sector such as Shurugwi, Zvishavane and Mashava that have a lower functional rank in when compared to the population rank since these are more involved with the specialised sector of mining than the service provision sector. In terms of threshold population sparsely populated areas have larger service areas than densely populated areas. Areas with a high purchasing power located within commercial farming area such as Mvuma easily meet the requirement of a minimum population that has to be served compared to those with a sparse population and low purchasing power. Other Zimbabwean settlements with a lower functional rank in relation to population include Hwange, Mhangura, Triangle, Mashava, Dete and Mutorashanga and this is also attributed to some element of specialisation of economic activity. It has also been proven empirically by Heath (1991) those centres that appear to serve a large or prosperous rural area have a greater number of central functions and hence a higher functional ranking indicating that these settlements owe much of their importance to rural service functions rather than to services provided for their local residents. The hierarchy of some of the dominant central places in Zimbabwe is shown in Table 3.

Table 3 The Hierarchy of Central Places in Zimbabwe

Settlement	Rank according to population	Rank according to functions
Harare/Chitungwiza	1	1
Bulawayo	2	2
Gweru	3	3
Mutare	4	4
Kwekwe/Redcliff	5	5
Masvingo	6	6
Kadoma	7	7
Marondera	8	8
Chinhoyi	10	9
Bindura	11	11
Chiredzi	24	12
Rusape	18	13
Chegutu	15	14
Zvishavane	9	15
Other	Centres with a higher functional rank in relation to population	Centres with a low functional rank in relation to population
	Gwanda, Victoria Falls, Chipinge, Banket, Norton, Beitbribge, Chivhu, Mvuma, Shamva, Gutu, Mutoko, Murewa, Glendale, Filabusi	Hwange, Kariba, Shurugwi, Mhangura, Dete, Triangle, Mashava, Mutorashanga, Nyazura, Penhalonga, Arcturas, Chimani mani, Concession

Adapted: Heath(1991)

The sphere of influence of Gweru and service areas within it reflects a distorted picture of Christaller's primary hexagonal lattice. The distortion can be explained by a number of factors in the absence of an isotropic plain or homogeneous population density. In the first place administrative boundaries were used in the delimitation process and these in themselves are irregular in shape. In the south west of Bulawayo, the presence of a centre with a higher grade than Gweru, i.e Bulawayo, has greatly reduced the extent of the service area of Gweru since it draws more customers. Distortion has also occurred because service regions are elongated along communication routes and away from areas of competition such as Chegutu, Kadoma, Kwekwe, and Masvingo. In the smaller centres the

service areas are centred about the central place. These centres include Lalapansi, Munyati, Zhombe, Chinyemba, Insukamini, Makuva, Chireya, Goredema, Nyama and Dendera. Public transport is an important means of movement within the service area of Gweru and this highlights the role of the traffic principle in determining the shapes of service areas. According to the traffic principle low order centres are assumed to be equidistant from two higher order centres. A higher order centre serves half of the population of each of the six surrounding lower order centres and its own population:

i.e. $k = (1/2 \times 6) + 1 = 4$; where k represents the number of lower order centres dominated by a higher order centre.

The idea of an isotropic plain is therefore difficult to attain due to the fact that population is unevenly distributed in the Midlands and movement of people cannot be equal in all directions. Moreover, human perception is quite complex to predict as not all people act in an economically rational manner by visiting the nearest central place.

The study of the service area of Gweru and other centres within its sphere of influence is vital as it helps in the mapping of the settlement structure of the Midlands. It is possible to arrange the settlements into a hierarchy reflecting the spatial structure and hence identify those areas that require services. The growth point policy used in the decentralisation policy has been premised on the idea of developing the smaller centres such as Gokwe, Zhombe, Mataka, Insukamini, Tongogara, Charandura and Mabasa as centres with identifiable resource bases that can stimulate production and rapid sustained growth. This is an attempt to move away from a polarised economy as reflected by the primate distribution of settlements in the hierarchy of the Midlands. The restructuring of the unbalanced hierarchy in the Midlands and indeed Zimbabwe as a whole would be assisted by developing the rural economy as observed Wekwete in 1988. Wekwete (1988) observed that there was need to develop rural service centres so as to integrate the functions of the lower order settlements serving even up to 10 000 people to avoid walking more than 20 kilometres to the nearest service centres. These would provide the focus for the provision of services such as schools, clinics, local markets, entertainment, telecommunications and ward development centres. District service centres need to be effectively developed into centres that provide higher order functions such as the administration of the district, information, hospitals and training for the district.

Conclusions and Recommendations

The service area of Gweru is complex because it incorporates the service areas of other settlements within its influence. Gweru is the main centre of the Midlands and it is through it that information is disseminated to the settlements within its influence. The socio-economic and political character of the Midlands is epitomised in the sphere of influence of Gweru. It is also possible to arrange settlements within the sphere of influence of Gweru into a hierarchy. However, the resultant hierarchy is an unbalanced one that lacks centres in the middle orders and therefore reflects primacy in the Midlands province and this is associated with lack of development of most smaller centres. The service area of Gweru is itself oval in shape and nowhere near the primary lattice postulated by Christaller. The ideas of the central place are vital in so far as the development planning of the Midlands is concerned. The polarised hierarchy of the settlement structure can be narrowed down through development of middle and lower order centres by refocusing on the growth point policy. Provincial government needs to channel resources to the middle and lower order settlements of the Midlands to make them vibrant and involve them in the development of the region. The peripheral areas could be made more attractive to skilled personnel and entrepreneurs from by developing infrastructure in those areas. All in all the central place theory assists geographers in planning and policy formulation and it arrived at a time when geography was ready it as the quantitative revolution made the subject scientific in outlook. As noted by Beavon as far back as 1977, were it not for the dawn of the central place theory, it would not be possible to be so confident of the existence of a theoretical geography independent of any set of mother sciences.

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THE POLITICAL EMPOWERMENT OF WOMEN UNDER THE ZANU PF GOVERNMENT: REAL EMPOWERMENT OR A POLITICAL GIMMICK 1972-2008

By

Dorothy Goredema and Monica Dorothy King¹
Department of History and Development Studies
Midlands State University
Zimbabwe

Abstract

Zimbabwe is a signatory of many international conventions and declarations on gender. However, despite these declarations and pledged commitments by the state, few of her women folk have found themselves really empowered. ZANU PF leadership has failed to meet the SADC 30% political empowerment of women by 2000. Of those who were empowered in the political office under party leadership, one finds that they initially derive at least part of their political legitimacy from their association with prominent male politicians within the party. As a result, these women fail to advance the female agenda as they owe their political allegiance to the party. Their posts have become ornamented as they have failed to use them as mechanism for advancing the status of women. Furthermore the major problems of gender imbalances are left intact. It is within this framework that the researchers argue that women's political empowerment of women under ZANU PF was nothing but a political gimmick aimed at placating the international community and Zimbabwean women's cries for gender equality.

Introduction

In Zimbabwe women form 52% of the population. As such they make up at least half of the electorate in the Country. By virtue of these numbers women in Zimbabwe have the capacity to decide on their political leadership. Despite the achievement of universal suffrage, increased education and greater political participation in public life, women in Zimbabwe have remained marginalized and grossly under – represented in areas of public life where important decisions and policies are made.

Their drive for a space in decision making has been ineffective. Whatever initiatives made by ZANU PF government to incorporate them into state politics and decision making has proved to be nothing but cosmetic. The higher one goes in either party or state hierarchy, the fewer women there are and when women are found in policy making and administrative positions, they typically hold soft positions. Mechanisms put in place by the state have also not afforded women any political power as evidenced by the ZANU PF's women's wing which can be regarded as "glorified hospitality wings of the party" rather than mechanisms for advancing the status of women. The research findings have shown that the in thing with the ZANU PF ruling party with regard to gender politics was that it adapted the use of inclusionary or "make room in" type of gender politics. The ruling party posed as a liberator and patron of its womenfolk through the creation of state run gender machinery. It created some space for elite women and used them as show cases of its dedication to women empowerment, the party then rhetorised women's

¹ Dorothy Goredema and Monica Dorothy King are Lecturers, Department of History and Development Studies, Midlands State University, P Bag, 9055, Gweru, Zimbabwe, e-mail goredemad@msu.ac.zw and kingmd@msu.ac.zw.

issues and window dressed gender issues to conform to international conventions while leaving the structural base of inequality intact. Since most of the female politicians derived at least part of the political legitimacy from their association with prominent male politicians within the party the results was that they did not use their positions as mechanisms for advancing the status of women but to advance the male/party political agenda. It was within such discourse that the political empowerment of women under ZANU PF leadership will be discussed.

STRUCTRE OF THE PAPER

The paper starts by giving a background of the study. Here it focuses on bringing out the place of women under ZANU PF as a party during the liberation struggle. 1972 becomes the starting point because it is at this time that many women began to join the liberation struggle . Again it was also at this time that ZANU PF began to boast of being a gender sensitive, democratic party which had emancipated women and given them equal status with men. ZANU PF's policies towards its female cadres will also be discussed with the aim that readers will appreciate the argument to follow which will prove that ZANU PF had no gender agenda during and after the struggle of empowering women politically that is.

The second part of the paper, entitled “Female Political Empowerment Under ZANU PF leadership 1980-2008”, focuses on how ZANU PF showcased the political empowerment of women. This section discusses how the party posed as a liberator and patron of its womenfolk through the creation of state run gender machinery which did not wield any authority rendering Zimbabwe women to be women of politics not in politics. It ends at 2008 in a bid to reflected the current political dispensation in Zimbabwe as ZANU PF stopped being the ruling party on the 15 of September 2008 when a government of National Unity was created with MDC and MDC T leading to power sharing.

Theoretical framework

The research should be understood it the context of gender and politics. Whilst it should be acknowledged that SADC member states have in the recent past attempted to further the gender agenda, most of the countries in the region and Zimbabwe in particular cannot be taken as an epitome of gender equality. The problem emancipated from the adoption by the ZANU PF government of a liberal feminist discourse. This discourse lent itself to the “make room in” type of gender politics(Cheater,:1986:5) This is inclusionary gender policies which does not change gender imbalances. Hassims sees inclusionary feminism as a circumscribed approach which defines women’s interests as mere limited on focusing only on their relationships to formal political institutions.(Hassims, 2005:16) Inclusionary feminism theory focuses therefore on women accessing arenas of public power not an debating the policy outcomes of such on engagement.

The research has shown that ZANU PF did not have problems with the inclusionary gender approach of women empowerment, representation in national parliaments and quarters as this did not temper with the structural basis’s of gender inequality. Feminists and political scientists, commenting on the Zimbabwean situation argue that, had ZANU PF really had women political empowerment in mind, it could have opted for the transformational feminist theory. According to Hassims (2005:16), transformational feminist theory is geared at overthrowing the structural basis of gender discrimination.

Transformational feminists argue that as it was, there was no way ZANU PF could have empowered women through the use of inclusionary gender policies. This is so in view of the fact that currently women in policies in Zimbabwe do not have informed strategies of engagement in order to disengage with the state if the partnership degenerates into co-optation. Since female politicians will be in power on the ticket of the ruling party, their main task would be to advance the party’s political agenda not the gender agenda since their positions would have been

derived via party politics. What then ensues is state feminism whereby the party poses as the liberator and patron of its womenfolk through the creation of state run gender machinery, creating space for a few elite women and strategically positioning them as symbols of women political empowerment. It is within this theoretical framework that the political empowerment of women under ZANU PF government will be discussed and analyzed.

Background to the study: 1972-1980

By 1972 ZANU PF as a party boasted that it had emancipated and had adhered to the principles of gender equality when it called many women to join the liberation struggle. In line with the above, the party's newspaper published pictures of women in action, in military training exercises, operating mounted guns aiming to shoot or receiving military briefings in the war front. The paper through its pictures and writings left its readers with the impression that the Liberian struggle afforded women a new status in society. As testimony to this, Robert Mugabe (1979:15) explained that if women are not drawn into political life, if women are not torn off their stupefying household and kitchen environment it will be impossible to build even democracy let alone socialism. In line with the above agenda of drawing women into political life, in 1979, ZANU PF went a step further and promoted a number of women into the party hierarchy. Teurai Ropa Nhongo was appointed head of department of women's affairs, Sally Mugabe her Deputy and Julia Zvobgo became the department Secretary for administration, while Sheba Tavarwisa became the only woman in the High command. (Nhongo – Simbanegavi, 2000:41). The High Command consisted of twenty eight members. Sheba Tavarwisa also set in the central committee together with Teurai Ropa Nhongo, the secretary for women's Affairs. Addressing the 8th congress of the women's union in Albania in 1978, Teurai Ropa Nhongo (ibid) acknowledging ZANU PF's efforts in empowering women politically by explaining that women comrades are represented at every level of ZANU PF's organization, from the national executive through the central committee, high command, general staff, down to every level of the ZANLA forces. She went on to explain how women had won our rights and place in the revolution and not by anyone's pity but through our determination, direction and bravery. However, she went on to further explain that women under ZANU PF owed a lot to their male comrades who have stood by them, fought for their rights, and attained them a degree of freedom to contribute to the best of our abilities to the national cause (ibid).

Many scholars and readers internationally succumbed to these high declarations and accounts given by ZANU PF as political organs pertaining to women empowerment. However as Dr Nhongo- Simbanegavi rightfully observed (ibid:8), gender equality during the war was nothing but a political gimmick. She is of the opinion that ZANU PF only exploited gender issues to achieve recognition as an authentic liberation movement. Eventually its members began to receive invitations from sympathetic countries especially in the former Eastern Block. Research findings have shown that Zimbabwean women in the liberation struggle were not treated equally with their male counterparts per se. The majority of women were given menial duties such as cooking, washing, carrying ammunition from one place to the other and attending to the sick. Many women were trained to go and fight in combat and the majority returned home as refugees after the war. A few were later trained as soldiers after an uproar by women demanding that they should be receiving military training since they moved military weapons. According to Lt Getrude Mutasa (ibid) of the Zimbabwe National Army, by the time of the 1979 ZANU PF congress the women's anger was boiling over. She explained that the mood at the congress became explosive as many women demanded that the rhetoric of gender equality be matched with deeds.

Such sentiments clearly shows that women were treated as they had been treated back home before the war. They were delegated duties which were viewed as feminine whilst the battlefield was regarded and reserved for men. As such perceptions about gender roles were actually entrenched during the war by the same party which posed as an advocate and liberator of its womenfolk. It should be noted that by being called upon to join in the war and "fight"

side by side with men it did not mean empowerment. That women were called from the kitchens to serve in the war did not mean empowerment because they were performing the same duties that had been expected of them but now in a different environment and under different circumstances. Empowerment is increased self reliance and internal strength. According to Kruger (1992:32) it is the right to determine choices in life and to influence the direction of change through the ability to gain control of crucial material resources. On the same note, Geisler (2004:70) explains that wars are seen as exceptional situations which necessitate a change in the usual order of things. She argues that by allowing women to participate in the war, it does not mean that people have become enlightened about patriarchy for people will do whatever they have to do to win the war even if it means women are liberated from gender roles. However, after the war is won things return to 'normal'.¹⁰ What this means is that the exceptionality of the war forced everyone to be in the war playing different roles towards the war effort. Even if it meant that women would be temporarily regarded as equal with men, the party was prepared to allow that as long as it would lead to winning the war. However it was expected that after the war, everything would return to "normal" and women would go back to their roles as mothers and as home makers and leave the field of politics and decision making to men.

On the same note, Chung (2007:72) also maintains that wars were seen and considered as men's wars and that it was the imperative of laying a sound political foundation as well as the need to bring in large quantities of weapons that brought about the need to train women guerillas. Hence it can be argued that a necessity of the war, the broadening of the revolutionary base which led ZANU PF to allow women to participate in the war. Sally Mugabe admitted to this fact when in 1980 she spoke at the UN WORLD Conference for Women in Copenhagen that, the protracted struggle for liberation forced some realities upon our tradition because every human resource was needed. (Nhongo Simbabanegavi 2000:47). As such the broadening of the revolutionary base led the party to allow women to join the war. According to Mugabe in (Herald, 1984:3), four years after independence. initially ZANU PF had no intention of involving women in the war which means that it had no gender agenda. However the exceptional demands of the war forced them to change their plans and become "gender sensitive". This could not be frowned upon if it was a means to an end that is, winning the war (ibid). He admitted that ZANU PF 's original plan was to recruit male cadres only for military training. He also explains that the belief they had then, which obviously was mistaken, was that only male comrades could prosecute an armed struggle.

It should be noted that the reluctance to admit women into the liberation struggle in the initial stages of the war was followed by the same reluctance to give them political empowerment during the war. It should be noted that the Department of women's Affairs was only formed on the eve of independence 1979. More so it was formed after the 1979 ZANU PF congress when women had made noise that ZANU PF rhetoric gender equality should be matched with action. As a way of placating the women's anger the Department of Women's Affairs was created. However, the party had short changed women into believing that it had empowered them by using the inclusionary political theory of empowerment. Those who were included into political office were wives of senior party members. They played highly publicized roles and arrogated the leadership of an estimated 10 000 ZANLA female combatants that is as far as women's affairs were concerned. Leading the Department of Women's Affairs was Teurai Ropa Nhongo, wife of the Rex Nhongo, ZANLA's Operative leader. Sally Mugabe her Deputy was the wife Robert Mugabe the Chairman of the party, Julia Zvobgo who was the secretary of administration was Edison Zvobgo's wife, the party's publicity secretary. The appointments substantiate the researchers' argument that women who were mostly politically promoted into offices at least owed their political legitimacy because of their connection to prominent male politicians within the ruling party. Furthermore it also meant that since these women had been promoted via party politics it meant that they owed their political allegiance to the party whose agenda they advanced and not the gender agenda.

This background therefore serves to show that ZANU PF as party did not have a gender agenda during the liberation struggle. By simply allowing women to "fight" in the war, it was the imperative of the war which called

upon the party to include women. When women began to clamor for gender equality the party went on to employ a gender ' political theory which would only make room for women to get into politics. It ensured that those put into political offices would not criticize or question party policies hence the party chose women associated with males within the ruling party. As such it should be remembered that these women's political empowerment was cosmetic. Being elected into position of power does not mean actual empowerment. As Kriger (1992:40) rightfully noted female participation in roles from which they are usually excluded is not sufficient evidence of changing attitudes towards them.

The Political Empowerment of Women under the Zanu Pf Government 1980-2008

Zimbabwe attained independence in 1980, during the decade for women, 1975-1980. As such, she became part of the celebrating team of the decade for women. Her manifesto released on 25 January 1980, declared among its thirteen fundamental rights and freedoms that under the ZANU PF government, women will enjoy equal rights with men in all spheres of economic, political and cultural life Beumhoger (1982;1310). As such, a corpus of the war experience and an exposure to Western Feminism at the embryonic stage of independence created in the ruling party a new awareness of women's multiple needs even those of a political nature. In accordance with the theme of giving women equal opportunities to participate in politics, ZANU PF declared in its manifesto that it will uphold the right to empower women. This, coupled with the independence euphoria witnessed the newly elected government creating room for women in government. Out of a total of 80 candidates the party had fielded for elections, five seats were given to women. Out of the five, three women obtained cabinet posts. These were Teurai Ropa Nhongo who became Minister of Youth, Sports and Culture. She later became Minister of Community Development and women Affairs. Naomi Nhwatiwa became Deputy Minister of Post and Telecommunications. Victoria Chitepo became Deputy Minister of Education and Culture (Nhongo – Simbabanegavi, 2000:64). No woman was however appointed to the senate to qualify for cabinet post. It was hoped that with time more women were to find themselves holding political portfolios which would eventually result in the full empowerment and emancipation of women.

In what appeared like a gesture of empowering women to participate in politics, ZANU PF extended the vote to women in 1982. It passed the Legal Age of Majority in 1982. For the first time Zimbabwean women above 18 years could vote. Women constitute 52% of the population and extending the vote to them meant more votes for the ruling party as well as broadening the ruling party's support base. As such the extension of the vote was not an act of gender sensitivity as ZANU PF made it to appear nor was it the empowering of women per se so that they would vote themselves into political offices. The vote was extended to women so that they could vote for men into political offices. The politics of the party were designed in such a way that any woman wishing to vote or contest a political office had a necessity to be a member of the ruling party. The result became that many women from grassroots to the national level were ZANUPF party members. These women participate as voters in the national electoral process that take place every five years. However, many as they are, very few of them are found as candidates for political office. As noted by Steady (1986:6), the higher one goes in either party or state hierarchy, the fewer women there are and when women are found in policy making and administration positions, they typically hold soft positions.

In line with the above argument that women were given "soft positions" Joyce Mujuru was made Minister of Youth, Sport and Culture. Later she became the Minister of Community Development and Women's affairs, Opha Rushesha was the Minister of Small and Medium Business Enterprises, only to name but a few. Women are given Ministries which have to do with children, youth's or education, ministries which do not temper with male authority. Key ministries such as Defense, Home affairs and Finance are given to men. Nzamo explains that the justification usually used for this anomaly is that women are not yet qualified for political experience and leadership (Nzamo,

1994;120) This is not convincing given the fact that male politicians have also entered political offices at independence. It is the researchers' views that in the Zimbabwean context, the role of the established state (which is a male dominated political system) is crucial in understanding the dynamics of women's participation in politics. It is common knowledge that in a largely patriarchal state, there are no cases when men give up without a fight for the privileged positions they have historically enjoyed as the authoritative decision makers. While in the private domestic sphere men may concede sharing some decision making roles with women, in the political arena, the male gender employs every strategy to keep women out. If they "make room" for them, they give them then political office but still retain decision making powers. On the same note of men not willing to share political power with women, Ruth Habwe of Kenya also advanced a similar explanation for male resentment to her parliamentary candidature. She stated that she was aware of the difficulties which men face when they consider possibilities of women gaining positions of influence. They (men) harbor the inevitable fear that if women reached the same levels, they (men) would be removed from their exalted stature which they have exploited for so long (Geisler, 2004:123). To make sure that Zimbabwean women do not get too influential, politically that is, ZANU PF made sure that women's access to political office is determined by males. Men control the political structure of elections, recruitment, principally the political parties. No political party was formed or controlled by women. This is further worsened by women's lack of adequate money or capital to invest in the election campaign given that very few women are independently wealthy due to patriarchal sharing of property.

To appear democratic and dedicated to International Conventions on Gender equalities, the ZANU PF government went on to promote or rather "include" a few women to get into political office. The likes of Ruth Chinamano, Sunny Takawira, Opha Rushesha, Shuvai Mahofa, Fay Chung, Sabina Mugabe, Margaret Dongo, Vivian Mwashita, Mama Mafuyana and Tsitsi Muzenda to have just a few were promoted. A critical analysis of these appointments lead to the inescapable conclusion that the party only wanted to window dress gender issues by appearing to be gender sensitive when the structural bases of gender inequality were left intact. Most of these women appointed again were connected to males within the ruling party. For example Ruth Chinamano's husband had been Josiah Chinamano earlier founders of the party, Sabina Mugabe is Robert Mugabe's sister, Tsitsi Muzenda, daughter of Simon Muzenda the former first Vice President of the ZANU PF government, Shuvai Mahofa was connected again with Simon Muzenda and her political career died with Muzenda's death in September 2003. This is to name but a few.

The ruling party was well aware that by adopting the inclusionary political theory it would still remain in power. By co-opting a few women into decision making the party was well aware that the few included women could not stand and advance a women's agenda as they are their first allegiance to their political patron- the ruling party. No wonder nothing has fundamentally changed for women in Zimbabwe despite the efforts to reach the 30% women in parliament. Fourteen years since Zimbabwe signed the 1995 Beijing Platform for Action, the country has failed to locate gender justice in a political paradigm that seeks to fight sexism with the same vigor as it did with racism during the liberation struggle (Meena, 2006;39).

In tune with the feminist theory of inclusionary, ZANU PF included women in its ruling hierarchy but disarmed them of real power, that is, the power to make decisions. Theirs were ornamental positions not decision making positions rendering them to be women of politics not women in politics. According to Joyce Mujuru who was the Minister of Women's Affairs, her ministry find itself in a very difficult position with regards to gender queries. As women directed all their queries to my ministry, ...he Ministry was not in a position to give any accurate answers because it does not administer any statute. It has no mandate to introduce laws in parliament either could it amend any. This

testifies that whatever initiatives made to incorporate women into politics and decision making was nothing but cosmetic, a political gimmick aimed at retaining males as political gate keepers.

Continuing to pose as the liberator and patron of its women folk, the ruling party created state run gender machinery, the women's League. The league as put across by the ruling party was intended on providing leadership and guidance when lobbying for women's representation in the political arena. It was again intended on influencing national decision making processes on gender issues. Research findings prove that the league has been totally ineffective in empowering women and facilitating increased participation of women in public decision making process on Gender issues. Research findings prove that the league has been totally ineffective in empowering women and facilitating increased participation of the women in public decision making. The league has deeply divide the elite and alienated local women who are served.

Since women who are in political office owe their political positions to their male patrons in the party, they end up supporting male authority against their fellow comrades. Those who challenge the male status quo end up being enemies of the male politicians. Denouncing female activists, Mujuru stated that the newly formed group of women's taskforce consists of " an elite group of women whom she accused of two things: merely sitting down and doing nothing or when they worked at all, of opposing the women's league. She then vowed to stop the " nonsense and confusion, that is, of female activists clamoring for real gender equality from the ZANU PF government. Such threats created an atmosphere of intimidation. According to Nhongo- Simbanegavi (ibid;96) the message was clear; unless people want to organize around charities whose terms of reference excluded meddling in politics there was no space for them in politics, there was no spare for them in politics. Politics could only be done through or within the orbit of ZANU PF circles. The implications are that as long as the party retained control, the scope of women's political activities remained narrow.

Furthermore members of women's league do not came openly in support of women who urged the ZANU PF government to empower women in the real sense. The league and its female leaders denounce and disassociate themselves from these women activists. This show of disassociation coming from fellow women gives legitimacy to the continued political marginalization of women. The experiences of women is movements such as the Women's Action Group, the Task Force and of individuals like Margaret Dongo further affirm that ZANU PF politicians were not receptive to criticism, especially from women who challenged party policies and decision. When these women cry for gender equality and democracy, party politicians descended upon them, attacking them as failures, frustrated women who have no credentials or mandate to challenge state order. What is a national issue and a human right, the demanding of equality was often reduced to a personal gender issue between women activists and male members of the political system.

The strategy by the ZANLU PF government to focus more on the women's league as the only legitimate platform for women's voices has weakened and further fragmented the women's movement for real political empowerment. As such these researchers have concluded that ZANU PF government state sectioned machinery for gender empowerment was nothing but cosmetic. The league's position was tokenism. Nzamo strongly feels that these tokenism positions given to the women need to be taken cautiously, as they make women develop a false sense of power hence complacency, thus deflecting them from struggling for substantive influence in decision making positions in parties and government (M Nzano: 1993, 113).

Women should be aware that male politicians are not too keen on sharing power with women and hence the promise of women's presentation in political empowerment will never materialize. Wipper (2004) argues that as

practicing politicians are bent on keeping themselves in power, they are not about to locate resources needed for other goals to a group seen as powerless and hence no immediate threats to their positions.²⁴ To derail women's demands on political empowerment the ZANU PF government employed the tactics of ceremonial affirmative tokenism, verbal plays and the promotion of conservative elements such as the adaption of the inclusionary feminist theory. This has apparently subdued women's voices for political empowerment and has disrupted the women's Movement in Zimbabwe.

To date the country has got a female Vice President and Vice Prime Minister. There is no doubt that the positions listed above to which women were appointed carry authority and decision making powers. What is of doubt is whether women appointees have used their decision making platform to influence national policies in a manner which benefit other women who have no such platforms. Vice President Mujuru stated on one occasion that, there is no such thing as equal rights or gender equality. Those who demand it are failures in life (2004). This coming from the one who is supposed to be spearheading issues of gender equality in parliament clearly shows that Zimbabwe is still a very long way towards achieving true political empowerment. With such a mentality it would not be surprising that the Vice President has not attempted to appeal to government to remove legislation which discriminate against women. Top female politicians have failed to make an impact on the national political and decision making arena. This is best explained by their passivity on issues and policies that directly affected their fellow women's status and welfare. They have failed to propose an improvement into the government's meager financial allocations to women's programmes many of which have failed to take off due to the lack of adequate financial and technical input. For instance, between 1980-1990, the government allocated to women's programmes the equivalent of 1% of total government expenditure. At present the government grants to women's groups have dropped to a significant zero. Despite the social and political constraints discussed, Zimbabwe has a few courageous women who have kept the fire of real political empowerment of women burning. Acting as the voice of silent majority, many women activist such as Rudo Gaidzanwa, Margaret Dongo, Everjoy win to name but a few have continued to lead the persistent and courageous crusades for women's rights and social injustice. Such movements need moral support not isolation by all persons committed to the real political empowerment of women in Zimbabwe.

Conclusion

Research findings have proved that under the ZANU PF government the political empowerment of women has been nothing but a political gimmick. The Party posed as the liberator and patron of its womenfolk whilst window dressing gender issues. It was able to do this through its adoption of the inclusionary feminist theory which enabled it to co-operate a few elite women into state structures. These few women although they hold positions of power they did not have decision making powers. The males within the party retained their power. As such female politicians in Zimbabwe have remained women of politics than women in politics.

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SUSTAINABLE SOIL MOISTURE CONSERVATION TILLAGE TECHNOLOGY ADOPTION: EVALUATION OF THE NO TILL TIE RIDGING TECHNIQUE IN CROP PRODUCTION AMONG SMALLHOLDER FARMERS IN MANICALAND PROVINCE.

By

^{1,a,*}Chivizhe J B and ^{2,a}Murewi C T F

¹Department of Agricultural Practice and ²Department of Mathematics,
Midlands State University,
Zimbabwe

Abstract

The drive towards a form of sustainable crop production through a reduction in soil loss, water runoff and nutrient conservation influenced the launching of a No Till Tied Ridging (NTTR) System in 1989 by the Department of Agricultural Technical and Extension Services (Agritex) for improved crop production through moisture conservation. Moisture conservation techniques are very important for southern Africa region where rainfall amounts are expected to decline under climate change. The survey conducted in the Manicaland Province, showed a thirty-three percent adoption of the NTTR technology among contact farmers. The factors that contributed towards non-adoption were increased labour demand on planting and ridge tying (33%), weeding (11%) and poor germination (56%) of contact farmers. The limited plot size put under the system (0,4ha) by the contact farmers indicate the importance of labour on the system. The balance between costs and benefits as a comparison between the NTTR and the conventional till ridge systems showed that farmers generally adopt a technology when benefits outweigh costs, and also that farmers are more interested in short-term benefits. Long term benefits are believed to be shared by the whole community particularly where common properties such as the communal land are involved. Future research needs for improved moisture conservation technology should address aspects on nutrient conservation technology differences between the NTTR and the conventional till ridge system, poor germination as well as labour demands on weeding, planting and maintaining ridges.

Introduction

While the region faces an increased demand for food every year, the search for improved agricultural crop production technology such as one that helps to conserve moisture is important particularly with the lessons learnt from the past years which have witnessed recurring droughts. With most climate model estimates indicating rainfall decreases of up to 20% in many areas over southern Africa (Barnett, Dessai and Jones 2003), farmers and researchers should always be in search for ways and means that are aimed at improving crop production. Researchers and extensionists may come up with ideas but what is more important is whether farmers will adapt or adopt them, thus necessitating a close link with farmers and understanding their circumstances.

Due to problems/challenges of soil, nutrient and water run-off in the region, the Department of Agricultural Technical and Extension services (Agritex) initially carried out trials in communal areas throughout Zimbabwe as from 1983/84 through to 1987/88 seasons. These trials were carried out under the theme known as the Observational Tillage Trials (OTT) managed by the Institute of Agricultural Engineering in collaboration with Agritex field staff. A second phase was then run under a different name, No Till Tied Ridges (NTTR), from 1989/90 up to 1992/93 seasons in

¹Chivizhe J B is a Lecturer in the Department of Agricultural Practice, Midlands State University, P. Bag 9055, Gweru, Zimbabwe, e-mail chivizhej@msu.ac.zw

selected districts. In 1989 the then Director of Agritex issued out a circular in which the NTTR was strongly recommended by the department for sustainable crop production in communal areas and that it be integrated into all relevant provincial and specialist branches. From 1990 there was intensive farmer and staff training in the aspects of NTTR system as a technology that would help in the reduction of nutrient, water and soil losses intended to improve crop production in the communal areas. It is against this background that an ex-post evaluation was carried out on the adoption of the NTTR technology years after its introduction.

The NTTR system is one where ridges are initially made up using a ridger or animal drawn plough after the initial conventional ploughing during the first season of implementation. The ridges are then maintained (re-ridged) and only disturbed during planting as they are split or hoed out in subsequent seasons to create planting stations. During the re-ridging process tying of ridges takes place to create miniature dams that then retain water for the conservation of moisture and in addition mechanical weed control also takes place simultaneously. These ridges in NTTR system are sometimes referred to as semi-permanent ridges (Appendix A).

During the NTTR implementation phase, there was an intensive resource utilization exercise to have the NTTR system adopted by smallholder farmers. The specific objectives of the NTTR as outlined by Elwel and Norton (1988) were:

- i) Soil loss to drop from the then current levels of 50 - 100 tonnes/hectare/year to lower levels of about three (3) tonnes/hectare/year.
- ii) Run-off losses to drop from existing values of 30%-40% to 10% of seasonal rainfall.
- iii) Nutrient losses to become insignificant.

Ridging systems are designed to reduce water run-off from the soil to concentrate water infiltration into specific areas of the soil where it can be efficiently utilized by the crops. The furrows are also designed to act as a means of drainage where there is excess water like in the wetlands (*Dambos*). Two main aspects addressed in literature in relation to ridging systems are improving crop yields and management efficiency.

Farming System Research Unit (FSRU) in Chivi communal area of Zimbabwe (personal communication with Mavedzenge) showed no maize yield improvement from ridging or tied ridging on sandy soils, but some yield reduction mainly due to generally low fertility of the soils and water logging in years of high rainfall. However, Chuma (1994) found that the ridges facilitate drainage in periods of excess rainfall. Work carried out by Elwel and Norton (1988), and Gatora (1989) found an increase in crop yield mainly due to improved moisture availability as a result of reduced run-off and nutrient conservation. The Soil Loss Estimating Model for Southern Africa (SLEMSA model) quite ably proved reduction in soil loss and possibly a nutrient build up in the semi-permanent ridging system.

The main objective of this study was to establish whether NTTR contact farmers continued using the system after the withdrawal of the extensionist's material support. The survey also sought to establish an adoption comparison between the NTTR system and the conventional till ridge system practiced by farmers. The conventional till ridge system involves making ridges annually after crop emergence (Appendix B). The system is also used in the control of weeds. The findings of the survey would provide feed-back in Farmer-Researcher and Extension linkage.

Materials and methods

An interview schedule on the NTTR technology adoption was administered by the researchers with the assistance of the local Agricultural Extension Workers (AEW) to contact farmers that had hosted the NTTR demonstrations. Contact farmers refer to those farmers on whose farms the NTTR demonstrations were conducted. These contact farmers had draught animals and a variety of implements including the animal drawn plough and hand hoes. Three districts namely Mutare, Makoni and Nyanga were involved. Nine contact farmer households, two of whom were female headed comprised the sample of the study. The interview schedule was backed up by observations on

whether contact farmers had adopted the NTTR technology by not undertaking any conventional ploughing. The observations were done during field visits and discussions with farmers. Agricultural Extension theories claim that a good innovation will continue to be used long after the withdrawal of both technical and material support. The respondents as contact farmers had been supplied with maize seed and fertilizers when the NTTR demonstrations were conducted. The contact farmers were expected to continue on their own, using their own inputs, after adopting the technology through NTTR demonstrations.

Results and Discussions

The results of the survey are presented and discussed within the framework of the objectives of the study stated above.

Technology adoption after withdrawal of material support by Agritex department.

Table I, shows the length of time in seasons that the contact farmers participated with and without material support from the extension services department, the plot sizes and the adoption status.

Table I: Farmers Participation with and without material support and adoption status.

District	Agro-Ecological Region	Site Name	Seasons with material support	Plot Size (ha)	Seasons without material support.	Plot size (ha)	Adoption status
Nyan ga	III	Tamunesa	2	0.4	-		Non-adopt or
	III	Nyatate	3	0.4	-		Non-adopt or
	III	Nyatate	3	0.4	-		Non-adopt or
	III	Nyatate	3	0.4	-		Non-adopt or
Makoni South	Iib	Pasipanodya ¹	2	0.4	2	0.1	Adopt or
	Iib	Pasipanodya ²	2	0.4	2	0.1	Adopt or
	III	Chitenderano	3	0.4	3	0.4	Adopt or
Mutare	Iib	Dora –Dombo	2	0.4	-		Non-adopt or
	III	Muromo-West	2	0.4	-		Non-adopt or

During the NTTR demonstrations, inputs (seed and fertilizers) were supplied by the extension services department. Six contact farmers did not adopt the practice after the withdrawal of the material support. Three contact farmers in Makoni South district adopted the NTTR technology possibly because of the district's high crop production potential (mostly in Agro-ecological Iib). In this district the two contact farmers at the Pasipanodya sites rotated the plot every two seasons whilst the Chitenderano farmer operated on the same plot without a rotation. The two farmers who rotated the plot were in Agro-ecological region Iib whilst the one in the drier Agro-ecological region III did not rotate possibly because moisture conservation practice is more beneficial than in the former region.

Observations showed that the non-adoptors practiced the conventional till-ridge system on almost all their maize fields while one farmer extended the practice to other crops like pearl millet, sorghum and sunflower. The conventional till-ridge system (post-crop emergence ridging) makes ridges as a weed control method after the crop has germinated (Appendix B). The conventional till-ridge system was also observed to be practiced by quite a number of farmers in the neighbourhood of the contact farmers as well as in much of the province.

Reasons for Non-Adoption of the NTTR system

The survey also investigated on the reasons (Figure 1) why the farmers were not taking up the NTTR technology (that had been demonstrated by the Agritex) despite its envisaged advantages on soil loss, water run-off reduction, nutrient conservation and management efficiency.

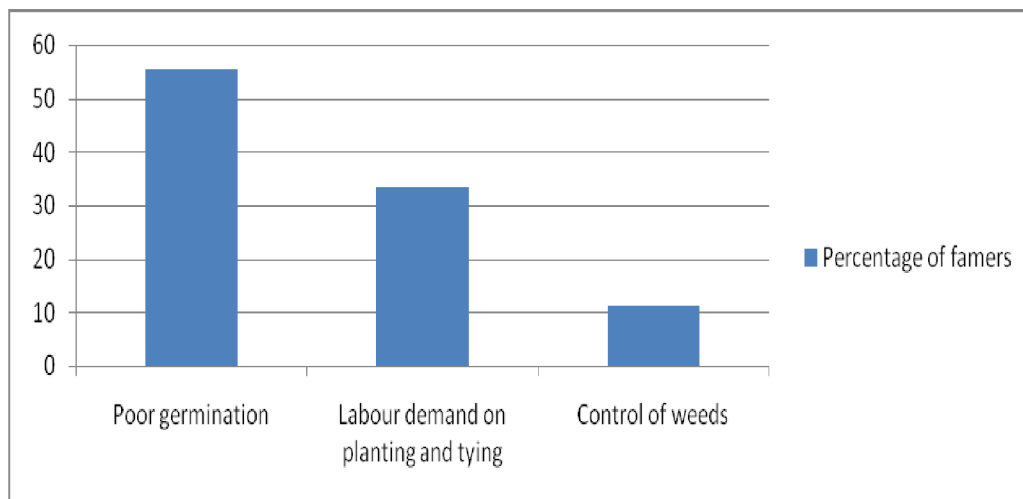


Figure 1: Reasons for Non-Adoption of the NTTR system.

In ranking the reasons for the non-adoption of the NTTR technology, poor germination (56%) came first followed by high labour demand on planting and ridge tying (33%) and lastly weed control (11%). Although research done by Elwel and Norton (1988) and Gotor (1989) claimed a reduction in the demand for labour under the NTTR system, the survey showed that 44% of the contact farmers noted increased demand for labour during planting, ridge tying and weeding operations. It was also observed that although the re-ridging operation controlled some weeds, the weeds on the sides and over the top of the ridge may only be covered by loose soil and would therefore need a hand operation to control them. Increased labour demand on planting was also confirmed by Chuma (1994) when he found that hand-hoe planting contributed to non-adoption of NTTR as it was viewed as a backward practice.

Comparison of the NTTR and the Conventional Till Ridge systems.

It was mentioned earlier on that farmers would only adopt a technology if it was compatible with their farming system and also if the benefits out-weighed the costs. In this study the contact farmers were not in a position to quantify the costs and benefits, but were only able to categorise them as high or low as shown below.

Table II: Comparison of costs and benefits between NTTR and conventional till ridge systems as viewed by the contact farmers

Cost-Benefit/Tillage System	Conventional Till Ridge	No Till Tie Ridge
Costs		
Weeding (Labour)	Low	High
Planting (Labour)	Low	High
Ridge making (Labour)	Low	High
**Soil Loss	High	Low
Nutrient loss	High	Low
Benefits		
Yield increase	Doubtful	Doubtful
Nutrient saving	Low	High
Moisture conservation	Low	High
*Reduced run-off/soil loss	Low	High
Compatibility with farming system	High	Low

*Long term ** Borne by Society

According to the contact farmers' views, the costs generally out-weighed the benefits for the NTTR technology while that for the conventional till-ridge system showed benefits out-weighing costs. The contact farmers regarded costs due to soil loss as costs to be borne by the society and not to them as individuals, and therefore do not count as much to them unless some kind of benefits are paid directly for adopting practices that reduce soil loss in addition to better producer prices.

Conclusion

Amongst the contact farmers who hosted demonstrations for over two seasons only a third of them adopted the technology. The rest of the contact farmers did not adopt the technology citing poor germination and increased labour demand as the main reasons for non-adoption. The non-adopters continued to use conventional till ridge system which is less labour intensive though it compromises on water run-off and soil conservation. However, the non-adoption of these NTTR technologies should provide a platform for both researchers and agricultural extensionists to find ways that would make them compatible with the farming systems. Future research on the adoption of improved moisture conservation technology should address the aspects of poor germination and labour demands on weed control, planting and tying of ridges.

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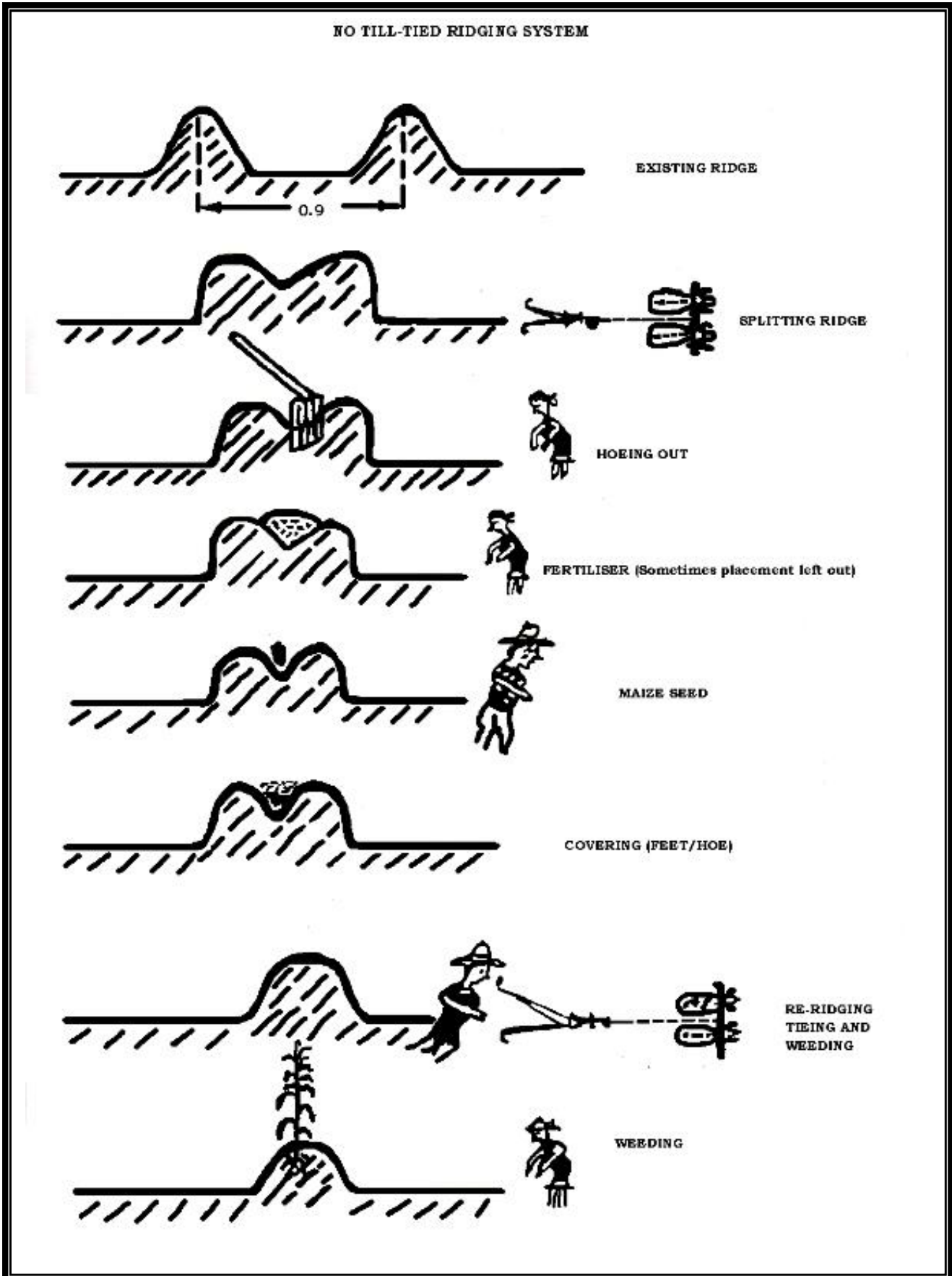
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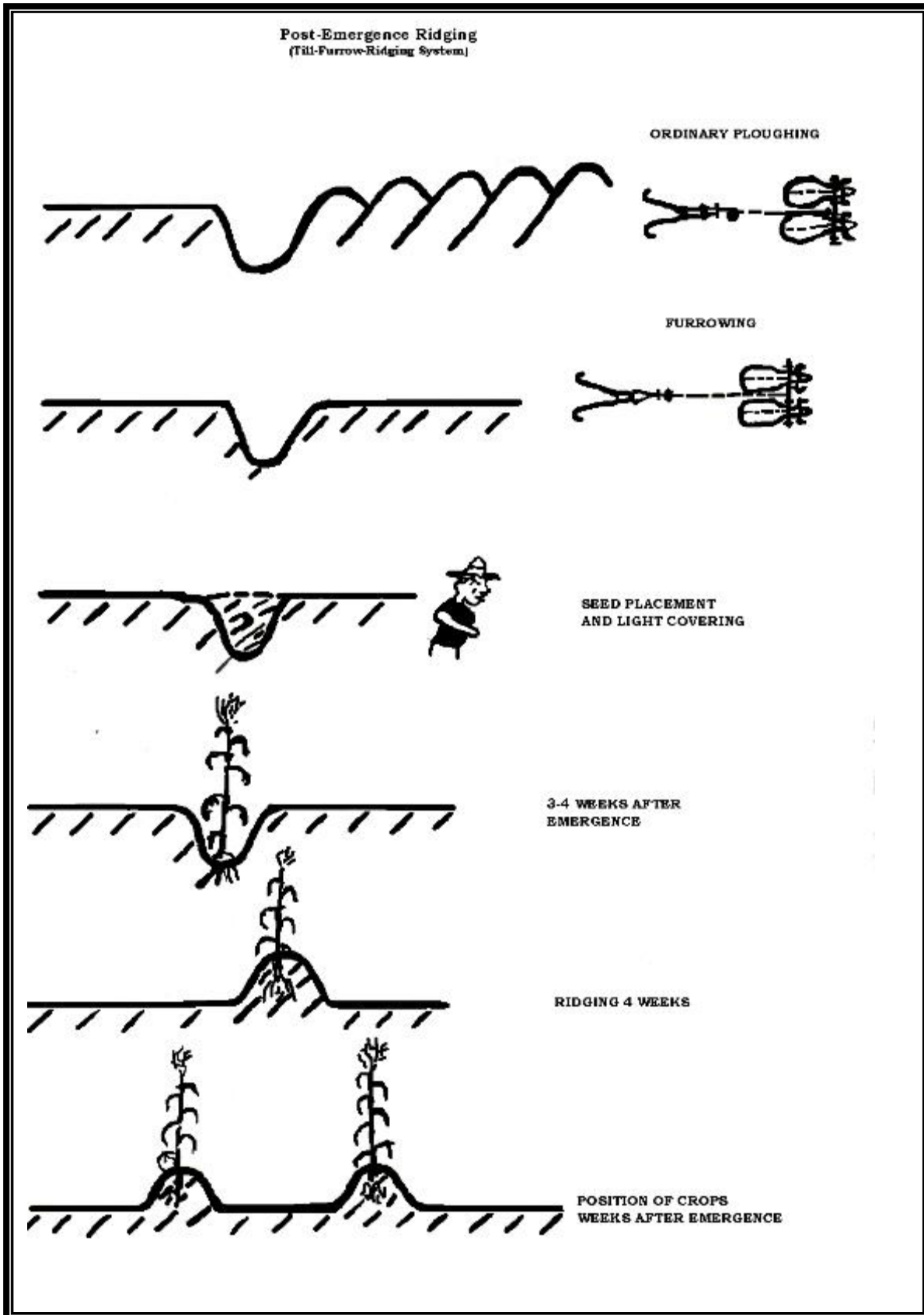
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Appendix B



PUBLIC SECTOR CORRUPTION AND ITS IMPACT ON DEVELOPMENT IN ZIMBABWE SINCE 2000

By

*Ishmael Jeko and Canisius Manyumwa¹

*Department of Educational Foundations Management and Curriculum Studies
Midlands State University,
Zimbabwe.

Abstract

Development workers and theoreticians now generally conceptualise development in terms of a broad set of socio-centric indicators, moving away from the econo-centric view prevalent in the 1960s which valorised economic growth as a sole index of development. It is in the context of such thinking that corruption has come to be acknowledged as a fundamental, albeit indirect, obstacle to development. In this connection, recent research and historical experience demonstrate consistent correlation between lack of or slow rates of development and corruption, with the least developed countries consistently scoring lower points on the TI (Transparency International) Corruption perception indices. While corruption is found in all countries, scholars agree that corruption is more endemically and more menacingly present in Africa than elsewhere in the world, with African countries always occupying the tail end of the TI Corruption Perception indices. In this regard the TI NIS (National Integrity System) 2007 report on Zimbabwe notes that corruption has become a central aspect of the economic survival strategy for most individuals and corporate bodies. Despite boasting vast natural, technical and human resources alongside modest financial resources, since 2000 Zimbabwe has been experiencing precipitous developmental decline unprecedented in the SADC region. This developmental stagnation and decline may arguably be accounted for in terms of the same explanatory matrix, with corruption being seen as a major triggering and exacerbating factor. However, the nature and impact of such corruption on development in Zimbabwe remains largely unexplored, yet such information is potentially useful as a possible basis for policy intervention. The paper therefore sought, through theoretical analysis and examining archival and secondary sources, to explore the genesis and impact on development of public sector corruption in Zimbabwe since 2000. In this paper we contend that public sector corruption in Zimbabwe has been predominantly committed by the members of the political and bureaucratic elite after they systematically vandalized and crippled the accountability pillars of society. The study recommends an urgent and comprehensive strategy to rebuild and reinvigorate the institutional framework of governance in order to plug the vast opportunities and tendencies towards corruption in the Zimbabwean society. This can only start with a clear redefinition of the relations between the three main arms of government to allow for their respective independence as well as to create a favourable framework of operation for both media and civil society. In the same breath, economic factors that are causal to the growth of the corruption crisis need to be addressed to minimize the temptation towards corrupt practices in the public sector.

Key words: corruption, development

¹Canisius Manyumwa, is a Lecturer, Department of Educational Foundations Management and Curriculum Studies at the Midlands State University, Zimbabwe, e-mail manyumwac@msu.ac.zw.

ABBREVIATIONS AND ACRONYMS

AIPPA	-	Access to Information and Protection of Privacy Act
MIC	-	Media and Information Commission
NECI	-	National Economic Conduct Inspectorate
NOCZIM	-	National Oil Company of Zimbabwe
POSA	-	Public Order and Security Act
VIP	-	Very Important Person
ZISCO	-	Zimbabwe Iron and Steel Company
ZUPCO	-	Zimbabwe Passenger Company

Introduction

A few short years ago, any mention of the word ‘corruption’ to a Zimbabwean audience would turn all heads. Corruption was as rare as it was despised and socially spurned. Today the mention of the same term is greeted with an indifference that denotes familiarity and an acceptance, if not of its value, at least of its endemic and pervasive existence in the Zimbabwean society. While corruption has been described to be as old as the human race (Wilton Park Conference, 2004), and to exist throughout the world in developed and developing countries alike, it is its levels of incidence and the debilitating effects that it has visited on modern communities and whole nations that have become a grave cause for concern. The world globalization phenomenon has made it possible to determine fairly accurately the corruption levels in different parts of the world and to compare them. From numerous studies and analyses, greater corruption has been found to be associated with less developed nations and societies in transition. For example, Lawal (2007:24) says “Corruption has ravaged the entire African continent, causing the continent to be the most corrupt in the world,” and he further notes that this endemic infection of corruption must be dealt with before meaningful development can be realized. While it cannot be denied that corruption affects both developing and developed countries, it is also true that the levels of this phenomenon’s occurrence are not the same in the two types of economy. Corrupt practices are more frequent and their effects are more debilitating in the developing economies than in developed ones.

These observations raise the question of the causal relationship between *development* and *corruption*. Stated plainly, at the immense risk of oversimplification, such a question would ask whether corruption reduces or stunts economic development, or conversely, whether poor economic development breeds and/nurtures corruption. The answer to this question, however, is not as straightforward as may appear to be the case at first sight.

This paper seeks to unravel the conceptual imports of ‘corruption’ and ‘development’ with a purpose to analyse the relationship(s) that can exist between the two. The discussion will then focus on the realities of public sector corruption and development in Zimbabwe through a careful examination of the national context as well as the patterns of corruption typifying the Zimbabwean socio-economic and political space, their implications for national development and suggestions to help the nation to crawl out of the depths of the scourge of corruption and, possibly, out of the curse of the cycle of underdevelopment and poverty.

Methodology

This study adopted a philosophical and analytical approach as a methodological perspective in the paper. The researchers view the phenomenon of corruption as inherently secretive because people who engage in the practice seek as much as possible to hide their corrupt behaviour from the public eye to avoid detection and prosecution and circumscription. To this end, the reported cases of corruption in the public media and the levels of incidence that reaches the public domain are very often a mere tip of the iceberg and a serious understatement of the reality of the problem. Researchers in this study therefore relied heavily on an interrogative analysis of several archival sources and reports in the public media. While the completeness and reliability of these sources can be called into question, serious efforts were made to ensure a balanced collection of data from a wide variety of reports.

The study's concern with public sector corruption is also relevant to this methodological paradigm as the corruption in this domain occurs mostly at the interface of public institutions and their representative officials vis-a-vis large organizations and their representatives. It is thus largely not privy to private individuals. It is also true that the corruption in the public sector is to a large extent committed between the public sector organizations or their representatives and private sector individuals and organizations. Our contention is therefore that an attempt to study the issues surrounding the patterns of corruption in the public sector through gathering information through surveys, for example, would not gain significantly different insights from such an analytical approach. We acknowledge though that it will still be useful to carry out a similar study from this scientific angle to find out whether its findings will support the present studies conclusions or not.

The study's focus on public sector corruption is no denial that there is equal concern about the incidents and patterns of corruption in the private sector. Indeed, the question of which sector commits the higher levels of corruption is a debate that may deserve a separate study. The researchers argue that an attempt to consider both public and private sector corruption in one paper would be cumbersome and may not do justice to either of them. Similarly, the researchers' decision to concern themselves with the period 2000 to 2009 is an acknowledgement that the year 2000 was a significant watershed in the corruption levels in the public sector in Zimbabwe. There was some corruption both before the country attained independence in 1980 and in the first 20 years of its existence, but this was insignificant compared to the period under scrutiny in this paper.

The Conceptual Framework

The meaning of corruption

Several meanings have been attached to the concept 'corruption'. The difference between them often refers to the various forms that corruption takes rather than to the real meaning of the term. Useful insight will be gained by examining a few of these definitions.

According to Klitgaard (1988:21), corruption is "the inducement of a public official by means of improper consideration, e.g. a bribe, to commit a violation of duty." While this definition appears to assume that the public official is a victim 'being induced' to accept a bribe, other sources seem to imply that the public official is, more often than not, the perpetrator rather than the victim. The World Bank (1997:102) describes corruption as "the abuse of public power for private gain". In the same vein, Lawal (2007:2) sees corruption as "the conscious attempt or deliberate diversion of resources from the satisfaction of the general interest to that of self (personal) interest." The attributions of 'conscious' and 'deliberate' in this definition indicate that corrupt acts do not happen by chance or by accident. They are well thought out, premeditated choices made by people who want to achieve definite results often by subverting the operations of laid down social structures. This is also reflected in Muponda's (2009:1) interpretation which holds that:

Corruption is a general concept describing any organized, interdependent system in which part of the system is either not performing the duties it was originally intended to, or performing them in an improper way, to the detriment of the system's original purpose.

We note in the above definition that the system is distorted and manipulated in a manner that detracts it from its set goals and objectives for the benefit of personal or partisan/sectoral gains.

Other meanings attempt to define corruption in relation to the various types and levels it can take. In this view, it may be either petty corruption or grand corruption. Petty corruption denotes the small bribes and routine ‘speed money’ that the ordinary person often comes across in the ordinary course of business, e.g. when he/she is asked to pay something extra to have a passport processed, or to have a policeman ignore an offence purportedly committed. Grand corruption on the other hand, is much bigger in nature and scope, and it includes facilitation payments, kick-backs, and expensive gifts often associated with the disposal of large state assets or the award of massive procurement contracts. While petty corruption touches more people and occurs much more frequently in the societies so affected, the effects of grand corruption are more devastating and detrimental to the society’s social and economic fabric, in spite of its deceiving low incidence. Thus corruption is commonly a feature of the interface between the private sector and the public sector. In it, private entities seek to gain in acquiring state services and assets at values significantly below market prices or to win huge supply contracts unfairly ahead of their competitors.

Another way of understanding the reality of corruption is to view it from a perspective that distinguishes forms of corruption by their location in the social setting. Klitgaard (1988) identifies public sector corruption as situated in the public finance operations of government, in the administrative functions of government, in the legislative arms of government as well as in the judiciary sector. Public finance corruption occurs when a public official accepts or solicits a bribe for the performance or non-performance of an action associated with his/her office. In general, these would be instances of petty corruption. In the grand corruption form, the officials would be involved in facilitation payments or kick-backs as happened when some persons were heavily rewarded for engineering the award of a tender for the purchase of a fleet of buses for a local public transport company a few years ago.

In the administrative domain, corruption may take the form of nepotism, cronyism, patronage or tribalism, among others. Documents and records may be falsified or destroyed altogether to satisfy some personal interests, or the interests of some political leadership. It may even entail the purchase of public office, or a deliberate politicization of the administrative system to make it serve the leaders rather than the public. The provision of expensive plasma televisions and luxury vehicles to judges, items that were arguably neither in line with their conditions of service nor commensurate with their work responsibilities, and were not extended to other civil servants in similar positions, is a case in point. Sometimes administrative officials go to great lengths to bend and soften established rules and regulations for the benefit of certain interested parties in return for some consideration.

At the legislative level, corrupt practices may range from the shady sourcing of campaign funding for political parties, to the tendency to manipulate and rig elections, processes that severely compromise democratic principles and undermine the legitimacy of the elected organs. It is often such practices that engender society’s distrust of public institutions and deplete the levels of transparency and accountability in the systems of government.

However, corruption at the judiciary level is the form that is described by Klitgaard (1988) as the most pernicious. This is when judges seek personal benefits for handing down predetermined verdicts in their judgments, or they receive material consideration just so that a case is brought to a hearing. In the same vein, clerks of court may connive to hide, avail or destroy confidential information for some payment in order to ‘assist’ the selected clients who make such payments. The more serious form, however, relates to the appointment and promotion of judges directly by the executive arm of government. This has the overall effect of overwhelmingly undermining the independence of the judiciary, as it directly influences the verdicts in the courts. The verdicts will often be based on political expediency rather than on justice. Once again the public’s trust in the justice institution is tampered with.

An attempt to redefine corruption or engineer the concept *corruption* from a specifically Zimbabwean context has

not been found necessary. Corruption should be seen from the same lenses anywhere in the world. It is the causes and the dynamism of the factors that exacerbate the phenomenon that differ with place or region. A universal meaning of the reality of corruption is important to enable a fair comparison of the levels of corruption between different countries and societies. Localized definitions may tend to cloud global conceptualization of the issue and to make meaningful analysis difficult. We therefore assume that an act of corruption in Russia, for example, should equally be considered an act of corruption in Zimbabwe and anywhere else and vice versa.

We now turn to the concept ‘development’.

The concept ‘development’

Early conceptions of development in the 1950s and the 1960s measured development along three indices which were the Gross Domestic Product (GDP), the Gross National Product (GNP) and the income *per capita*. The assumption that improvement in these factors would benefit all in society as wealth gradually trickled down to all people in the population was later found to be unsound and largely untrue (Monograph No. 40, 1999:2). Thus in the 1970s, the focus of the meaning of development changed to refer to improving the quality of life for the population at large. In this sense, meaningful development should contribute to a reduction in poverty, inequality and unemployment. This implies that mere economic growth is inadequate and for the most part, it is a poor indicator of real changes in the human conditions of the people. In contemporary discourse, the ‘quality of life’ perspective of development is generally warmly received, but in addition, several other meanings have been appended. For example, the importance of equity in the distribution of wealth is recognized and the reduction of economic inequalities in the society is seen as a central indicator of development. There is also the need to reduce poverty by ensuring that poor people are enabled to acquire assets and to gain access to a variety of life-enhancing opportunities, including better financial, health and education services, as well as other basic facilities like water and electricity. The interface between human beings and their environment has also gained prominence in development debate. It is realized that environmental degradation through deforestation, air and water pollution and the global warming phenomenon can easily whittle down any benefits that may come from economic growth, threatening human lives and making human existence harder. Attention to environmental safety and improvements in the human natural habitat are therefore called for in any definition of sustainable development. Thus this view of development has been taken to include aspects like “better education, higher standards of health and nutrition, less poverty, a cleaner environment, greater equality of opportunity, greater individual freedom and a richer cultural life” (World Bank, 1991). The United Nations Development Program (1997:1) describes this as *sustainable development* because it is specifically suited for “expanding the choices of all people in society and the protection of the life opportunities of future generations and the natural systems on which all life depends.”

Finally, current thinking on development increasingly regards the institutional framework that guides the organization and interaction of the different groups of people in society as a critical cornerstone in the dynamics of developmental processes. Social, political and administrative institutions are vehicles that ensure that conflicts are managed in order to achieve cohesion which is a prerequisite for positive developmental behaviour. This perspective on development is particularly central in this discussion because the effects of corruption directly target and weaken the institutional pillars of society, as is illustrated later in this paper.

For the purposes of this paper, we choose to adopt the more comprehensive definitions of development as encapsulated in the contemporary and current considerations of the term. With this understanding of ‘corruption’ and ‘development’, our focus now turns to the relationship between the two.

The relationship between corruption and development

It is imperative that our conceptual analysis of corruption and development must shed light on the relationship

between them. Put simply, does corruption undermine development, or does poor development cause corruption? The answer to either part of this question is not an easy “Yes” or “No”.

There is widespread evidence that suggests a strong inverse relationship between corruption and development across the globe. According to Chetwynd, Chetwynd and Spector (2003), “economic theory and empirical evidence both demonstrate that there is a direct causal link between corruption and economic growth.” Typically, little or no development, and in places negative economic growth, has been found to prevail alongside high levels of corruption. A significant reduction in corruption levels in a country has also been associated with higher economic growth indicators and subsequent reductions in poverty levels. One direct reason for this is that investors and donors are acutely averse to and shun environments that are riddled with corruption largely because of the lack of transparency therein and the unpredictability of the economic climate. The additional costs of corruption, the bribes and the kick-backs for public officials, also deter any investors who seek honest returns to their enterprises. In this sense, corruption leads to less development. The UNDP (1997) analyses that corruption is detrimental to development because of three reasons:

- (i) it diverts public resources into private pockets, thereby further widening inequalities;
- (ii) it drives away private investment which requires political stability and economic predictability before committing their funds; and,
- (iii) it undermines the tax base of the government as more enterprises disappear from the taxation radar by moving into gray economic activities in the informal market.

Other views on the relationship between corruption and development are more cautious and ambivalent. Gray and Kauffmann (1998:7) note that “corruption is widespread in developing and transition countries, not because their people are (inherently) different from people elsewhere, but because conditions (in these countries) are ripe for it.” This assumes that the poor conditions in developing nations give rise to corruption. On the other hand, Frisch (1996:69) holds a more balanced position. He asserts that “corruption is one of the causes of underdevelopment and poverty, yet poverty is in part responsible for the continuation of corruption.” In this argument, while it is corruption that causes poverty and underdevelopment, once these conditions have set in, they in turn sustain and promote corruption. So, while increased levels of corruption drastically curtail potential development, the severe conditions of underdeveloped societies are very fertile breeding ground for corruption.

In the final analysis therefore, the relationship between corruption and development is akin to the proverbial ‘chicken and egg’ dilemma. Our view in this paper is that a holistic understanding of this complex and often shifting relationship must accept the reciprocal and very dynamic interaction between the two phenomena. They work together well, albeit conversely, with corruption undermining development and underdevelopment promoting corruption. The dialectical relationship can further be clarified by considering it using some models.

Some models of the corruption-development phenomenon

Chetwynd, Chetwynd and Spector (2003) explain the linkages between corruption and development by two models which they call The Economic Model and the Governance Model.

The Economic Model is based on the fundamental effects of corruption on economic growth factors and the resultant impact of these on the poverty levels of the society. Stated simply, the model views corruption as a direct cause of reduced economic growth and increased income inequality, leading to increased poverty. Diagrammatically, the model is linear and plain.

Figure 1. The Economic Model



(Chetwynd et al., 2003)

The causal pattern in this model resembles the one in the Economic Model. In this case, corruption is perceived as undermining governance capacity which then increases poverty. Poverty is the end result of the process in both models.

While the models are useful in their attempt to expose the links between corruption and development (development as reflected in the poverty levels in a society), we contend in this paper that the two models are structurally deficient and do not fully capture the dynamic relationships that subsist between the two realities. To begin with, it is rather simplistic to assume that corruption is always at the head of the causal relationship. Indeed, both poor economic development and weak governance may well be the true trigger causes of corruption. In our view, the relationship between corruption and economic growth and that between poor governance and corruption are a lot more complex than this, and they assume a cyclical rather than a linear structure. More often than not, the relationship develops into a vicious cycle that is self-sustaining and very difficult to break. We would therefore, represent this relationship diagrammatically as follows:

Figure 3. A revised version of the Economic Model

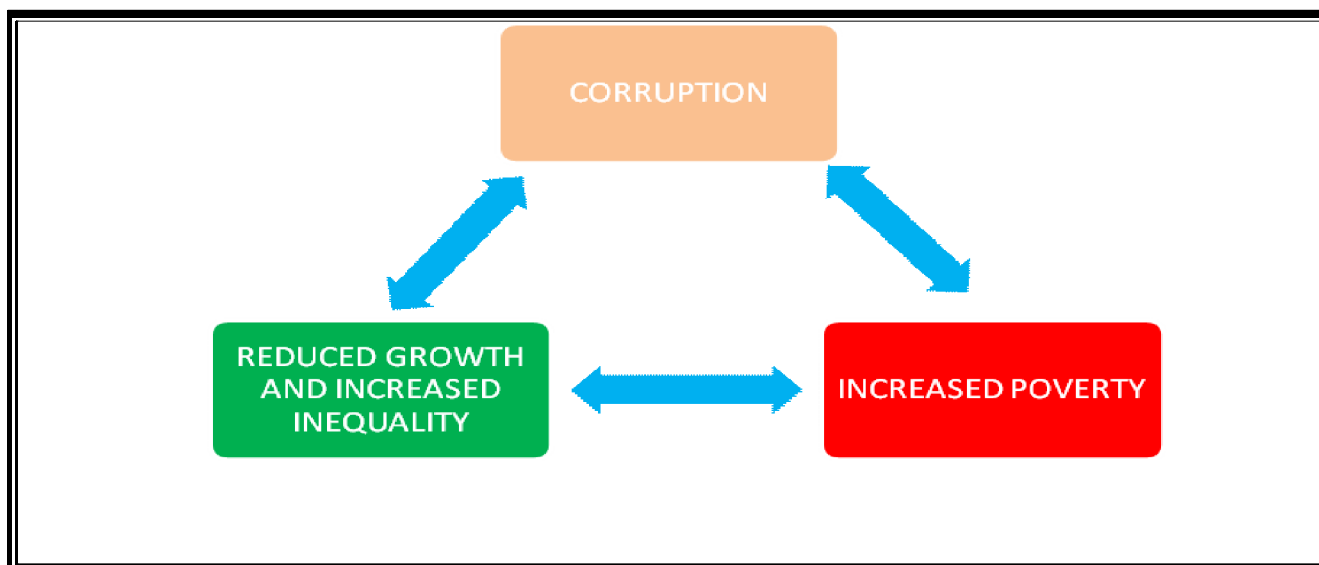
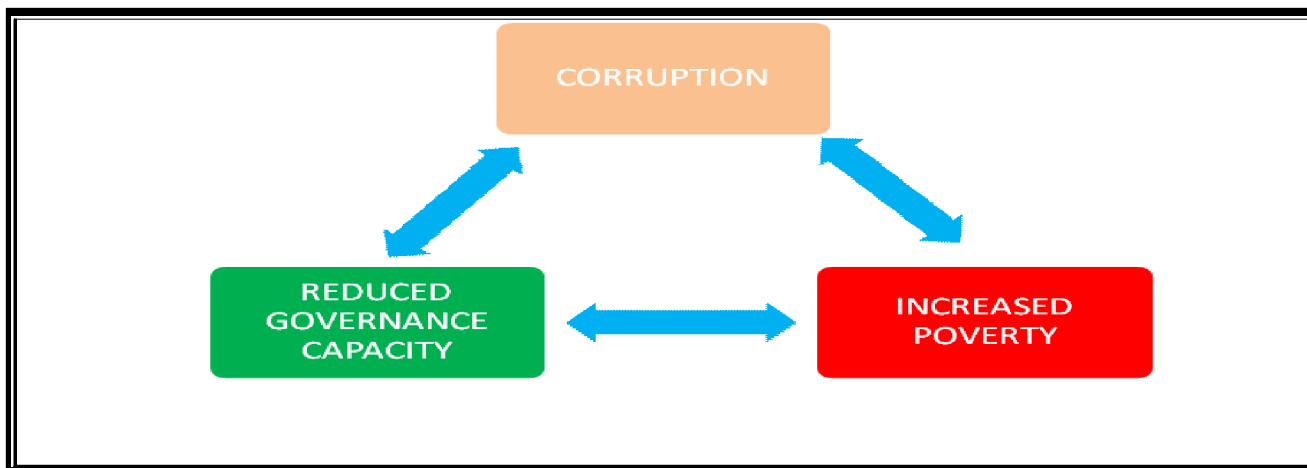


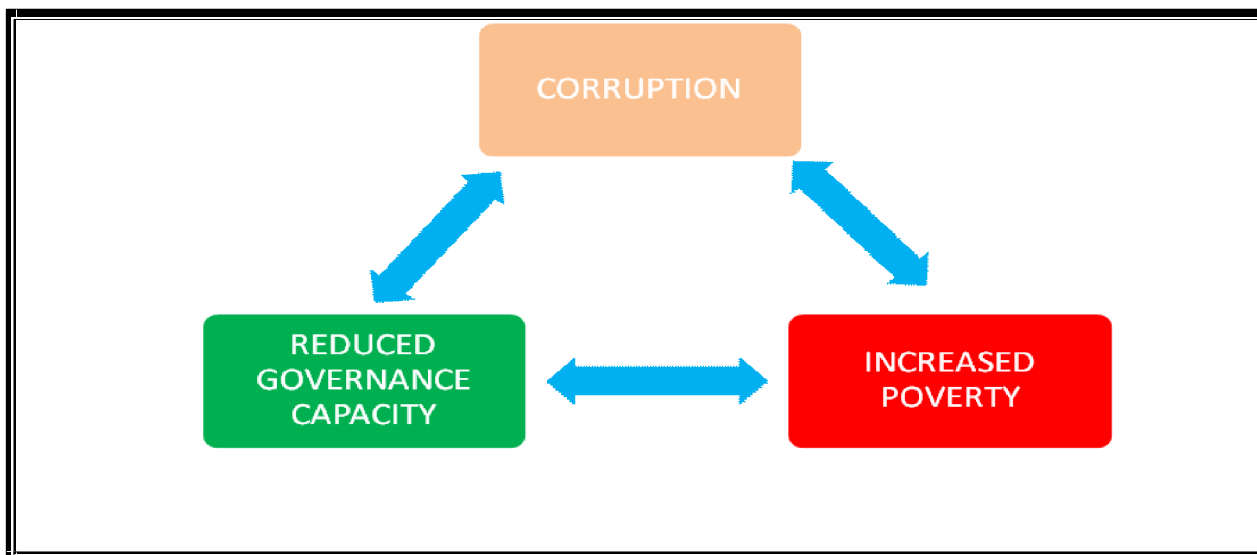
Figure 4. A revised version of the Governance Model



It is argued here that each factor on the cycle acts on, and affects, both of the other two factors in the cycle. Thus the factors are constantly interacting and if unchecked, the interaction grows progressively in intensity and effect. We also humbly propose that the separation of the two models, while convenient for analysis, may easily make us lose sight of an additional equally crucial dynamic. This is the fact that the two models are not mutually exclusive. Governance has a direct and dialectical relationship with economic development. Corruption comes into the dialectic and influences both the governance and the economic factors, usually through weaknesses in either or both of these, and it influences and undermines both. Dr. Shana (2006) clearly identifies this unholy trinity of factors in his description of “the most tragic and devastating crises of our nation (Zimbabwe)”. He aptly declares that:

Corruption is one of the four apocalyptic horsemen wrecking havoc in our country. The other three are the crises of national governance, national economy and HIV/AIDS. (Shana, 2006:1)

Figure 5: The interplay between the Economic and Governance Models



The health crisis of HIV/AIDS will not be a concern of this paper, but the other three are directly relevant. We argue that the corruption in Zimbabwe's context has significantly closer ties with the crisis of governance than with the economic development crisis. We concede, nevertheless, that all the three continue to influence one another in ever increasing ways. The consensus that emerges from this analysis is that corruption is a scourge in the Zimbabwean society. It bleeds the economy, saps the society of its livelihood and dries up the public purse in favour of undeserving, self-serving entities that are steeped in greed.

It is only appropriate that at this juncture we turn to an analysis of the specific corruption-development relationship in the Zimbabwean context.

The political context of public sector corruption in Zimbabwe

In this section we explore public sector corruption in Zimbabwe using the integrated model formulated and presented above. Our analysis of archival and secondary sources of data indicates that, while corruption is both a public and private sector phenomenon in Zimbabwe, the former is of such a scale that it constitutes a significant and fundamental threat to development (Gray & Kaufmann, 1998). Below we locate and explain the genesis and scale of corruption in the public sector in Zimbabwe in the context of the arguably, politically motivated erosion of the capacity of governance and accountability institutions, particularly in the post-2000 period. These institutions constitute a crucial ethics management framework providing ethical support and compass to the public official in the daily discharge of his or her duties.

Theoretical and empirical evidence from several research studies demonstrate that systemic dysfunctionality of governance infrastructure creates opportunities and inclination for corrupt practices among public officials (Lawal, 2007; Kunaka, et al. 2002; Pope, 2000 ; Gray & Kaufmann, 1998; Stanford Encyclopedia). Weak legislative and regulatory frameworks that do not sufficiently define and delimit the scope of bureaucratic decision-making ambiguate and dilute the ethical anchorage of the institutional roles, rules processes and purposes (Stanford Encyclopedia). This leaves the public official to operate without clearly-defined and consistent accountability benchmarks. In this way too much discretionary space and, by default, discretionary power is given to the public official (Pope, 2000; Gray & Kaufmann, 1998). Since virtue and ethical behaviour are not an inherent feature of human nature, this makes the public official prone to abusing his or her discretionary powers in pursuance of private as opposed to public interest (Mbeki, 1998, Hobbes as cited in the Stanford Encyclopaedia). This is likely to be worse in situations where watchdog and enforcement institutions such as the judiciary, the media and the civil society are also weak. In such a scenario, a work ethic deeply anchored in corrupt malfeasance as distinct from public service values is likely to take root, encouraged and nurtured by the ensuing opacity and sense of impunity.

In Zimbabwe, since 1980 a pattern has emerged whereby corruption is inversely correlated with quality of governance, with the prevalence of corruption increasing, *pari passu*, as governance worsened, particularly since 2000. The emergence of a relatively stronger opposition party on the political scene in late 1999 and the 2000 constitutional referendum dramatically altered the Zimbabwean body politic, with the then ruling party's sense of political invincibility being challenged by the triumph of the 'No' vote in the constitutional referendum (Raftopoulos, 2002). To the ruling party then, this development constituted a tipping point, emblematic of the resurgence of imperialist forces in Zimbabwe. The newly formed opposition party and the civil society in its entirety were cast in the ruling party's ideological discourse as imperialistic proxies deserving to be violently confronted and eliminated (Raftopoulos, 2002). The subsequent encroachment of the opposition on the ruling party's political turf in the 2002 legislative elections left the ruling party with a siege mentality. It soon got into a defensive, paranoid and realpolitic mode, determined to retain and reconsolidate its oligarchic dominance on the political scene at all costs (Raftopoulos).

This is the context in which institutions of governance in Zimbabwe were arguably manipulated and reconfigured to serve the ruling elite's political interests. In this regard the ruling party effected legislative and judiciary changes which were arguably intended to ensure that it regained and entrenched its wonted electoral invincibility. Such politically motivated tinkering with the governance institutions undermined and compromised their capacity for acting as pillars of accountability and transparency. Political agenda as opposed to public interest became the sustaining motive of governance institutions. Besides overt manipulation of institutions, the ruling party frequently sought to take advantage of loop holes in the governance institutions to tighten its grip on the Zimbabwean body politic.

In pursuit of this agenda, a number of statutes and constitutional amendments were introduced in Zimbabwe in the post-2000 period. On closer scrutiny, these constitutional amendments and statutes seem to be more oriented towards furthering parochial political party interests than public interest. In the following sections we argue and demonstrate that, while such politically opportunistic tinkering with the governance institutions may have served well the ruling elite's political interests, it considerably undermined pillars of accountability and transparency, thereby trashing the national integrity framework, which constitutes a central aspect of the ethics support and management framework (Mbeki, 1998). This created opportunities and inclination for corruption in the politicians and bureaucrats.

Post -2000 Constitutional amendments and their implications for corruption

Amendment No.17

Generally provides for the compulsory acquisition of land without compensation except for the infrastructural developments on the farm (Constitution of Zimbabwe as amended, 2007). It also puts the land disputes beyond the jurisdiction of the courts in Zimbabwe. This provision arguably abrogates the judiciary's capacity for scrutinising the goings on in the farms as well holding the government to account ,hence undermining the capacity of the judiciary for serving as an accountability and watchdog pillar. In this way a veil of opacity was cast on what went on in the farms as it would never get into the public domain. This arguably created a sense of impunity among potential land grabbers as they were assured of immunity from judicial scrutiny and review. Under such circumstances bureaucrats and politicians connived in corruptly acquiring multiple farms. Corrupt tactics used range from overt intimidation, torture, extortion, and blackmail, cheating, false evidence, cronyism, misrepresentation and cover-ups.

In light of this, the Constitutional Amendment No.17 can be justifiably seen as having created opportunities and inclination for corruption in Zimbabwe. Even those who by nature did not have a corrupt disposition found the vast opportunities for acquiring property too tempting to resist. This may explain the proliferation of land ownership-related forms of corruption after the enactment of the Constitutional Amendment No.17, the most dominant of which is the VIP Land Grab Scandal (Shana, 2006).

The VIP land Grab Scandal refers to multiple farm ownership by members of the ruling elite in Zimbabwe. This is a widely acknowledged phenomenon even in the ruling party and government circles. In recent years the Zimbabwean president has often publicly lamented this form of corruption. Even the government appointed Utete Commission also established the ubiquity of this form of corruption. Those implicated in this form of corruption are invariably the powerful and well-connected in high places in the political and bureaucratic circles in Zimbabwe.

Amendment No.16 and 18

These constitutional amendments, most importantly provide for, among other things, the fundamental reconfiguration of the legislature. As a result of the Constitutional Amendment No.16 of 2000, Zimbabwe was to have a bicameral

legislature, consisting of two houses, namely the senate and the house of assembly. The senate comprised 66 members, of whom 50 were directly elected on a constituency basis. The rest were generally presidential appointees (Constitution of Zimbabwe as amended, 2007).

The Constitutional Amendment No.18 of 2007 increased the number of senate members to 93. In addition to 66 directly members, the senate was to consist of the senate president and vice president, 10 provincial governors, 16 chiefs and 5 presidential appointees. Strictly speaking the governors and the traditional chiefs are presidential appointees since the president makes the final determination as to who becomes a chief or governor. In recent times, chiefs have been effectively co-opted into the ruling party rural campaign machinery through government - initiated patronage programmes. Amendment No.18 also increased the number of seats in the lower to 210. Of these 200 were directly elected while 10 were presidential appointees (Constitution of Zimbabwe as amended, 2007; Crisis in Zimbabwe Coalition, 2002).

These changes assured the ruling party of legislative majority in both legislative institutions, hence consolidating executive control of the legislature. Through the above amendments the executive managed to trip off balance the other two legs of the tripod of governance in pursuit of total control of the state. As a result, there was increased fraternisation and convergence of the executive and the legislature. As state power became centralised and concentrated in the executive, it increasingly became accountable to itself and not to the electorate. This ultimately undermined the principle of mutual monitoring between state institutions which makes for accountable and transparent governance. Thus, members of the legislature from the ruling party would vote for passage of bills which blatantly encroached on civil liberties without fear of losing their seats in subsequent elections as long as such pieces of legislation protected and entrenched the interests of the ruling party. A case in point is AIPPA, a piece of media legislation which was passed despite the fact that the Parliamentary Legal Committee had produced an adverse report on it because many of its provisions palpably violated the constitution.

Such erosion of administrative accountability created a sense of impunity on the part of the politicians and public officials. Politicians were no longer worried about being legitimised by the electorate since they could be legitimised and protected by the executive. For example, some officials implicated in corruption scandals would merely be pardoned and redeployed. This arguably creates and encourages inclination for corruption.

Post -2000 pieces of legislation and their implications for corruption

In addition to using constitutional amendments to retain control of state institutions, the ruling party also used its then unassailable majority in the senate and house of assembly to enact legislation that served its political interests as opposed to public interest while undermining other accountability and transparency pillars such as the media and the civil society. It became difficult for the media and civil society to critically engage and publicly interrogate government practices in the context of a restrictive and cramping regulatory environment. Under the resultant obscurity and relative immunity from scrutiny, government practices became progressively less transparent, thereby ultimately eroding government accountability. For illustrative purposes, below we review and analyse two pieces of legislation passed after 2000, namely AIPPA (Access to Information and Protection of Privacy Act) and POSA (Public Order and Security Act).

Access to Information and Protection of Privacy Act (AIPPA)

AIPPA was the first piece of media legislation in Zimbabwe since 1980. It was passed in February 2002, a few months before legislative elections. Its major provisions are as follows: Firstly, it provides for mandatory registration of all media institutions and journalists operating in Zimbabwe. The registering authority was the Media and Information Commission (MIC), composed solely of appointees of the Minister of Information. Secondly, registration was only for two years for media institutions and one year for journalists. Registration could be renewed on the condition that regulations had been complied with. However, media institutions and journalists could be de-registered if they

did not comply with the regulations. Secondly, AIPPA outlaws foreign media ownership and requires foreign journalists intending to cover Zimbabwe to pay prohibitively high accreditation fees (Crisis in Zimbabwe Coordination Committee, 2002).

Additionally, AIPPA for the first time in Zimbabwe criminalised journalistic practice through providing for imprisonment of journalists for, among other offences, spreading rumour, falsehoods, causing alarm and despondency under guise of authentic reports, denigrating or bringing hatred or contempt or ridicule or exciting disaffection or hatred against the president, the law enforcement agents or the administration of justice.

AIPPA can be seen as undermining transparency and accountability in a number of ways. Firstly, by criminalising journalistic practice, AIPPA undermines investigative journalism which has the potential of exposing malfeasance on the part of both politicians and bureaucrats. In this regard AIPPA fundamentally emasculates a key pillar of accountability and transparency, through blacking out the searchlight of media scrutiny on the activities of bureaucrats and politicians (Lawal, 2007). The ensuing sense of impunity on the part of politicians and bureaucrats encourages corruption.

Relatedly, AIPPA further completely outlaws registration of foreign journalists and media institutions. This a cynical attempt to not only limit the potential number of critical voices in Zimbabwe but also insulate the ruling elite from international media scrutiny. In this way AIPPA can be seen as undermining transparent and accountable governance. Under such circumstances the ruling elite would carry out its nefarious and tenebrous activities outside public scrutiny.

AIPPA also clogs public circulation of information through setting legal traps in the way of those responsible for facilitating public flow of information. This piece of legislation makes it a criminal offence for the press to circulate information which portrays the powerful in bad light. This effectively makes journalistic practice a risky undertaking. Hence, it deters journalists from critically interrogating the activities of those in power (Urofsky, n.d). Again this undermines transparent and accountable governance.

Lastly, AIPPA effectively puts the control of the public information circulation in the hands of the minister of information and the president. The Minister of Information, in consultation with the president are solely responsible for appointing the members of the MIC. Also, this organisation operates under the financial framework set by the minister and the government. This squarely places the organisation within the executive's ambit of influence, making the MIC potentially the executive's handmaiden and beholden to its political interests. For example, when vetting journalists and media institutions for registration, the MIC would be guided by political as opposed to public interests. As a result, the government effectively ended up being its own messenger.

Public Order and Security Act (POSA)

This piece of legislation was passed in January 2002. It provides for a stringent and restrictive legal framework for conduct in both private and public domains. It criminalises the following activities: organising or setting a group or assisting a group that seeks to apply pressure or threatens to apply pressure on the government, making a false statement that potentially undermines confidence in authority and government agencies, and making public statements that engender feelings of hostility towards the president. It also proscribes the holding of meetings unless notice is given to police seven days in advance and performing any action or utter any words or distributes or displays a sign that threatens to provoke a breach of the peace(Public Order and Security Act,(Chapt.11:17), 2002, as amended, 2005; Hondura, 2002).

The activities which POSA sought to outlaw lie at the heart and soul of democratic ideals of freedom of expression and assembly and peaceful protest which constitute the essence of the civil liberty. Thus POSA can be seen as an

attempt to weaken and undermine the civil society, which is another pillar of transparent and accountable governance (Pelizzo, 2004). A vibrant civil society can critically interrogate and monitor governmental practices, hence keeping its malfeasance and excesses in check, thereby dispersing power.

Post -2000 Judiciary Reforms

When it came to the judiciary the ruling party took a less manipulative approach, largely taking advantage of statutory and constitutional loopholes to reconfigure the composition of the judiciary to ensure that its political interests were protected. The major change was the politically motivated purging of white officials from the bench and their replacement with blacks. The constitution of Zimbabwe gives the president the power to appoint judicial and other senior law officers in consultation with the Judicial Services Commission, whose members are all presidential appointees. Also, the judiciary does not operate outside the fiscal framework of the government, which the executive controls. This manner of appointment of the judiciary gives the president wide discretionary powers to appoint political loyalists, hence giving the executive leverage over the judiciary. This effectively limits the independence of the judiciary, ultimately compromising the delivery of justice particularly with regard to cases where the executive's political interests are at stake. In this way the judiciary's capacity for checking the excesses of government is compromised, incapacitating it as an accountability pillar (Urofsky, n.d).

Overall, the post-2000 politically motivated manipulation of state institutions by the ruling party largely undermined the capacity of the legislature, judiciary, media and civil society to provide the necessary checks-and-balances framework which makes for transparent and accountable government. Thus power became concentrated in one centre instead of it being dispersed across all state institutions. The four institutions are important constitutive elements of the national integrity management system (Pope, 2000). Thus, in as much as the executive subordinated all the other institutions to its political interests, it became the veritable *l'e'tat c'est moi*, the only the real arm, with the other arms becoming its prostheses. Such concentration of power in one institution and effectively in one person augers badly for transparent and accountable governance.

Corruption and development in Zimbabwe

As Shana (2006) notes, corruption in Zimbabwe increased in tandem with the worsening of the crisis of governance, particularly in the post-2000 period. However, even before this period corruption had already started to rear its ugly head. Thus development momentum had already been undermined even in the pre-2000 period although the symptoms of this appeared much later.

Archival sources analysed demonstrate that major corruption scandals in the public sector in Zimbabwe since 1980 tend to involve members of the political and bureaucratic elite. It also emerged from the data analysis that most incidents of corruption invariably involved abusive use of power or political connections. The following categories of corruption emerged from our analysis of archival sources (the classificatory or typological scheme was adapted from Caiden, 1998): abusive use of power, misappropriation of public funds and resources, manipulation of regulation, purchases, supplies, contract and loans, tax evasion and excessive profiteering, bribery and graft, election tampering, misuse of inside knowledge, cronyism and cover-ups, links with organised crime and black market operations, blackmail and perversion of justice. Below we analyse the implications for development of some of these forms of corruption, giving illustrative cases from Zimbabwe.

Abusive use of power

In Zimbabwe, this form of corruption is arguably the most prevalent and the major example of it is the VIP Land Grab scandal (Shana, 2006). This is a developing scandal where political and bureaucratic elites use their power and political connections to mobilise and instigate violent elements in the ruling party to besiege and extra-judicially and forcibly take-over mainly white-owned farms. Such activities typically involve use of violence and torture.

This form of corruption had severe consequences for development in Zimbabwe. Firstly, it undermined productive capacity and food security (“Physicians For Human rights“, 2009). An unequivocal testimony of this was the progressive plummeting of deliveries to the GMB in the immediate aftermath of the post-2000 phase of the land reform programme (“Mugabe land Grab:Special Report“, 2009). This was worsened by the fact that the multiple farm owners lacked the logistical and financial capacity to productively run them. Secondly, the blatant disregard for property rights and the attendant violence on property and person projected an image of the country as a risky and uncertain investment and tourist destination (Dun & Bradstreet cited in Zimbabwe Standard Newspaper). Yet, these aspects are the major drivers of development in Zimbabwe. Thirdly, this form of corruption puts the bulk of the prime and arable land into the hands of the politically-connected few, distorting allocation of resources and excluding vast sections of Zimbabwean society from participating in meaningful development.

Misappropriation of public funds and resources

Two major examples of this form of corruption in Zimbabwe were the NOCZIM and ZISCO scandals. NOCZIM is the acronym for a Zimbabwean parastatal whose line of business is fuel procurement and distribution. The scandal arose in 1999 when NOCZIM top managers and the permanent secretary of the Ministry of Energy allegedly appropriated vast sums of money from the company. The case allegedly implicated the two Vice-presidents as well as ruling party officials who diverted the fuel obtained from NOCZIM at concessionary rates to the black market. Although the managers and the permanent secretary were arrested, the cases were withdrawn before plea in court. The money was never recovered.

ZISCO is an acronym for a major steelworks company, with 91 % government ownership. It is the second largest steelworks in Sub-Saharan Africa. The scandal arose when the two vice-presidents and some government ministers were accused by the National Economic Conduct Inspectorate (NECI) of looting the company’s resources. The minister of industry also disclosed the scandal when he appeared before a parliamentary committee. The NECI report was withdrawn in circumstances which suggest political interference with the judiciary. The resources looted were never returned.

This form of corruption projects an image of Zimbabwe as a country where law is selectively applied. The cases were arguably withdrawn under circumstances of probable political interference. This weak legal framework suggests that the country is an uncertain and unpredictable business environment. Yet, these are important considerations when a country is assessed as an investment destination. Hence, investors would shun Zimbabwe as a result of such forms of corruption. Also, the large sums of money looted make development more expensive for the country yet it does not have adequate financial resources in the first place.

Bribery and graft

A major example of this form of corruption was the ZUPCO scandal. ZUPCO is an acronym for passenger transport parastatal in Zimbabwe. The scandal arose when its chief executive officer (later appointed cabinet minister) and the chairperson of the company board allegedly solicited a bribe of US\$85000 from a foreign bus supplier as inducement for them to award him a tender to supply buses to the transport company. The chairperson was convicted and jailed while the case of the chief executive officer has not yet been finalised, more than three years after it was uncovered.

This form of corruption projects Zimbabwe as an unattractive, expensive and risky investment destination. It would be difficult for an investor to make profit after paying hefty bribes of the proportions demanded in the ZUPCO scandal (Gray & Kaufmann, 1998). Also, the fact that the case of the chief executive officer has not yet been finalised suggests political interference, something which projects the country as an uncertain and risky investment destination. In this connection, Zimbabwe is ranked among the riskiest investment destination(Dun & Bradstreet, 2009).

Conclusions and recommendations

It has been demonstrated above that Zimbabwe, like the proverbial fish, started to rot from the head. Since 1980, major cases of public sector corruption mainly implicated members of the bureaucratic and political elite. In the post-2000 period, public sector corruption reached kleptocratic levels as most bureaucrats and politicians took advantage of the weak and trashed accountability pillars to loot state resources (Shana, 2006; Pope, 2000). It also emerged from the paper that the parastatals in Zimbabwe are major conduits for channelling state resources into the pockets of the members of the political and bureaucratic elite.

In light of the close relationship between lack of development and corruption as illustrated above, development efforts in Zimbabwe should first address the systemic and institutional corruption in the public sector. Hence this paper recommends the adoption of a multi-sectoral approach as a basis for coming up with comprehensive strategies to rebuild and reinvigorate the institutional framework of governance in order to plug the vast opportunities and tendencies towards corruption that currently plague the public sector in Zimbabwe (Pope, 2000). This can only start with a clear redefinition of the relations between the three main arms of government to allow for their respective independence as well as to create a favourable regulatory framework of operation for the media and civil society. It is also recommended that those economic factors that are causal to the growth of the corruption crisis should be addressed to minimize the strong temptations towards corrupt practices in the public sector.

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THE ROLE OF ENVIRONMENTAL FACTORS IN THE DISTRIBUTION OF POLLUTANTS AROUND THE CITY OF GWERU'S DUMPSITE

By

Matsa, Mark and Mutekwa, Timothy
Department of Geography & Environmental Science,
Midlands State University
Zimbabwe

Abstract

Little has been documented on the hidden relationship between environmental factors and pollutants spreading from municipal dumpsites in Zimbabwe (DNR, 1993; Chenje *et al*, 1998; Masocha, 2004), yet such information can be useful for urban land use planning purposes to safeguard both people and the environment against pollution and its related effects. This study aims to evaluate the role of environmental factors in the distribution of pollutants around Gweru dumpsite. It also determined whether there is a significant ($p < 0.05$) relationship between the concentration levels of lead (Pb), cadmium (Cd), and sulphides (SO₂) and environmental factors - specifically slope, soil bulk density, stream flow direction, soil infiltration rate, and distance from the dumpsite. Geographical Information Systems (GIS) was used to input process and analyze both spatial and attribute data. The Principal Components Analysis (PCA) revealed that there is a significant ($p < 0.05$) relationship between the concentration levels of Pb and SO₂ and Principal Component 2 (PC2) consisting of slope and infiltration rate. This means that the spread of pollutants (Pb and SO₂) around the dumpsite can be traced back to the dump and is directly linked to both slope and soil infiltration rate. It is recommended that further research be done to find possible factors responsible for the spread of cadmium, which could not be explained by the Principal Components Analysis for city planners to get a fuller picture of the situation.

Introduction

Hazardous waste sites, in particular, and potentially contaminated sites, in general, may pose significant risks to the public because of the potential health and environmental effects (Ellis, 1989; Asante-Duah, 1993; Tevera, 1995; Mariolakos *et al*, 2003). Apart from its immediate and direct health and environmental hazards, hazardous waste disposal could lead to the long-term contamination of the ambient air, soils, ground waters, and the food chain. When waste is deposited at dumpsites, it is usually forgotten yet it continues to interact with the environmental factors to become even more dangerous - to both people and the environment - through soil, water, and air pollution (William and Blackman, 1993; Lanphear *et al*, 2002; James, 2003). Heavy metals, like lead and cadmium, behave differently to different environmental factors, yet both are potentially poisonous.

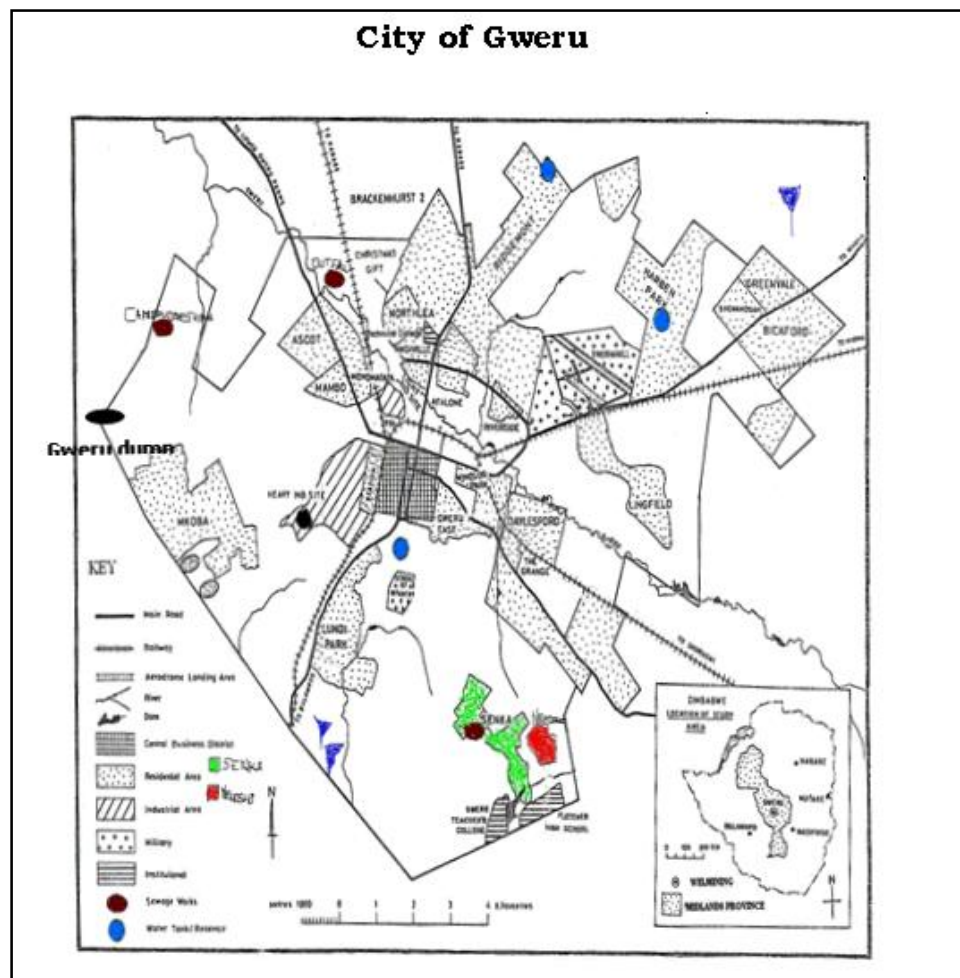
Gweru waste disposal site is an open dump, which produces leachate that contain chemical contaminants including heavy metals, like lead (Pb) and cadmium (Cd) as well as sulphides (SO₂). The dumpsite is located in prime urban agricultural land where residents grow maize and other food crops for subsistence and they could be at risk from pollutants emanating from the dump. Although an Environmental Impact Assessment (EIA) was carried out before siting the dump, this was only partial and did not determine the hidden relationship between environmental factors and pollutant spreading from the municipal dump. This study, therefore, sought to determine whether there is a relationship between the concentration levels of cadmium (Cd), lead (Pb), sulphides (SO₂), and environmental factors - specifically, soil bulk density, soil infiltration rate, slope, and stream flow direction - around Gweru dumpsite.

¹ Lecturer, Department of Geography and Environmental Science, Midlands State University, P.Bag 9055, Gweru, Zimbabwe, e-mail @msu.ac.zw

Such information can be useful for city land use planning and development purposes to safeguard both people and the environment against pollution. The dumpsite is the final resting place for all municipal and industrial solid waste (Jerie, 2005; Matsa, 2007). Metal smelting and refining industries, like Zimbabwe Castings Limited and Zimalloys, are potential lead sources, while Bata Shoe Company produces a lot of sulphides from hide processing. These are deposited at the municipal dumpsite.

Materials and Methods

Location of the Study Area



The City of Gweru is located at 19°25'S 29°50'E. It is 168 km from Bulawayo and 280km from Harare along the major Harare-Bulawayo road and railway line. Gweru is the fourth largest urban settlement in Zimbabwe - after Harare, Bulawayo, and Chitungwiza - in terms of population size. It is the provincial capital of the Midlands Province, and is centrally located in the country.

Gweru straddles across 3 types of soils, namely black basalt soils, red loams, sands, and gravel. The city of Gweru lies on a watershed, which stretches from Rusape to Bulawayo and is at an altitude of about 1422 meters. The Municipal area is dissected by numerous streams most of which drain into the Gweru River, a tributary of the Gwayi River. The region is mostly affected by northeast prevailing winds, which are dominant from August to November during which their mean speed is in the range of 8.0 to 9.3 knots. The city covers approximately 26,113ha including the newly acquired land of Cambridgeshire and Clydesdale (City of Gweru, 1994).

Gweru dumpsite lies between the high density residential suburbs of Ascot, Mutasa, Mambo, and Mkoba 12. The area is unprotected and gently slopes in a westerly direction. Residents are lured to practice urban farming on the

edges of the dump in all directions where they grow crops like maize, groundnuts, sweet potatoes, and sugar beans. Soils on site are mainly sandy and these may promote leachate movement.

Data Collection Methods

Figure 1 shows a sampling point map of the study area with random points along transects. It is along these random points that samples to test for soil bulk density and infiltration rate were taken. Samples to test for sulphides, lead, as well as cadmium concentrations were also taken from the same points.

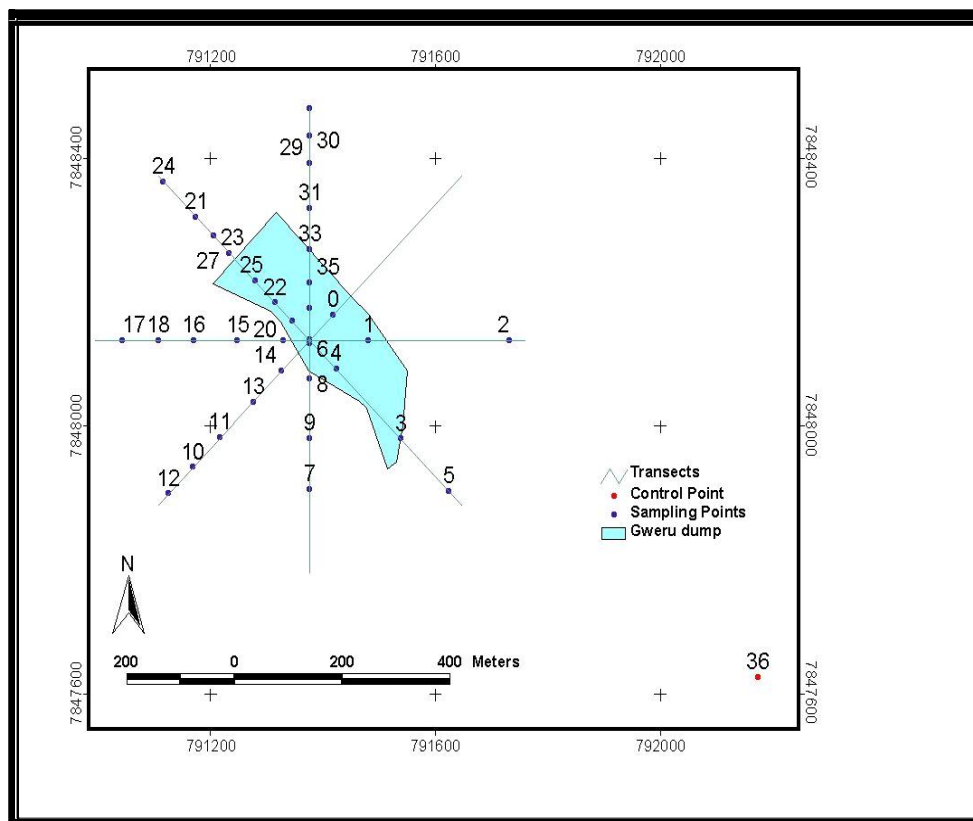


Figure 1: Sampling Points Map of the Study Area

Determining Individual Environmental Factors

Soil Bulk Density

The sampling cylinder and its base were weighed (W_1). The cylinder's internal diameter and its height were also measured. The cylinder flush with the wet soil sample (W_2) was then weighed and the volume of the sample was calculated from the inner volume of the sampling cylinder in cm^3 (V). The wet weight of the sample ($W_2 - W_1$) was then divided by the calculated volume (cm^3) to get bulk density of the soil (B_d). (That is: $B_d = (W_2 - W_1) / V = \text{gcm}^3$.)

Soil Infiltration Rate

Considered was a "single ring" infiltration measurement in which a cylinder, 12cm in diameter and 12cm length, was driven into the soil. The cylinder was graduated with lines every 1.0cm. The cylinder was then filled with water and the level of water was monitored. The time taken by the water level to drop 1.0cm was recorded. Measurements were taken for a given amount of time (5 min) or until a steady state had been reached. The infiltration was then calculated using the formula: $I = (\text{ml of water infiltrated} / \text{time min}) (1 / \text{area of the cylinder } \text{cm}^2)$; where "I" is infiltration rate.

The direction of stream flow, as well as the slope of the dumpsite area, was determined on the Digital Elevation Model (DEM) of the study area using the Geographical Information Systems (GIS).

Determining Chemicals Concentration around the Dumpsite

100g of soil samples were collected from 12 random points around the dump. Two adjacent points were systematically selected along each transect from the dumpsite in order to assess the concentration of each of the chemicals from one point to the adjacent one. Samples were also collected from 3 randomly selected points from within the dump. These served as control points to ascertain the presence of the chemicals within the dump. Another control point to test the natural level of these chemicals in the soil was also determined from the prevailing windward direction (north-eastern side of the dump) and upslope to make sure that the natural mineral concentrations within the soil were not a result of pollution from the dump.

Sulphides Determination by Leco Machine

A 1g sample was weighed in a Leco crucible and mixed with 2 spatulas of leco accelerator, which enhances the sample ignition. The sample was loaded onto the sample holder and introduced into a furnace in which the sample was burnt and emitted the entire sulphur dioxide in it. The released sulphur dioxide was measured by the machine which gave the results on the read-out (screen).

Lead and Cadmium Determination by Atomic Absorption Spectrometer

5g samples were weighed in a Phillips beaker by analytic balance. 20ml of nitric acid (HNO₃) and 20 ml of perchloric acid (HClO₄) were added. The solution was heated to fuming. It was then digested for 5 minutes on a hot plate and then cooled. The solution was then transferred into a 100ml volumetric flask and topped with distilled water to the 100ml mark. It was closed, shaken, and then allowed to settle. Atomic absorption spectrometer readings for both Pb and Cd were then taken.

Data Analysis and Discussion

Relationship between Chemicals Concentration and Environmental Factors

The Principal Component Analysis (PCA), which is a technique for simplifying a data set, by reducing multidimensional data sets to lower dimensions for analysis, was used to try to find out possible relationships between the environmental factors and the concentration of the chemicals under study. PCA was, thus, used for dimensionality reduction in the data sets while retaining those characteristics of the data sets that contributed most to its variance by keeping lower order principal components and ignoring higher order ones.

The Principal Component Analysis grouped environmental factors into principal component 1 (PC 1) and principal component 2 (PC 2) as shown in Table 1.

Table 1: Component Matrix

Environmental factor	Component	
	1	2
Bulk density	0.794	0.187
Infiltration rate	-0.342	0.846
Slope	-0.362	-0.642
Distance	0.856	-0.327
Flow direction	0.494	0.382

Extraction Method: Principal Component Analysis.

PC 1 comprised mainly of distance from the dump which had the highest positive factor loading of 85.6%, followed by soil bulk density with another positive factor loading of 79.4%. Flow direction, slope, and infiltration rate had lower loadings and, therefore, did not contribute much to the analyses in which PC 1 dominated. On the other hand, PC 2 was dominated by infiltration rate with a high positive factor loading of 84.6%, as well as slope which had a negative high factor loading of -64.2%. Loadings by flow direction and soil bulk density were low for PC 2.

Relationship between Soil Bulk Density and Distance (PC 1) and Cadmium

Figure 2a shows that Principal Component 1 comprising soil bulk density (79.4%) and distance (85.6%) did not significantly ($p > 0.05$) explain the spread of cadmium ($r^2 = 0.129$ and $p = 0.251$).

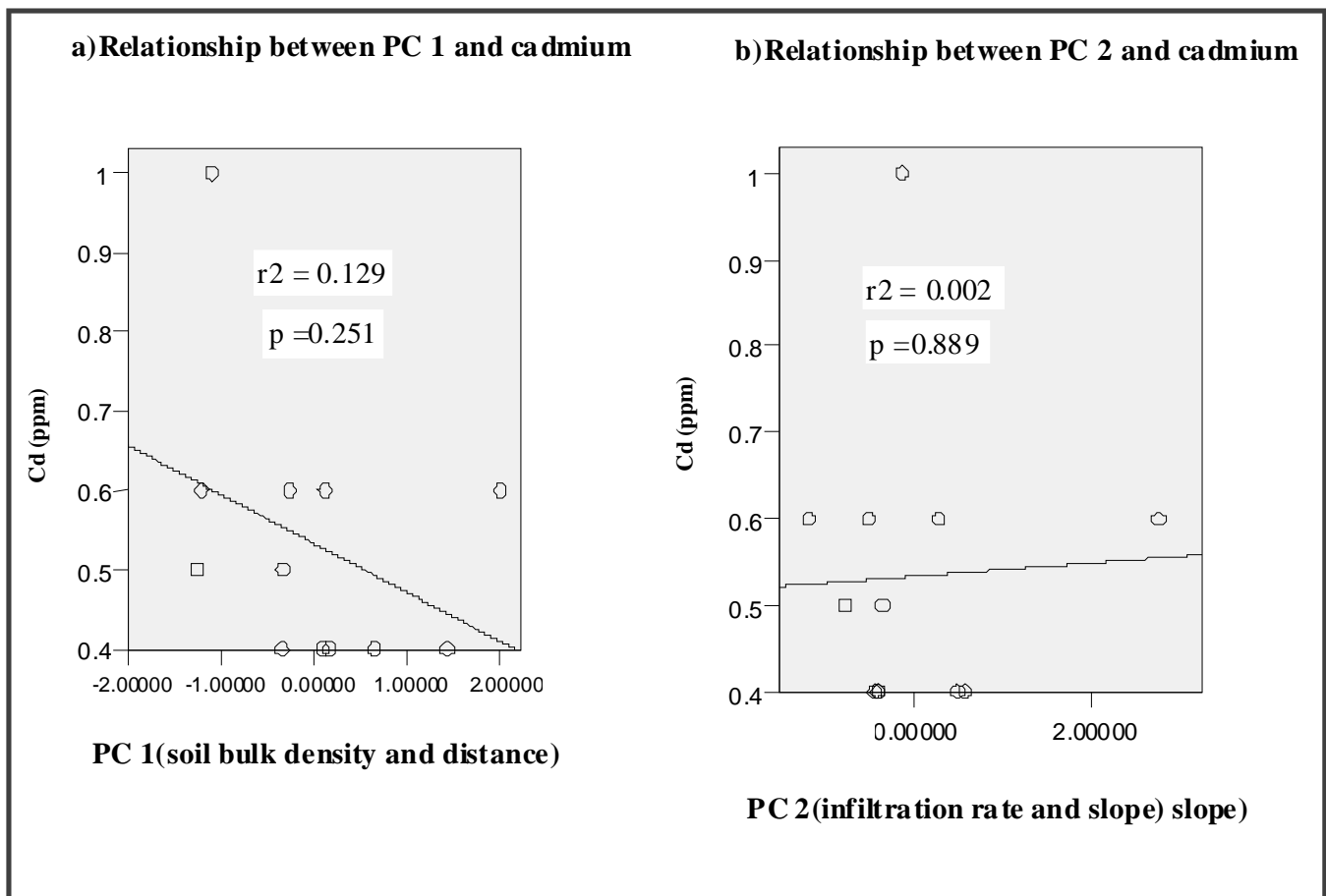


Figure 2: Relationships between Cadmium and PC 1 and PC 2

Relationship between Soil Infiltration Rate, Slope (PC 2), and Cadmium

Figure 2b shows that Principal Component 2 comprising soil infiltration rate (84.6%) and slope (-64.2%) did not significantly ($p > 0.05$) explain the spread of cadmium ($r^2 = 0.002$ and $p = 0.889$).

Relationship between Soil Bulk Density, Distance (PC 1), and Lead

Figure 3a shows that Principal Component 1 (soil bulk density and distance) did not significantly ($p > 0.05$) explain the spread of lead ($r^2 = 0.002$ and $p = 0.884$).

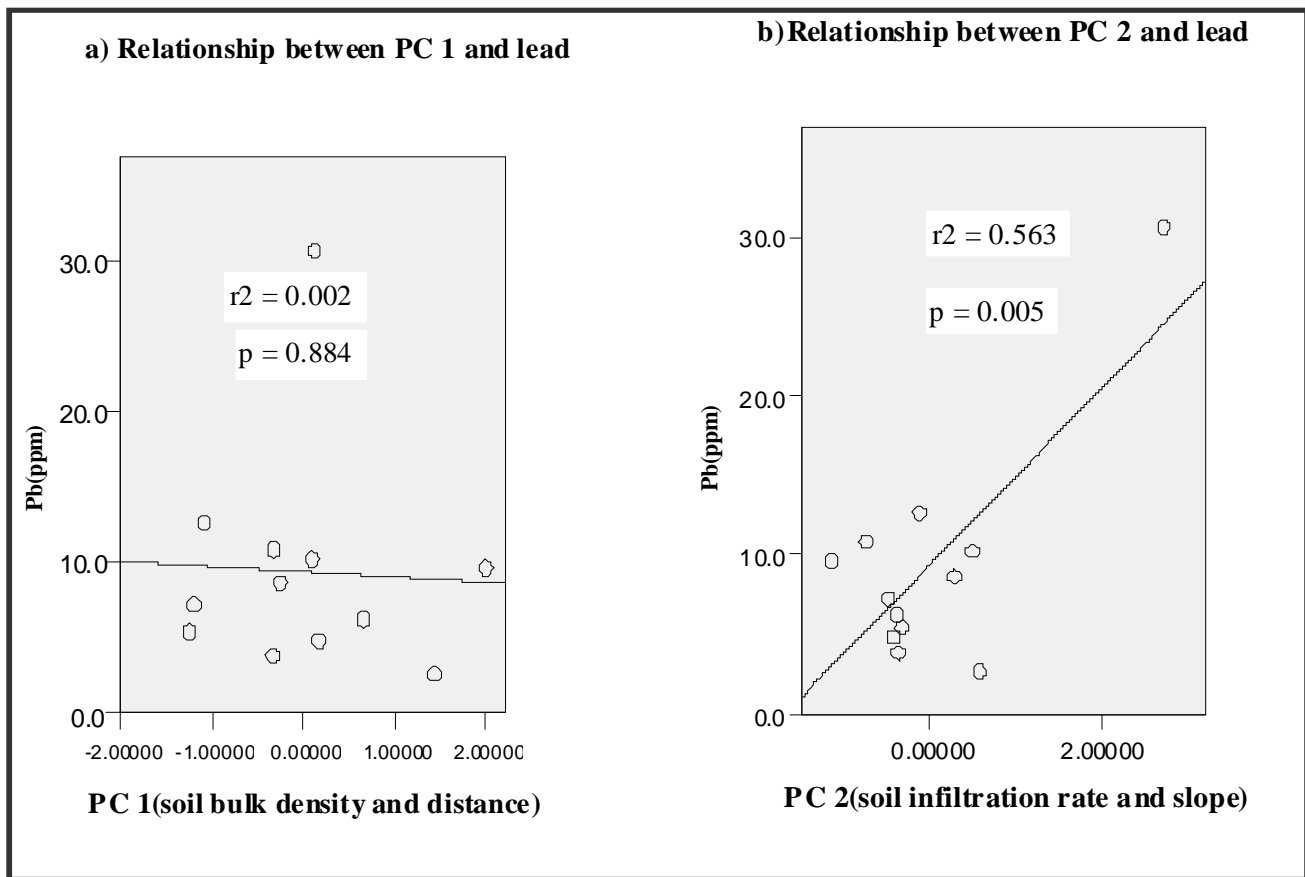


Figure 3: Relationships between Lead and PC 1 and PC 2

Relationship between PC 2 and Lead

Figure 3b shows that Principal Component 2 (soil infiltration rate and slope) managed to significantly ($p < 0.05$) explain the concentration of lead ($r^2 = 0.563$ and $p = 0.005$). This suggests that lead concentration can be explained more by infiltration rate which has a higher positive factor loading of 84.6%. As infiltration rate increases, Pb concentration also increases around the dump since water (or leachate) is the medium through which chemicals are transported. However, with a negative factor loading of -64.2%, slope has a negative relationship with Pb concentration. As slope decreases around the dump, Pb concentrations increase. This could be because lead-carrying leachate has more time to infiltrate as the terrain becomes gentler. Incidentally, it is on these gentle slopes where residents grow their crops. Residents may, therefore, be at risk from the lead which they get through crops from around the dumpsite. Lead toxicity may lead to manganism, a Parkinson disease-like neurological disorder with symptoms of mental difficulties and impairments in motor skills (Andrew and Jackson, 1998; Jarup, 2003; Kusangaya, 2006).

Relationship between PC 1 and Sulphides

Figure 4a shows that Principal Component 1 (soil bulk density and distance) did not significantly ($p > 0.05$) explain the spread of sulphides ($r^2 = 0.016$ and $p = 0.696$).

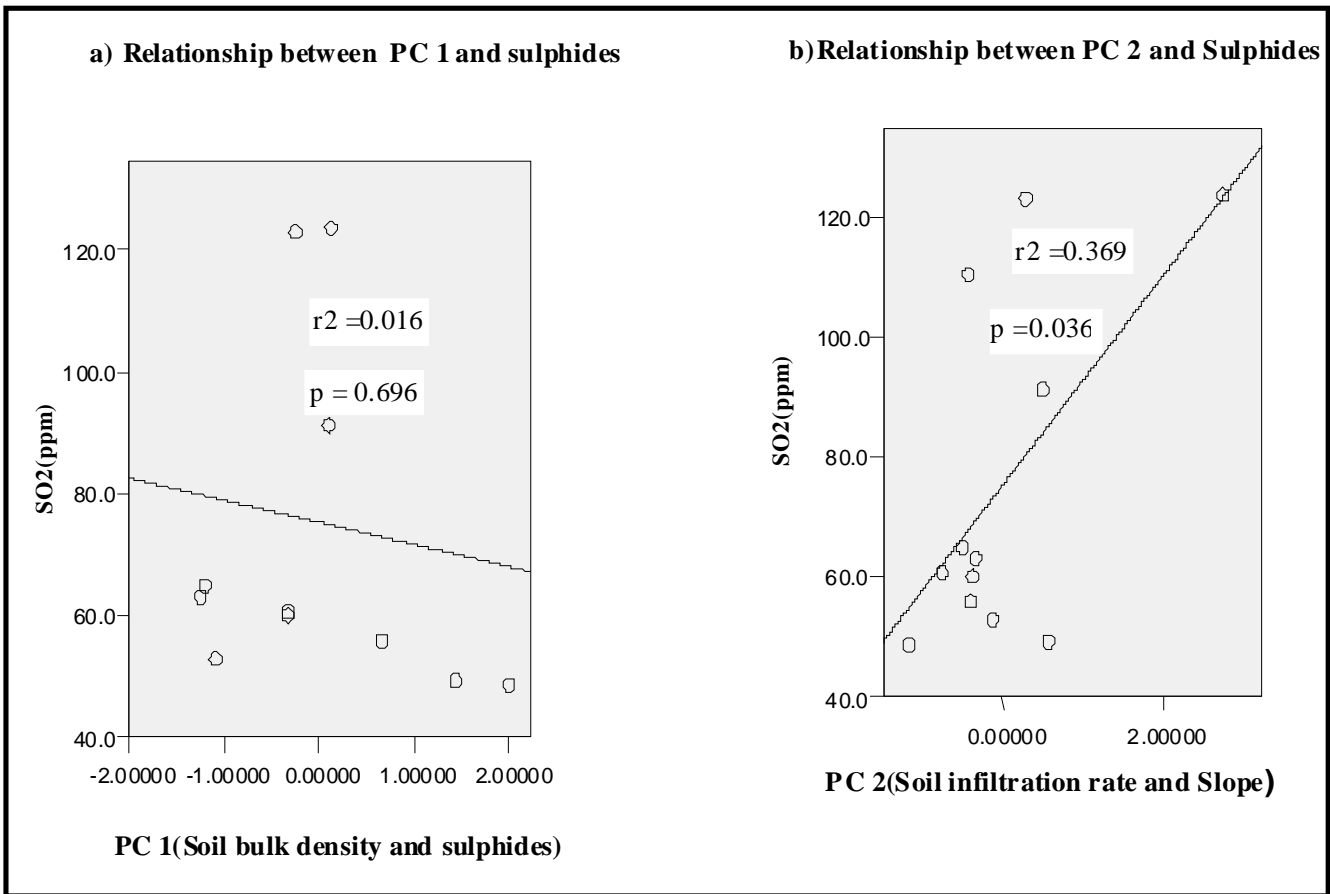


Figure 4: Relationships between Sulphides and PC 1 and PC 2

Relationship between PC 2 and Sulphides

Figure 4b shows that Principal Component 2 (soil infiltration rate and slope) managed to significantly ($p < 0.05$) explain the spread of sulphides ($r^2 = 0.369$ and $p = 0.036$). Like lead, sulphides concentration can also be explained more by infiltration rate and slope. As infiltration rate increases, more sulphides could be transported within the soil medium from the dump. However, as slope decreases, sulphide concentration around the dump increases, as a result. Areas around the dump are fertile because of the waste from the dump and it is for this reason that these areas are heavily cropped. Apart from being exposed to lead, residents may also be at risk from sulphides through contaminated crop intake. Exposure to sulphides may result in lower respiratory tract illness and chronic lung disease (Boulding, 1995; SCEE, 1999).

The results between soil infiltration rate and slope (Principal Component 2) and sulphides and the same environmental factors and lead confirm the earlier stated hypothesis that there is a significant relationship between environmental factors and the concentration of the stated chemicals.

Conclusion

Principal Component 2 (PC 2), comprising soil infiltration rate and slope, managed to significantly ($p < 0.05$) explain the concentration of lead. As infiltration rate increases, lead concentration also increases and as slope decreases, lead concentration increases from the dump.

Principal Component 2 (soil infiltration rate and slope) also managed to significantly ($p < 0.05$) explain the spread of sulphides. As infiltration rate increases, more sulphides are transported within the soil medium from the dump. However, as slope decreases, sulphides concentration increases from the dump since a gentler slope gives leachate more time to infiltrate.

There was, however, no statistically significant ($p > 0.05$) relationship between individual environmental factors and cadmium concentration nor between combined environmental factors (Principal Components) and cadmium concentration. This means that cadmium concentration would need the exploration of other environmental factors other than those selected for this study.

Given the high significant relationships between environmental factors and the toxic pollutants (lead and sulphides), it is recommended that residents be discouraged from growing crops around the dump, as there is a high possibility of pollution.

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RESEARCH PUBLICATION CHALLENGES FACED IN ATTAINING TENURE IN ZIMBABWE STATE UNIVERSITIES: PERCEPTIONS OF UNTENURED FACULTY OF EDUCATION LECTURERS

By

Daniel Mawere¹
Department of Education
Midlands State University
Zimbabwe

Abstract

The purpose of the study was to explore the research publication challenges faced by untenured lecturers in two (Midlands State University and Bindura University of Science Education) Zimbabwe state universities' faculties of education. The study was conducted between April and June 2008 with 50 fulltime untenured lecturers. The data gathering instruments used included self-administered questionnaires with open and closed items, and an interview schedule. The study revealed that there is low induction of untenured lecturers into a research culture. Teaching and community service functions take a lot of the untenured lecturers' time for research. The faculties' research resource base is deficient as there is a high lecturer-computer ratio, absence of mentoring opportunities and hard to come by computer and Internet facilities. In view of these challenges, research publication amongst untenured lecturers is low. Implications drawn from the study are that universities should induct new lecturers into a research culture, avail financial, material, as well as human and time resources for their research activities. Untenured lecturers should take the initiative to form groups of scholars with a view to enhancing their research publication capabilities.

Key Terms: Challenges, untenured lecturer, research publication, tenure

Introduction

Lecturers at the entry level of their life in a university are made aware of the need to teach, publish research articles in refereed journals as well as partake in the governance of the university by engaging in university community service. An untenured lecturer is viewed in this study as a permanent lecturer, yet to be tenured but who however, is still in the formative stage of a career in a university. Whilst issues of teaching and community service have presented challenges to untenured lecturers, it is in the area of research where these lecturers have encountered a multiplicity of challenges. Williams and Williams (2006) have reported that many lecturers have reported personal and professional discomfort regarding their research, scholarship and ultimately, acceptance in the university community. Research publication is an area that is accorded value and importance by universities. The dictum "publish or perish" noted in university academic circles revolves around this expectation, particularly on the part of new lecturers. Tenure, which refers to the position of having a formal secure lectureship appointment, is earned by untenured lecturers who will have worked on a temporary or provisional basis. Tenure is only granted when the untenured lecturer has, among other things, researched and published in refereed research journals. This study explored research publication challenges faced by faculty of education lecturers prior to their earning tenure.

¹Daniel Mawere, is a Lecturer, Department of Education, Midlands State University, Zimbabwe, e-mail mawered@msu.ac.zw

Theoretical Framework

Several studies have been conducted in many universities' on issues pertaining to lecturers' research publication, however a search of the literature shows that minimal attention has been given to challenges faced by lecturers when it comes to research publication, particularly for those aspiring to be tenured. Lecturers' research publication is the major criterion for earning tenure in universities. Studies carried out on research publication reveal that lecturers need to: be socialized into a research culture (Williams and Williams, 2006 and Moody, 2000); show confidence in their research abilities (Kotrlik, Bartlett, Higgins and Williams, 2002); balance their teaching and community service functions by creating time for research (Valantasis, 2005); do research and publish in refereed journals (Sharobeam and Howard, 2002 and Groupa, 2005). Furthermore a rich research resource base in the faculty augurs well for conducting research amongst lecturers (Grunig, 1997 and Moody, 2000).

Williams and Williams (2006) studied lecturers' perceptions on promotion and tenure and found out that a mentoring support structure was of paramount importance in helping untenured lecturers traverse the new terrain and ease their transition to seasoned academics and professionals. They further advised that senior faculty and departmental chairs should announce their, clear unambiguous criteria for earning tenure to the new lecturers. In other words there is need for induction of untenured lecturers, particularly into researching and publishing. Moody (2000) is of the view that workshops for senior faculty and departmental chairs could improve their interpersonal communication skills and help them guide and direct untenured lecturers. Faculty and departmental interventions can, therefore, be effective strategies to navigate the promotion and tenure process and ultimately foster untenured lecturer scholars.

Kotrlik, Bartlett, Higgins and Williams (2002) carried out a study on factors associated with research publication on agricultural lecturers and found out, among other things, that lecturers in agriculture had confidence in their ability to conduct research. On the other hand Vasil (1996) noted that lecturers' confidence in their research ability is related to their research publication.

Valantasis (2005) points out that usually there is a heavy load of teaching and community service work at universities. In the same vein, Messy and Zemsky (1994) and Wenzel (2001) argue that university lecturers have high teaching loads. Whitt (1991) goes further to observe that high teaching loads are compounded by the pressure to write and publish cutting edge research. Williams and Williams (2001) note that having too much time committed to community service responsibilities takes away time for research. A heavy teaching load and too much time committed to community service responsibilities therefore decrease the quality of lecturers' research. Untenured lecturers may, in such circumstances, find it difficult to maintain an active research agenda.

A faculty without proper resources and funding opportunities makes it difficult for untenured lecturers to garner financial support for their research agendas. Grunig (1997) suggests that university funding, availability of technology, computing facilities, books and journals are directly associated with increased research publication. Given that research is directly linked to research and tenure, effective allocation of resources is vital to the survival and success of untenured lecturers. Moody (2000) observed that the tenure process can be made simple and fairer if untenured lecturers receive instrumental mentoring and an equitable share of research resources.

Sharobeam and Howard (2002) studied lecturers in undergraduate institutions and observed that administration and institutions judging lecturers' research publication have often used number of publications. By and large, lecturers' research publication is the major criterion for earning tenure in universities. In the same vein, Garoupa (2005)

observed that publication in peer reviewed journals gives a clear output and a clear publication measure for an untenured lecturer.

Purpose of the study

Given the challenges spelt out above it was therefore the purpose of this study to explore the research publication challenges faced by untenured lecturers in Zimbabwe universities' faculties of education in order for them to earn tenure. Research publication is defined as an assessment of the extent to which lecturers engage in their own research and publish researched articles (Kusure, Mutanda, Mawere and Dhliwayo, 2006). The study addressed the following questions:

1. Are untenured lecturers in the education faculties of universities inducted into a research culture?
2. What are the untenured lecturers' perceptions of the organizational culture obtaining in the education faculties in support of research?
3. What is the self assessment of untenured lecturers' research confidence?
4. Do teaching and community service functions impact on research publication of untenured lecturers?
5. What research resource base obtains in the faculties of education to support untenured lecturers in their tenure track?
6. What is the research publication status of faculty of education untenured lecturers in the study?

Research Methods and Procedures

Population and Sample

The study was conducted with 50 full-time untenured lecturers in two Zimbabwe state universities' faculties of education. The sample comprised untenured lecturers who had been in university for periods ranging from 2 years to three years only, given that granting of tenure in universities occurs after a lecturer has discharged the teaching, research and community service mission for a period ranging from two to three years. Furthermore any untenured lecturer strives to have at least an article published in a refereed journal within this timeframe.

Instrumentation and Data Collection

A Questionnaire and an Interview schedule were the instruments used to collect data. The questionnaire was designed after a review of the literature. The content validity of the instrument was evaluated by colleagues in the faculty of education who are experts in research. The instrument was pilot tested with 10 university lecturers. Alterations to the instrument identified by the experts and noted during the pilot test were incorporated into the questionnaire. The Questionnaire was hand delivered to respondents in the two universities. There was an 80% return rate of the questionnaire.

The Interview schedule was designed by the researcher after data collected through the questionnaire had been processed. The interview schedule was meant to capture the voices of the questionnaire respondents. This was done after a realization that some of the questionnaire responses merited a follow up. The main reason therefore was to cross validate questionnaire responses and elaborate on grey areas of questionnaire responses. Interviews were done with eight lecturers at each of the two state universities.

Data Analysis

The data yielded through the questionnaire was analysed using descriptive statistics for research questions 1 through to 6. The Likert scale categories of strongly agree and agree were collapsed into a single category response. The same was done for categories disagree and strongly disagree. The raw scores were converted into percentages for comparison purposes. The questionnaire responses and interview follow up responses were combined for further analysis.

Findings and Discussion

Induction into a research culture

The intention was to find out the extent to which education faculties inducted untenured lecturers into a research culture.

Table 1: Induction into a research culture

Induction into a research culture	Agree		Disagree	
	Number	Percentage	Number	Percentage
1. Workshops to develop research skills among lecturers in my faculty are held regularly	16	40%	24	60%
2. Presentations on completed and published researches are made regularly by faculty members	8	20%	32	80%
3. Presentations on research papers being worked on are made by my faculty members regularly	14	35%	26	65%
4. I get verbal encouragement to carry out research and publish in refereed journals from my chairperson and dean	29	72,5%	11	27,5%

Table 1 shows that untenured lecturers are verbally encouraged, by chairpersons and deans, to carry out research and publish in refereed journals as evidenced by 72% of the respondents. These encouragements were made in academic and professional meetings done at department and faculty levels respectively as revealed during follow-up interviews. However on the other three indicators of induction into a research culture, respondents were of the view that their faculties were not inducting them into a research culture as evidenced by 80% disagreement on regularity of: presentations on published researches; 65% disagreement on presentation of research papers in progress and 60% disagreement on workshops to develop research skills.

A synopsis of follow up interviews on induction into a research culture revealed the following sentiments:

- in my three years at this university I do not recall of any workshop held to staff develop junior lecturers on research.
- Workshops to staff develop junior lecturers are very few and far apart in my faculty. Only two have been conducted in the last two and half years. One was on presentation of papers being worked on and the other was on orientation to research and publishing.
- there are few role models to emulate. A tenured lecturer in my department or faculty would be an invaluable source of inspiration for researching and publishing.

These results show very limited induction of junior lecturers into a research culture by education faculties of the two universities. Verbal encouragement and one workshop in a year may not be adequate induction. Deans and chairpersons should state in clear terms their unambiguous criteria for attaining tenure. It is very helpful for untenured lecturers to have someone to guide them given that publishing is very difficult in the absence of guidance and support.

Education faculties' organizational culture

The organizational culture/support for research section contained three items that assessed the untenured faculty members' perceptions of the organizational culture and support for research that existed in the faculty.

Table 2: Organizational culture in education faculties

Organizational Culture in the Faculty	Agree		Disagree	
	Number	Percentage	Number	Percentage
Faculty supports untenured lecturers efforts to research and publish	22	55%	18	45%
Faculty values collaboration in publishing in refereed journals	22	55%	18	45%
Faculty gives incentives for lecturers who research and publish in refereed journals	5	12,5%	35	87,5%

Respondents were of the view that faculty did not sufficiently support their efforts to research and publish, and that faculty did not value collaboration in publishing in refereed journals. Furthermore, respondents were of the view that their faculties did not give incentives for researching and publishing in referred journals.

Interviews showed that education faculties supported untenured lecturers' efforts to research and publish through verbal encouragement made by chairpersons and deans. However on giving incentives for lecturers who research and publish in refereed journals, lecturers in one of the two universities indicated that their university gave a cash incentive for any article published by a faculty member. In the other university no cash incentive was availed.

Self-Assessment of untenured lecturers' research confidence

The intention was to describe the untenured lecturers' self-assessment of their research confidence.

Table 3: Untenured lecturers' self assessment of research confidence

Self-Assessment of untenured lecturer's research confidence	Agree		Disagree	
	Number	Percentage	Number	Percentage
5. I have confidence in determining the purpose and objectives of a study for publication in a refereed journal	25	62,5%	15	37.5%
6. I have confidence in determining a research/theoretical base of a study intended for publication in a refereed journal	32	80%	8	20%
7. I have confidence in determining a research method of a study intended for publication in a refereed journal	32	80%	8	20%
8. I have confidence in conducting the data analysis of a study intended for publication in a refereed journal	34	85%	6	15%
9. I have confidence in writing the findings of a research intended for publication in a refereed journal	34	85%	6	15%
10. I have confidence in writing the conclusions and recommendations/implications of a study intended for publication in a refereed journal	32	80%	8	20%
11. I have confidence in supervising students' research projects/dissertations in my faculty	40	100	0	0

Most respondents agreed with all the seven indicators. A 100% confidence level was shown in the indicator which stated that; ‘ I have confidence in supervising students’ research projects/dissertations in my faculty.’ followed by 85% confidence level in conducting data analysis as well as writing the findings of the study. These data are presented in Table 2 above. A synopsis of interview statements captured is shown below:

- I have done research at undergraduate and post graduate levels and this has given me a lot of research confidence.
- A combination of undergraduate and post graduate research coupled with supervision of both college students and undergraduate students’ has boosted my research confidence.

All in all, untenured lecturers feel that they have confidence in their ability to conduct research and do not have major concerns about conducting research.

Impact of teaching and community service functions on research productivity

The object of this section of the study was to find out the extent to which teaching and community service functions were a challenge to research productivity. Untenured lecturers’ teaching load ranged from 4 hours to 12 hours per week. The number of hours spent supervising students’ research work ranged from 2 hours to 5 hours per week. What is evident in this teaching load range is that there is no consistence in determining how many lecturing hours a junior lecturer should have in a given week.

Interviews responses showed that lecturers in one of the two universities, over and above the teaching load above, also had undergraduate and post graduate students they taught in January, April and August of each year. Each teaches, on average, two full modules (courses) per each of the two semesters for this group of students. A synopsis of statements captured is shown below:

- I am paid for these modules to offset challenges of inflation, to be honest, teaching these modules affect my time for carrying out my own research in a big way.
- Teaching conventional students for 12 hours and spending 5 hours supervising students’ research in any given week adversely affects my research function in the faculty. This is exacerbated by teaching two modules to students taught during vacation, the only time I could conveniently do my research. It is not surprising that I have only managed to carry out a single research which is still undergoing peer review in the last two years.

The time dedicated to university community service per week ranged from 1 to 4 hours. Interviews showed that the community service function on its own is not a deterrent to carrying out research and publishing. However, a lecturer with 12 hours of teaching, 5 hours of supervising students’ research work, and 4 hours of university community service in total has 21 hours of meeting the university’s teaching, supervision and community service. This load of teaching combined with community work at the university may make it very difficult for untenured lecturers to maintain an active research agenda of their own (Whitt, 1991). Lecturers may not be able to allocate adequate time for research during the semester, leaving them only breaks or vacation to carry out their research activities (Meiland and Rosenthal, 1994). However in one of the faculties under study, the vacation period is again a busy teaching one as evidenced by at least 72 hours of teaching for each untenured lecturer per each of the two semesters.

Research resource base in the faculty

The intention of this section of the study was to find out the extent to which education faculty resources helped untenured lecturers in carrying out research.

Table 4: Education faculty research resource base

Research resources in the faculty	Agree		Disagree	
	Number	Percentage	Number	Percentage
Research funds are readily available for lecturers in the faculty	14	35%	26	65%
Internet facilities are readily available for lecturers in the faculty	17	42,5%	23	57.5%
Current research journals are available for lecturers in the faculty	8	20%	32	80%
Lecturers have easy access to computers	15	37,5%	25	62,5%
Tenured lecturers assist untenured lecturers to carry out research to be published in refereed journals	8	20%	32	80%
Time for planning and carrying out research is readily available in my faculty	13	35%	27	65%

Table 4 shows very limited research resource base in the faculty. The picture portrayed is that funds are not readily available, internet facilities are hard to come by, current research journals are hard to come by, access to computers is not easy, tenured lecturers do not assist untenured lecturers to carry out research and that time for planning and carrying out research is not readily available. On the availability of computers connected to the internet, interviews indicated that sharing of this facility ranged from two lecturers to a computer to 10 lecturers to a computer hooked to the internet. On the limited resources available for facilitating research, lecturers pointed out the following challenges:

- having many tenured lecturers in my faculty would be an invaluable resource but unfortunately they are very few.
- Research grants from the research board of the university are the only source of funding available. The whole university lecturing community competes for these grants. Chances of me as an untenured lecturer, securing these funds are very slim. My research proposals are usually found deficient and therefore not approved.

It can be concluded from the above information that the faculties under focus have limited resources that could benefit the untenured lecturers in their bid to embark on research.

Untenured lecturers' research productivity status

This section aimed at establishing the research productivity status of untenured lecturers. This was done at the backdrop of challenges faced in efforts to research and publish. Articles published in refereed journals in the past three years were used as a surrogate for research publication.

Table 5: Research publication status of untenured lecturers

Research publication statement	Number of research articles, book chapters and papers							
	0	1	2	3	4	5	6	7
12. Number of untenured lecturers with research articles published in refereed journals	20 (50%)	13 (22,5%)	3 (7,5%)	4 (10%)	0	0	0	0
13. Number of untenured lecturers with articles being peer reviewed	19 (47,5%)	16 (40%)	4 (10%)	1 (2,5%)	0	0	0	0
14. Number of untenured lecturers with book chapters published	37 (92,5%)	2 (5%)	1 (2,5%)	0	0	0	0	0
15. Number of untenured lecturers with papers presented at research conferences	36 (90%)	2 (5%)	1 (2,5%)	1 (2,5%)	0	0	0	0

Fifty percent of the respondents had no article published in refereed journals. The other 50% had published articles ranging from one to three. Statements captured during follow-up interviews shed more light on the research publication of the respondents:

- I spent 8 years at a teacher education college but was not able to research and publish due to the over emphasis on teaching at the expense of research there. I have been at university for the last two and half years and have managed to research and publish only one article - enough to secure me tenure only I hope.
- I have two articles that were sent for peer review and were returned to me as not fit for publication. Tenured lecturers I have approached are not eager to engage in collaborative research with untenured lecturers, if they were eager I could have been assisted by some of them to research and publish at least one article.

The average research publication status of untenured lecturers was 0, 7 published articles per lecturer in two years. Research publication of untenured lecturers in the faculty was very low given that 50% of the respondents had no article published in refereed journals in the last three years. The chances of earning tenure in the circumstances become dim. It is also interesting to note that most lecturers recruited into education faculties are from teacher education colleges where teaching is deemed more important than research. It should also be pointed out that carrying out research and publishing enhances lecturers' knowledge and increases their enthusiasm to share such knowledge with students thereby enriching the students learning experience (Sharobeam and Howard, 2002). Furthermore publishing in a peer reviewed journal gives a clear output and a clear publication measure (Groupa, 2005).

Conclusions

There is limited induction of untenured lecturers into a research culture in the faculty of education. Verbal encouragement and threats of 'publish or perish' may not suffice in the induction of untenured lecturers to a research culture. Furthermore, whilst an organizational culture and support for research exists, more needs to be done to improve on it as there are very low or no incentives given to those who research and publish in refereed research journals.

Untenured lecturers in the faculties of education have confidence in their ability to conduct research and therefore do not have major concerns about conducting research. What therefore is needed is for faculties to exploit their confidence for purposes of research.

High teachings loads coupled with involvement in community services take lecturers' time for carrying out research and publishing. Whilst teaching and community service functions adversely affect their research publication, thereby leaving them with vacations for conducting research, the vacation is preoccupied with teaching undergraduate and postgraduate students.

A deficient faculty research resource base has been evidenced by a high lecturer to computer ratio, lack of mentoring opportunities by tenured lecturers, absence of research funds and hard to come by internet facilities. This observation directly supports Kelly and Warmbrod's (1986, p.3) suggestion that "Perceived institutional and departmental support for research are seen as the most important enablers to research productivity".

The challenges faced by untenured lecturers brought out in this study have a bearing on the low research publication of untenured lecturers in the two faculties of education. To have 20 out of 40 untenured lecturers yet to publish an article in a refereed research journal two years after joining university is indeed testimony to low research publication.

Sharobeam and Howard (2002) found out an average of one publication per year per lecturer in their study and were complaining that it was low. In this study an average of 0.7 publications per year was noted. The bottom line here is that research publication of untenured lecturers, at the two state universities' faculties of education, is low.

Implications

There is no doubt that research publication is one of the most highly valued aspects of an untenured lecturer's emerging career, particularly when earning of tenure is considered. This is only possible when faculties of education create enabling environments for untenured lecturers to carry out research and publish in refereed journals. Education faculties should:

- Induct untenured lecturers into a research culture, through verbal encouragement, and having at least a workshop per semester, to orient untenured lecturers into a research culture. Such workshops could focus on developing research skills of untenured lecturers through presentations on completed and published researches as well as presentations on research papers being worked on, among other activities.
- Avail financial resources specifically for untenured lecturers. These could be in the form of research grants.
- Avail material resources in the form of computers connected to the Internet as well as current and relevant journals. Whilst the ideal thing could be a computer to a lecturer, two lecturers instead of ten sharing a computer, could go a long way into availing this vital resource for research publication.
- Avail the human resources for mentoring untenured lecturers. A mentor, if available helps untenured lecturers to think through the kind of articles they should be working on and the journals in which to publish them.
- Give incentives to those who research and publish in order for a research culture geared towards enhancing research publication to be established amongst untenured lecturers. The incentives could include cash, improved office space, reduction in teaching load and community service involvement, among others.

Untenured lecturers could also take the initiative and form groups of scholars, meeting from time to time, brainstorming about their research proposals as well as presenting their researches to each other. Faculties' tenured lecturers' function, in this regard, would be to encourage such discourse among untenured lecturers and helping it to get organized and sustained.

It takes very committed untenured lecturers to research and publish in refereed journals given the challenges established in this study. If faculties and departments have to nurture a strong cadre of scholars, they ought to improve conditions that guarantee the success of these potential researchers who are still in the sunrise of their research mission in universities.

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INSTITUTIONAL RESPONSE TO CHALLENGES FACED BY WORKERS IN BALANCING WORK AND FAMILY RESPONSIBILITIES: THE CASE OF THE MIDLANDS STATE UNIVERSITY (MSU)

By

Ruth Mwanza and Sinikiwe Tirivanhu
Department of Human Resource Management
Midlands State University
Zimbabwe

Abstract

The paper seeks to establish the Midlands State University's responsiveness to challenges workers face in trying to balance work and family responsibilities. A sample of fifty (50) non-teaching members of staff was selected from a population of 487. Interviews, questionnaires and review of university documents were used to gather data. The research established that MSU is attending to some of the major welfare issues such as health, car loans and housing loans. However there is need to consider empowerment in terms of knowledge of both junior staff and their supervisors to reduce issues of overtime that adversely affect family time. Most junior staff members do not know some of the provisions of the Labour Act which enable workers to balance work and family responsibilities.

Key Terms

Work; family responsibilities; overtime; engagement; psychological contract

Introduction

The twenty first century has witnessed a rise in single parent families and increased participation of women in the labour market. This change has forced both men and women to be active in both, the productive and reproductive spheres. However, the burden of family responsibilities restricts these groups of people from participating fully at work thereby hindering their career prospects. By family responsibilities, the researchers are considering issues to do with child care, caring for sick and the elderly, attending funerals of both the nuclear and extended families at the backdrop of work commitments. It is thus the researchers' view that such obstacles that may force workers not to participate fully in the world of work can be minimized. To create equality of opportunity and treatment for men and women workers with family responsibilities, the International Labour Organization recommends that;

“The state shall develop a national policy to enable these persons to engage in employment without being subject to discrimination and without conflict between their employment and family responsibilities.

Appropriate measures shall be taken in community planning and development of community services such as child care and family services and facilities.

Family responsibilities alone are not a valid reason for a person to lose his or her job.”

¹*Ruth Mwanza, Lecturer, Department of Human Resource Management, Midlands State University, Gweru, Zimbabwe, email mubangar@msu.ac.zw*

This and other ILO provisions prompted the researchers to conduct this study to establish the extent to which the MSU had responded to these provisions.

In addition the Declaration of Philadelphia concerning the Aims and Purposes of the ILO states that it recognizes that;

“All human beings irrespective of race, creed or sex have the right to pursue their material well being and their spiritual development in conditions of freedom and dignity of economic security and equal opportunity.”

In line with the above aims and the recognition of the problems faced by workers with family responsibilities and aspects of wider issues regarding the family and society which should be considered in national policies, the ILO came up with Convention 156 on Workers with Family Responsibilities (1981).

Convention 156 took into consideration the fact that many of the problems facing workers arise out of mixing work with family responsibilities. The labour body thus recognized the need to improve the conditions of such workers through measures responding to their special needs and by measures designed to improve the conditions of workers in general.

The convention applies to men and women workers with responsibilities in relation to their dependent children, where such responsibilities restrict their possibilities of entering, participating or advancing in economic activity.

The belief that MSU did not recognize the need for workers to balance work and family responsibilities led to this research. The researchers believed that no deliberate strategies had been put in place to assist workers balance the two. As a result of this imbalance, employees at MSU were not fully engaged and the institution was losing out on productive time because of the unfulfilled aspects of the psychological contract. A continuous review of the initial psychological contract would assist MSU in regaining employee engagement. This, it was believed, would lead to employee loyalty, commitment and participation. Engagement is the positive attitude held by the employees towards the organization and its values. According to Armstrong (2006:272) an engaged employee is aware of business context, and works closely with colleagues to improve performance in the job for the benefit of the organization. Engaged employees and organizations will go an extra mile for each other as they see the mutual benefit of investing in their relationship.

Research Objectives

The objectives of the study were first, to find out the challenges that workers at the MSU faced in trying to balance work and family responsibilities; secondly, to find out how MSU handled workers' problems associated with balancing work and family responsibilities. The third objective was to find out how employees viewed MSU as an employer with particular reference to balancing work with family responsibilities and lastly, to come up with possible strategies that can be put in place to assist workers with family responsibilities which may be adopted by the institution.

The study was guided by the conventions that have been put in place by the International Labour Organisation (ILO), among many other instruments related to gender and the world of work that the organization has come up with. The concern of the ILO provisions in this regard was to protect women workers especially in relation to conditions of work that could entail risks for maternity and the subsequent neglect and harm to the child in view of the mother's engagement at work. The instruments of interest to the study were Convention No. 156 on Workers with family responsibilities, 1981 and Recommendation No. 165 (Workers with family responsibilities), 1981.

The aim of this convention was to create equality of opportunity and treatment for women and men workers with family responsibilities and to protect large numbers of employees, especially women, who had to give up their jobs or chances of promotion because of family. Initially ILO had come up with standards that were designed to protect and safeguard women against exploitation in their work and to safeguard their health, particularly after child birth. Later efforts were directed at improving the opportunities of women at work to ensure equality of opportunity and treatment in employment. The Convention was aligned mainly towards women because of the traditional belief that child care responsibilities are for women (some of the gender stereotypes).

Great strides were made in coming up with standards to protect women as outlined above. However these standards were inadequate as women were still forced to drop out of work because of family responsibilities with some even giving up chances of promotion. A resolution in 1975 concerning women workers called for measures to promote genuine equality for women through the provision of facilities to enable working parents to meet their responsibilities.

The new thinking held that women and men should have equal responsibilities towards their children and other family obligations and consequently, that all services and arrangements developed in this respect should be available equally to women and men. Convention 165 requires the State to make it an aim of national policy to enable workers with family responsibilities to engage in employment without being subject to discrimination, and, as far as possible, without conflict between their employment and family responsibilities. It also provides for corresponding measures to be taken in community planning and in development of community services such as child care and family services and facilities.

According to this convention, it is the responsibility of the State to ensure that workers with family responsibilities do not lose their jobs because of them. However, it is important to note that the responsibility does not lie solely with the state. Employers also have a part to play since they benefit from the workers who supply their labour. It is imperative that employers also take an active role in ensuring that such workers are able to participate in paid work without any prejudice. In Zimbabwe the local authorities have day care centres where mothers can leave their young ones during the day. These programmes are run under the Ministry of Education and are referred to as Early Childhood Education and Care centres. There is a curriculum that is drawn up by the state to cater for these centres. It is however important to note that most of these centres care for children between one and five years. In most cases they do not have facilities to care for babies less than a year old. This then creates a gap which is then filled by private day care centres which are sometimes very expensive and as such the majority of workers cannot afford them.

According to Schaeffer (2006), "The rise of single parent families, increased job opportunities for women, and the need for additional family income have all propelled an increasing number of mothers of young children into paid labour for in the United States. In 2002, 55% of women who had given birth the previous year were back in the labour force." The question arising from this situation was who would then take care of the children of those women during work hours? It is important to note that this trend was not unique to America alone, but is the case the world over including Zimbabwe. In response to this scenario, some states have come up with ways of assisting workers with family responsibilities through the provision of day care centres for babies and pre-scholers. According to Schaeffer quoted above for about 35% of all pre-scholers with employed mothers, the solution had become group child care programs.

Day care centres have become the equivalent of the nuclear family, performing some of the nurturing and socialization functions previously handled by family members. It is important to note that the states that have come up with such facilities are advanced and have good economies like Sweden, Venezuela to name but a few. In Sweden the

Government has taken a leading role to address the issue of child care. There are excellent pre-school day care centres at little costs. However, the people in Sweden pay very high taxes for the government to be able to run the institutions. This means that it is not only the responsibility of the government, but of the employees as well, who have to contribute in the form of taxes.

It is being over ambitious to expect third world countries like Zimbabwe to have such facilities. Moreso, when one considers that the government is struggling to meet its obligations pertaining to paying living wages to its workforce. In addition the economic environment does not permit such luxuries considering that institutions are also failing to mobilize funds to finance their operations.

In view of this, the study was aimed at discovering what MSU has done to ease the burden of workers with family responsibilities considering that in its vision it indicates that it is *a caring employer*. It must be noted that hiring a maid to take care of children whilst one is at work is expensive for the majority of the workforce in Zimbabwe today, in view of the fact that it is not only about the maid's wages, but it is a total package that includes blankets, accommodation, food etc. The recent promulgation of multi-currencies in Zimbabwe has made it even more difficult as people do not have easy access to the foreign currency in use and their jobs are not paying much for one to afford all life's necessities. In addition, many of those who would normally be engaged as maids now prefer crossing the border to neighbouring countries like South Africa and Botswana, where they believe they have better prospects of earning more, whilst performing the same menial tasks.

As a result of the above issues it is believed that employees tend to absent themselves from work for one or more reasons pertaining to family responsibilities; which reasons may range from failure to get someone to take care of the children, attending to sick children and other dependants, visiting children at school (for those with children in boarding school) and for consultation with teachers and so forth.

Most developing countries do not have an economic base to subsidise child care. In Zimbabwe additional child care facilities are expensive as a result most working mothers rely heavily on relatives and neighbours, and in extreme cases have to take their children to work or leave them unattended at home. Leaving children with unwilling relatives and neighbours and even unattended exposes them to many social ills like verbal, physical and sexual abuse. At times children go without meals the whole day not because there is no food in the home but because there is no one to prepare the food for them. This is a cause for concern as these young ones are the future of the country, workers and leaders of tomorrow. It is thus important to ensure that their welfare is prioritized as they grow up.

From an HR point of view it is important to make sure that employees are engaged. According to Chiumento (2004) in Armstrong 'engagement is a positive, two-way relationship between an employee and his organization. Both parties are aware of their own and others' needs, and they support each other to fulfill those needs. Engaged employees and organizations will go the extra mile for each other because they see the mutual benefit of investing in their relationship.'

This caption shows that engagement does not benefit one party only but benefits both parties. Thus it is in the institution's interests to ensure that it reaches a point where all its employees are fully engaged and this can only be achieved if the institution itself is also engaged and goes the extra mile to address workers' problems.

In addition there is the psychological contract which plays a pivotal role in the employment relationship which will also lead to engagement. According to Sparrow (1996) quoted in Armstrong a psychological contract is "an

open-ended agreement about what the individual and the organisation expect to give and receive in return from the employment relationship . . . psychological contracts represent a dynamic reciprocal deal. . . New expectations are added over time as perceptions about the employer's commitment evolve. These unwritten individual contracts are therefore concerned with the social and emotional aspects of exchange between employer and employee.” One can see from this definition that both the employer and the employee have got expectations which are implicit as they are not defined in the contract. It is important for the organization to manage the psychological contract as a balanced psychological contract is necessary for continuous, harmonious relationship between the employee and the organization.

In terms of the Labour Act (Chapter 28:01) employees are entitled to the different types of leave. Section 14B subsection (e) and (f) of the same Act provides for special leave which employees can access at any given time during a calendar year to attend to their different family responsibilities. It is the duty of every employer to ensure that his employees are aware of these provisions and is allowed access these types of leave in order to attend to the several family representatives.

Research Methodology

A case study design of MSU was used targeting the non-teaching members of staff from the senior assistant registrar to the general hands whose nature of duties demand their physical presence during normal working hours. Convenient sampling was done to the target group as the researches would target those members of staff that they could meet during the day and those who stay in the university compound. Purposive sampling was done for managerial employees in order to target the person who is in charge of policy formulation and implementation in the university. The same was done to the Workers Committee where two female and two male representatives were chosen so as to have a balanced view of the problem in question.

The researchers chose this group of employees since there had been complaints that they were exposed to long working hours to satisfy certain work commitments, leaving them without time for the family. These employees complained that after being exposed to such long hours, they were not paid overtime and hence believed that the employer did not respect the psychological contract. Some even alleged that such working practices have threatened their marriages.

The researchers assessed a sample size of 50 members of the non-teaching staff from a population of 487. Four (4) people were randomly chosen from the Workers Committee, fifteen (15) from the administrators, fifteen (15) from the secretaries and thirteen (13) from the general hands and two (2) from management. By administrators the researchers were looking at members of staff in grades 7 and 8 from the academic registry, library, bursary and student affairs.

Primary and secondary sources of data were used. For primary sources, interviews, observations and questionnaires were used. On secondary sources, the University's Handbook and conditions of employment for all staff were used. Records from management and the University Strategic Plan were also used. Further statistics from the human resource department were also used. Questionnaires were distributed to members of staff who live in the university compound. Thirty-five questionnaires were distributed and out of these twenty were given to females while the balance was given to male employees.

Research Findings

Of the thirty-five questionnaires administered, only thirty were returned. Eighteen came from the females and twelve from the males. The majority of respondents were females in the twenty to thirty age group who have

children of a school going age. The age groups of the respondents were in the following categories 20 to 30 years, 31 to 40 years, 41 to 50 years and the last one was the age group of those above 51 where only one respondent with grandchildren responded.

Responses from members of staff

Interviews conducted revealed the following information: of those in the 51 and above age group, it was observed that she stayed with her grandchildren who were of school going age. These would come from school in the afternoon and had no-one to take care of them when she would be at work. She indicated that it would not matter so much since she stayed in the university compound and hence they would play within the compound where there would be people and hence she believed they were a bit safe, though not very safe.

Six female members of staff who were interviewed who fell within the thirty-one to forty age group indicated that they would leave their children at home in Senga (a residential suburb next to the university). They indicated that their husbands also were formally employed and hence could not stay at home with the children. Only one indicated that her husband, who worked at the City Council but based in the same suburb, would go home in the afternoon and cook for the children before she got home. Another one indicated that her husband was a security guard who would only remain with the children on the few occasions that he would be on night duty. She however highlighted that the arrangement would sometimes be affected when she had to go to Mkoba (another high density residential suburb in Gweru) instead of her home at Guinea Fowl (a place about twelve kilometers out of Gweru town) during the days when she did not have enough busfare to commute to her home. During such days she would be relying on the university bus that carried staff to and from work from the different suburbs in the town.

Of the respondents in the twenty to thirty age group 55% indicated that they left their children with relatives. These were females who could not afford the costs of hiring a maid and had to leave the children with relatives. Some of them were single parents who were staying with their parents. These would leave their children with their parents who were not working.

Within the thirty-one to forty age group one interesting revelation was from a male respondents who indicated that he had three children and the youngest was three years old. His wife was in Botswana and he was the one looking after the children. His kids would be looked after by neighbours when he was at work and these would cook for them if they were not very busy.

The rest indicated that they did not have maids as their children were of school going age. That meant that they had to lock up their houses when going to work and thus there was need for them to be home early to cook for the children. That also exposed their property to burglary as no one will be left attending to their property. Some indicated the usual reason that they would leave their children with neighbours who were not employed. That exposed the young ones to abuse. In most cases such people indicated that they would be at work physically but their minds were at home with the children. That meant that they did not apply themselves fully at work as they had issues nagging them.

Staff members in lower grades were not aware of the benefits which accrued to them particularly special leave, which they could apply for when they had to attend to their family responsibilities. These respondents especially from the Security department indicated that in most cases they would feign illness, get a doctor's certificate which they would then use to apply for leave in order to attend to family matters. One respondent from the same department indicated that when her mother passed away she had to apply for annual leave to attend her funeral. Another security officer indicated that she ended up applying for annual leave after being denied sick leave, though

this was denied by some who explained that they had never been denied that chance whenever they brought a note from the doctor certifying them unfit for work. In addition they indicated that at times they had to “work overtime to cater for a friend’s duty” so that the friend could attend to family problems.

However of the many male workers that were interviewed they seemed quite divorced from the issues at hand as they believed that child care responsibilities were for females as they constantly dismissed most of the questions saying they could best be answered by their wives. Only one that was discussed earlier on seemed to understand what was being talked about. Their behaviour was consistent with what was said by one very senior member of the academic staff who overheard the interview and commented that: *‘men have better things to look at like feeding the family, power and politics. Issues to do with child care are for women and if you women do not make noise about it, do not ever think that one day we will talk about it. You think I can fail to come to work because there is no maid to look after the kids, no ways.’* Despite the efforts to make them issues of both male and female workers, child care and care giving responsibilities are still regarded as female duties.

Pertaining to the question of whether they believed the psychological contract was being respected, they indicated that their supervisors were not as supportive whenever they had family related grievances and hence felt they had departed from the initial arrangement they had when they joined the institution. They had high expectations of certain benefits that they could receive after joining the MSU, but these were no longer forthcoming and hence there was some feeling of betrayal. However, most of them, about 74% of the respondents indicated that MSU remains an employer of choice. They only suggested some review of the conditions of service in line with the current trends in some institutions, like the issue of contact leave for some grades and the facility to pursue further studies.

Responses from Worker Representatives (MSUNTSA)

The employee representatives explained that some of their duties included representing workers during collective bargaining on issues of remuneration; representing staff on welfare committees, for example the housing, car and computer loan committees; representing employees in labour disputes and being the voice of the constituency.

They highlighted that they rarely discussed social issues with their constituency though they felt that this was part of their responsibility. They concurred that it was indeed part of their responsibilities to educate their colleagues on their general conditions of employment. They also encouraged employees to access the code of conduct so that they know the do and don’ts of the workplace. They highlighted that during some of the meetings they discuss issues of punctuality so as to reduce backlogs that result in people working overtime. They further indicated that it was a result of the members of their constituency’s failure to report early for work which results in subsequent accumulation of work, which can not be finished within normal working hours.

As workers representatives they had received complaints from people who were expected to work overtime to the extent that they no longer had time with their families. They indicated that the problem had been brought to the attention of management and that has since been rectified. Management had assured them that such a case was not to happen again but workers would be expected to work overtime in isolated cases. In order for them to get home early and be with their families they had requested management to reduce the lunch period to one hour from the current one and a quarter hours so that they could dismiss fifteen minutes earlier at 1630 hours instead of 1645 hours. This would mean that they would leave work early and get home early.

Three of the representatives indicated that they were aware of vacation leave which one could apply for during students’ vacation; sick leave, maternity leave, leave accrued from overtime and occasional or special leave which he had applied for and used without any problems. However they had not discussed any of these types of leave with their constituency as currently they were concerned with bread and butter issues. They would however

consider discussing the leave entitlements with their constituency as they were aware that most of them were not aware of some of the types of leave especially the special leave.

They also indicated that they had received complaints from workers, especially in cleaning services pertaining to overtime work. This group of employees indicated that they had been compelled to work on weekends and one of the public holidays thereby depriving them of time with their families. The same issues had since been resolved by management which was receptive to their cause and assured them that they would try to work within the confines of the law. Some departments had also raised informal complaints but as workers representatives they believe they only tackle documented cases of dissatisfaction to reduce chances of spite and malice.

In order to balance work and family responsibilities, employees needed to be punctual all the time so that they do not have to work overtime thereby prejudicing themselves of time with their families. They further suggested that given the fact that the employer does not shift his expectations on work output, the backlogs finally become a source of overtime. They also indicated that another source of overtime arose from the fact that currently salaries were low which forced people to do a lot of moonlighting thus affecting their work output. Offices were converted to mini shops where people sell all sorts of things during working hours to supplement their income thereby making it difficult for them to satisfy their work commitments. On that point they recommended an upward review of the salaries so that people concentrate on their work and reduce down time. The representatives were divided as to whether there was need for so many people in some of the grades as these services could be performed on a target basis, for example, landscaping. They however called on the empowerment of supervisors so that they could supervise their juniors to minimize overtime and only be resorted to in extreme cases of demand.

The workers' representatives concurred that flexi-time was not possible with type of customer that they served. As public officers at a public institution which requires one's physical presence, there was need for people to be at work all the time. They highlighted that the institution and its stakeholders were not yet technologically advanced to allow people to work online therefore that provision was not possible. They however proposed that a day care centre would go a long way in alleviating problems of workers with young children who needed to be taken care of during working hours. As a constituency they believed that though it was a welcome move, most of them would appreciate more money as they believed all their problems could be solved if they had money.

Response from Management

A representative from management indicated that the university was guided by its vision of a caring institution. He indicated that the university had put in place a number of schemes related to welfare of employees namely, housing, car and computer loan schemes, funeral fund and the salary advance facility. The funeral fund covered funeral for the member and his nuclear family. The latest innovation was the drug fund where staff could access drugs through the university clinic at a subsidized rate. The organization did not have a hardship fund as some companies to cushion their employees.

In the case of MSU hardships were catered for by the salary advance facility which a member was free to apply for in extreme cases of need but recoverable at the end of the month. He highlighted that it was difficult for the institution to have a hardship fund as it did not have the capacity and financial autonomy. However they did assist employees by selling foodstuffs, for example, chickens, milk and clothing to members of staff on credit at subsidized rates. In addition members of staff were encouraged to participate in sporting activities where they would participate in university games, which help them to relax and de-stress. The university has assisted sportspersons with transport traveling to Bulawayo, Chinhoyi and as far as South Africa for sporting activities.

He however pointed out that the welfare incentives that the university has were not operating as expected because of the hyper-inflationary environment. He expressed hope that the multi-currency system would inject some life into these schemes for the benefit of the employees.

In addition he indicated that there was no specific welfare section but it was one of the mandates of the Human Resources (popularly as the Personnel Department) to consider the welfare needs of the employees. He explained that employees were advised of these benefits when they join the university and through the various committees that represent staff.

On child care facilities the institution was planning to establish a day care centre to cater for the employees' children during the day. This would go a long way as it would ensure that members of staff would focus on their work knowing that their children were well taken care of. He emphasized that the plans were long on the agenda except that implementation had taken so long. A committee had already been put in place to identify the place and the logistics surrounding the operations of the day care centre.

The management representative also indicated that the workers representatives had raised issues to do with the improvements in conditions of service, in which committees they had raised welfare issues as well. He indicated that the harsh economic environment was forcing workers to concentrate more on "bread and butter" issues relegating welfare issues to the periphery. This is in line with Maslow's hierarchy of needs which postulates that workers will want to satisfy their physiological needs first which are the low level needs then later at the higher order needs.

In response to concerns raised by employees pertaining to overtime especially during the weekends and public holidays, he indicated that the issue was being blown out of proportion. Employees were only required to work beyond normal working hours in isolated cases, for example, during registration time, examination results processing and the recent case where cleaners and general hands had to work additional hours for clean-ups following the 2008 strike which had left the grounds neglected. He explained that there was need for people to clean up the place to ensure that core business took place in clean environs.

He further indicated that the institution did not pay overtime; instead employees accrue leave in lieu of overtime according to the overtime policy available on the website. This leave however could only be taken following the normal procedures that apply when one wants to go on leave and when it is convenient to both parties.

He concurred with the workers representatives that some people did not apply themselves fully at work and thus create artificial needs for overtime work. However, it was to be noted that in 2008 people failed to apply themselves fully to work as a result of the harsh economic environment where people came to work on empty stomachs. It was thus difficult for people to perform especially those who do manual work and that created the need for overtime, at the time when normal teaching resumed in 2009.

On flexi time he indicated that the institution was not in a position to introduce flexi-time for a number of reasons. Firstly, it was not possible in some areas because of the nature of jobs that required the physical presence of the incumbent e.g. during registration time. There was need for the people in the Bursar's department, Admissions and Registry to deal personally with students who were coming in for registration. Secondly, flexi-time is meant for job sharing and part-time workers who are paid on an hourly basis as is the case in the United Kingdom and other advanced states. Thirdly, the institution was not yet advanced technologically to the extent of introducing virtual offices and also serve its stakeholders on line.

Social Responsibility Committee

One of the researchers is a member of the Social Responsibility Committee which was which she joined in 2009. One of the issues discussed in one of this committee's meetings in 2009 was the issue of establishing a child care centre for nursing mothers and those with children of pre-school going age. It was indicated that there was concern that some members of staff could not afford maids and thus were forced to leave young children unattended. This prompted the idea of coming up with a child care facility where members of staff could leave their children in the care of trained staff. The committee was in the process of trying to identify a house within the university premises that could be converted to a crèche. Besides, there were plans to come up with a playground where children could spend their time instead of them roaming the campus streets where they could be exposed to dangers of being knocked down by vehicles and other forms of abuse.

Observations

It was observed that some of the respondents did not answer the questions truthfully. When one discussed issues with them they had lots of grievances to talk about, which were not related to the research in question. However, when given the questionnaire to complete they portrayed a different picture. Most of them, especially those in the cleaning and security departments, did not believe that the purpose of the research was strictly for academic reasons.

Some also thought that the study was meant to change their conditions of service and thus showed enthusiasm. Members of staff in the lower grades were scared because they thought that the researchers were fishing for information that would actually cost them their jobs since one of the researchers was a member of the Personnel department. They were asking if the researchers had permission from their supervisors to carry out the research. They even wanted permission from their supervisors before they could respond to the questionnaires.

Analysis of findings

From the responses received it was evident that members of staff are more concerned with bread and butter issues. This is in line with Maslow's hierarchy of needs where people are more concerned with satisfying their lower level needs than higher level needs and hence relegate welfare issues to the periphery. Most employees, particularly those in lower grades, are concerned with a roof over their heads, food on the table and believe that once their salaries are reviewed upwards, all their problems will be solved. They are not aware of the concept of a total reward package where both the pecuniary and non-pecuniary aspects of employment matter. Their idea of a perfect workplace is one which pays more in nominal wages though in terms of real value, it does not cover much. Hence the needs for some intangible benefits which ease pressure on the pocket.

The fact that most of these employees resort to the use of annual leave and even feigning illness to attend to issues like funerals, sick children, relatives and so forth imply that they are not conversant with all the labour provisions that allow workers to balance both work and family responsibilities. Most of them are not aware of their statutory rights especially special leave which is provided for in terms of the Labour Act. Though the inductions are meant to educate employees on their rights and duties, they seem not to be aware of such provisions. One would suggest an HR bulletin to educate employees of some of these important provisions that may ease the workers' problems and help them balance work and family responsibilities.

From the findings the issue of converting offices to mini shops to supplement income raises the aspects of moonlighting which is characteristic of most workers even in advanced economies. Workers resort to more than one job in order to supplement income and this is sometimes done at the expense of the 'known' formal employer. Productive time of the formal employer is lost through these informal jobs that are aimed at supplementing income. This is quite prevalent at the MSU and in the end puts pressure on the individual when he is asked to work overtime and is prejudiced of family time.

It was also clear that the ILO Convention 156 and its provisions are applicable to Zimbabwe as the institution is in the process of applying some of its provisions in its workplace policies. Some of these provisions on welfare include the plans to establish a day care centre for the children and welfare schemes for its staff. However most of them are well sustained in strong economies where they are supported by taxes and subsidies, for example Sweden and Venezuela.

Most of the respondents were not aware of some of the types of leave, especially special leave which they can use to attend to their personal family needs. That problem was more prevalent in the lower grades whose educational backgrounds were not as strong as the others. It reflects that merely handing out the conditions of service to these people is not enough as some of them can neither read nor understand English. Workers' representatives should be seen to be playing a leading role in educating these people to complement the efforts of the HR (Personnel) department. This will reflect the extent to which the institution practices participative management which the workers' committee is not taking advantage of to the benefit of their constituency.

Both parties are contributing towards the survival of the psychological contract. It is important as it improves the engagement of employees to ensure commitment, loyalty and increased productivity. Engagement ensures that an employee applies himself fully to his work to reduce incidents of moonlighting as stated above. It also reduces the number of occupational hazards and loss of property, especially in security circles.

It is indeed encouraging to note that the university is considering coming up with a day care centre for its members of staff. This shows that the institution is indeed "a caring university". The main reason is that this facility is available in developed countries and is run by the government through taxes as is the case in Sweden. In the case of MSU it is the employer who, despite financial constraints, is making efforts to come up with such a program.

Addressing welfare issues of employees ensures that employer derives tangible and intangible benefits from his workforce. The idea of a caring employer becomes clear as one realizes that his/ her employer cares for his/her welfare. The strides that the institution has made to date improve the relations between management and labour, and promotes a harmonious working environment. Though the efforts are not exhaustive, it is imperative for the parties to work towards the proper management of the employment relationship.

Conclusion

Despite the harsh economic climate, it is commendable to note that the institution is still committed to its vision of being a caring university, which takes the welfare of its employees seriously. There are however a few areas that need to be addressed.

There is need for the institution to empower supervisors in all departments so that they supervise their subordinates to reduce idle time, which results in the much disputed overtime. They must be able to make decisions that are in the best interest of both the institution and the employee.

Workers' representatives should not only concentrate on salary issues, but should work hand in hand with management (HR department) in empowering their constituency too. It is their responsibility too to educate their constituency on the different benefits that accrue to them.

Induction program should be more comprehensive to include all aspects of the employment relationship. The efforts currently there are commendable though there remains need to widen its scope.

Finally it is recommended that the implementation of plans, especially the establishment of a day care centre for workers' children, be done to ease the burden on its workers. Such brilliant plans should not vanish into oblivion. However despite the fact that the ILO has come up with such recommendations it is incumbent upon the member states' good citizenship to adopt them as they are not an obligation at all. They are just guidelines that are meant to promote good quality of working life and manage the employment relationships well.

Whilst this piece of work was targeted at members of the non-teaching staff, a comparative study of both teaching and non-teaching staff would be appropriate to ensure that the responsiveness of the employer is understood across the institution.

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CONTRIBUTION OF VEGETABLE FARMING TO HOUSEHOLD FOOD SECURITY AND RURAL LIVELIHOODS IN UZUMBA MARAMBA PFUNGWE COMMUNAL LANDS OF ZIMBABWE

By

Marambanyika Thomas¹, Mutekwa Timothy, Mutsiwegota Cuthbert and Matsa Mark
Department of Geography & Environmental Studies
Midlands State University
Zimbabwe.

Abstract

The paper examines the contribution of commercialized small scale vegetable farming to household food security and rural livelihoods in Chikwira and Manyika wards of Uzumba Maramba Pfungwe district in Zimbabwe. Information was collected through questionnaires, informal interviews and on-site observations as the basis for rapid rural appraisal. Vegetables grown include tomatoes, cucumbers, leafy vegetables, beans, okra, carrots and onions. Vegetable output for different species varies from as high as 4500 kilogrammes (kg) per acre per year for tomatoes to as low as 93 kg for carrots. Each household has an average plot size of approximately 0.5 hectares in the dryland fields and 0.1 hectares in wetlands. Land was acquired through traditional leadership, fragmentation of existing plots and inheritance. Strategies used to improve crop productivity involve use of pressure-gradient induced hosepipes and conservation farming practices such as strategic timing in watering of crops, organic manure and composting. Ninety six percent of households involved in vegetable farming afford at least three decent meals per day. Each person's daily income is US\$3,29 and US\$17,98 at parallel and official market rates. Problems like shortage of and high costs for transport, poor roads, inappropriate use of chemicals and inadequate irrigation infrastructure are inhibiting vegetable farmers from realizing their maximum potential. These can be mitigated through formation of social organizations for co-ordinated planning of farming activities. Farmers need to be trained on proper storage, use and application of chemicals which maybe toxic to both ecological and social environments. The paper concluded that vegetable farming resulted in improved rural food security and livelihoods.

Keywords: Vegetables, Farming, Dietary diversity, Income, Livelihoods

Introduction

Concern with food security can be traced back to the Universal Declaration of Human Rights in 1948 and world food crisis of 1972-74. In the 1970s, the focus was on national and international food supplies, but later shifted to access to food at household and individual levels after 1980 (Maxwell and Smith 1992). A number of coping strategies were implemented to enhance food access in different countries at both local and national levels. In Zimbabwe rural communities remained vulnerable to hunger and poverty due to underdevelopment and their location

¹Thomas Marambanyika is a Lecturer in the Department of Geography & Environmental Studies, Midlands State University, P Bag 9055, Gweru, Zimbabwe, e-mail marambanyikat@msu.ac.zw or arambanyikat@yahoo.co.uk.

in relatively dry areas as defined by the Land Apportionment Act of 1930. The semi-arid conditions of the regions where about 70% of Zimbabwe's rural population lives left large proportions of communal households continuously threatened by food insecurity.

The hub in communal areas of Zimbabwe on household food production has been on maize, sorghum, pearl millet, finger millet and wheat that make up the traditional food grain crops at the expense of horticultural products which are essentially for direct consumption (Mudimu 2008). Food security in the country is mainly defined in the context of availability or access to cereals, particularly maize as a staple food crop (Mudimu 2008). This conception has overshadowed the ability of small-scale vegetable production to stabilize communal food systems.

In Chikwira and Manyika wards of Uzumba Maramba Pfungwe district, households have opted for and intensified annual vegetable farming for food and income generation at household level. This is despite the fact that the horticultural production sector was dominated by large-scale commercial farmers who had both the liquidity and knowledge to viably carry out the activity. In order to ascertain how smallholder communal farmers have managed to transform themselves into competitive horticulturalists, the paper also considered the motivating factors behind this transition.

The paper focuses on whether vegetable production has had a positive bearing on rural livelihoods in terms of households' income, access to food, food availability and food consumption patterns since it started in earnest in the early 1990s. This research was done in order to ascertain whether communal vegetable production can be adopted as a sustainable tool in fulfilling the Millennium Development goal number one of eradicating extreme poverty and hunger. It is clear that the notions of poverty, under-nutrition and vulnerability are closely intertwined in definitions of food security (Maxwell and Smith 1992).

Location and description of study area

Chikwira and Manyika wards are located in Uzumba-Maramba-Pfungwe district of Mashonaland East province in Zimbabwe (Fig 1). The area is in Zimbabwe's agro-ecological region three which experiences annual rainfall amounts ranging from 700mm to 1000 mm and is associated with short mid-rainy season dry spells (Govereh, et al 1989). Mean annual temperature is 18 degrees celcius with maximum temperature recorded in October - November and lowest in June - July.

Soils in the area are of the medium grained sandy type belonging to the paraferallitic group (Nyamapfene 1991). The soils have generally low potential hydrogen and are deficient in both nitrogen and phosphorous (Govereh, et al 1989). There are isolated patches of both red and black clayey soils across the plain. In Zimbabwe these soils are of high agricultural potential. Vleis are dominantly found along main streams but those located away from major streams are usually desiccated during the dry season.

Altitude in the area is between 900– 1300 meters above sea level (Fig 1). The area has a rugged terrain characterized by existence of uplands with relatively steep valleys sandwiching ephemeral and intermittent stream channels. Communication services in the area are generally poor with only one all weather road from the capital Harare to Mutawatawa district service center in Uzumba Maramba Pfungwe (UMP). All the other road networks that traverse the area through most of the wards are of very poor conditions particularly during the rainy season. Maize is the staple food crop in the area. Uzumba, which is part of UMP district and where Chikwira and Manyika wards are

located, is suited for horticultural production because of the availability of ground water and a frost-free environment (Govereh, *et al* 1989). Other livelihood activities in the area include crop farming, sugar cane farming, poultry and livestock rearing.

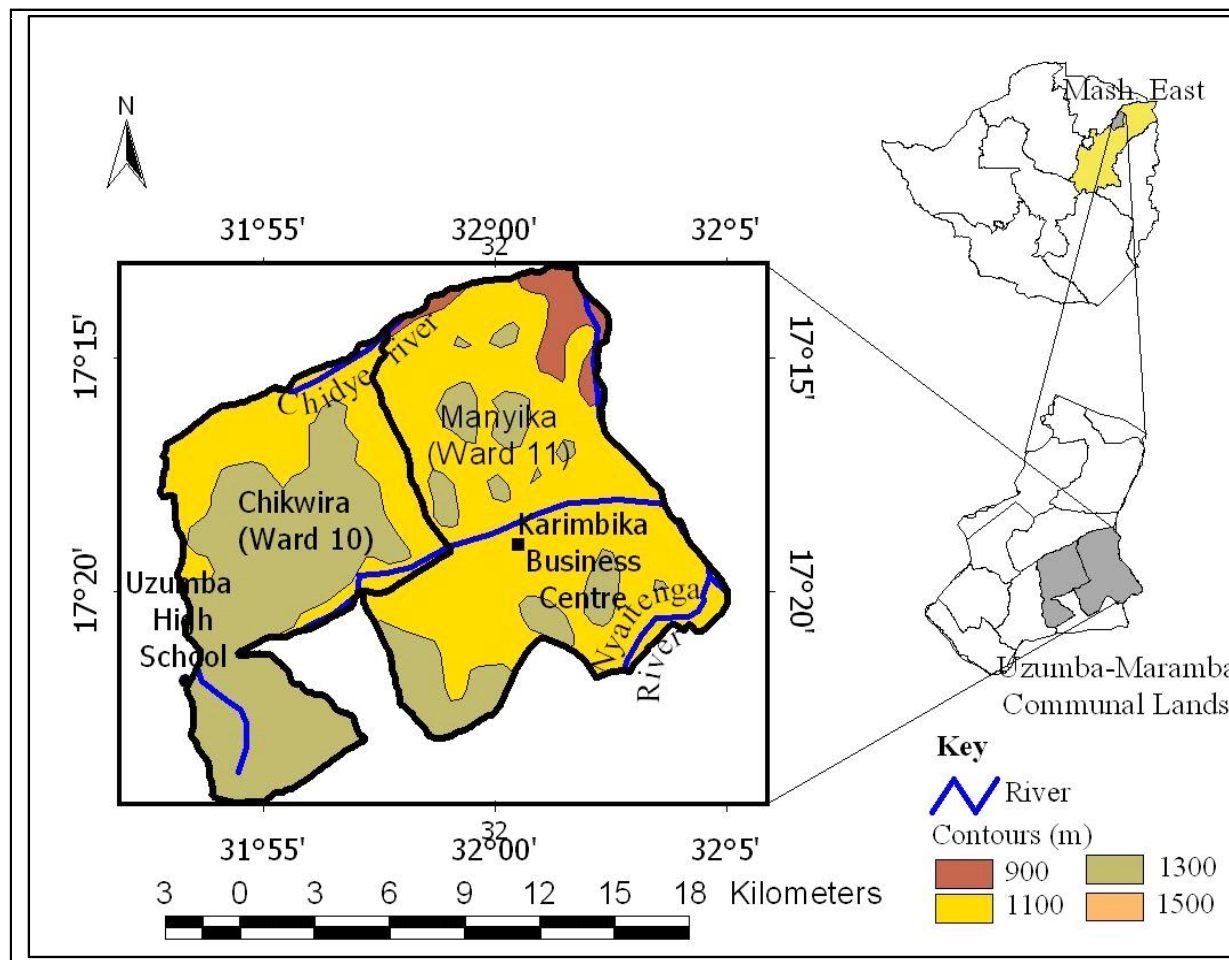


Fig 1: Map of the study area

Data collection and analysis

In order to have an in-depth understanding and analysis of vegetable production in relation to food security of Chikwira and Manyika wards’ households, the research used rapid rural appraisal (RRA) as a method for data acquisition. RRA helped the researchers to make contact with the rural population in a learning process (Crawford 1997). This method of data acquisition allowed for triangulation; hence informal interviews, questionnaires and on-site observations were concomitantly conducted during fieldwork. Respondents for questionnaires and interviews were selected through purposive sampling. A multi-disciplinary team comprising of four researchers met with thirty-six local farmers and shared ideas through probing for information over a period of three weeks. The research instruments collected information on type of vegetable varieties grown, volumes of produce, proportions of output consumed and sold, marketing strategies, impact of output on food access, availability and consumption patterns.

Since farmers were mainly producing for the market, the researchers examined the contribution of horticultural activities to rural well-being in terms of income levels for households. Hoddinott (1999) and Bickel *et al* (2000) explained that income was one of the best indicators of household food security as it determines family entitlements.

The researchers converted vegetable output prices from Zimbabwe dollars into stable United States dollars in order to evade the effects of national economic hyperinflation rates surging at 231 million percent in October 2008 (Distressed Volatility, 2008).

October 10, 2008 rates were used because that was the day and month in which fieldwork was concluded. Conversions from Zimbabwe dollars were done using OANDA foreign currency converter and prevailing parallel market rates or “*black market*” rates. OANDA rates were used as they depict prevailing official exchange rates (OANDA Corporation, 2008). Use of both parallel and official market rates was meant to cater for discrepancies between the two monetary systems. Government as well as foreign agencies and individuals rely on official rates but local market prices were mostly pegged at black market rates. Conversions were done in order to determine the viability of vegetable production as a strategy to enhance household income.

Results and discussion

Motivating factors

Individual households started small scale intensive vegetable farming as from mid-1990s due to retrenchment of bread winners from formal employment in urban areas as a result of the Economic Structural Adjustment Programme (ESAP) of early 1990s. Unemployment was further exacerbated by the economic meltdown since the turn of the twenty-first century that left most youths with limited opportunities of finding off-farm jobs and other livelihoods enhancement options. Given the background that seventy-six percent of the respondents fell within the economically active category and at least seventy-seven percent have reached ordinary level education, increasing rates of lack of formal employment left most people with limited or no means of generating household income.

Subsequent to considering favorable environmental resources within their locality such as perennially flowing rivers, wetlands, small dams and good soils, households found that horticultural farming was one of the few viable options to enhance their livelihoods portfolio and food security. The existence of a conveniently large market in the capital city Harare to profitably sell vegetable products throughout the year was another strong motivating factor. The deteriorating economic situation in the country, with inflation at 231 million percent (Distressed Volatility, 2008), further boosted the urban vegetable market as all types of meat and related products became either unavailable or too expensive for the majority of the residents. With the concomitant fall in the value of the Zimbabwe currency also rendered workers’ earnings almost useless necessitating the need to supplement formal employment wages and salaries hence even the households with formally employed breadwinners sought other sources of additional income to survive. Vegetable farming mushroomed as a result of moral, technical and economic support shared amongst friends and community at large. Prior to this commercial endeavour, households were growing vegetables in small gardens for subsistence purposes.

Farm size and location

Vegetable farming is done in both wetlands and some dryland fields close to reliable water supply sources such as rivers and small dams. Each household has an average plot size of approximately 0.5 hectares in the dryland fields and 0.1 hectares in wetlands. Plot sizes were mainly determined by variability in availability of both family and hired labour, capital status of farmers, source of water, soil quality, land shortage and the need to strike balance between horticultural crops and other important crops. Dryland fields are generally small averaging 2-3 hectares in Zimbabwe (Zinyama 1989). Distance covered by farmers to their fields is variable, as on average 1 120 metres are travelled to wetlands compared to 685 metres to dryland fields. By communal area standards, the dryland fields are relatively

close to the homesteads and therefore little time is lost to get to the plots and the security of the vegetables from animals and thieves is guaranteed since the fields can be observed from the homesteads. However, most of the wetland located sites are significantly detached from homesteads and this presents two main challenges to the farmers. Firstly, a significant amount of time is lost through travelling because at least an average of one kilometer has to be covered to get to and from the fields. Considering the fact that horticultural crops require close monitoring and therefore frequent field visits to water and guard them against animals and thieves, much time and effort are invested in travelling to and from the fields.

Plots for vegetable farming in both dryland fields and wetlands were apportioned to farmers under customary law through the headmen. However, some households got farming plots through fragmentation of existing pieces of land inherited from parents. Crop farming is still practiced in dryland fields although under reduced portions of land. Farmers devote most of their time towards vegetable farming even during the summer season when crop farming was dominantly practiced and this has implications on the productivity of other crops like maize that constitute the country’s food crop. This area has therefore witnessed reduced production of cereals over the years due to ensuing competition between horticultural crops and cereals in the context of very limited land availability.

Vegetables grown and output levels

Tomato is the most grown vegetable crop as each farmer harvest an annual average of 4 546, 94 kgs per acre (Fig 2). Average onions output per acre was 1 347, 78 kgs and the crop was ranked second in terms of productivity. Leafy vegetables and beans were ranked third and fourth respectively (Fig 2). Carrot is the least grown crop due to high cost for seed and low market demand. Unlike other vegetables whereby farmers use seeds from previous harvests, seed for carrots had to be purchased from seed manufacturing companies and retailers. However, production levels for each vegetable type vary from farmer to farmer. For example, higher producers of tomatoes yield at least 5 542 kg per acre compared to 3 580 kg per acre from low producing households. Least producers for beans produce 250 kg per each farming season. These variations are as a result of differences among households on acreage under production for each crop, availability of chemicals, organic manure, labour, water, soil type and household’s vision.

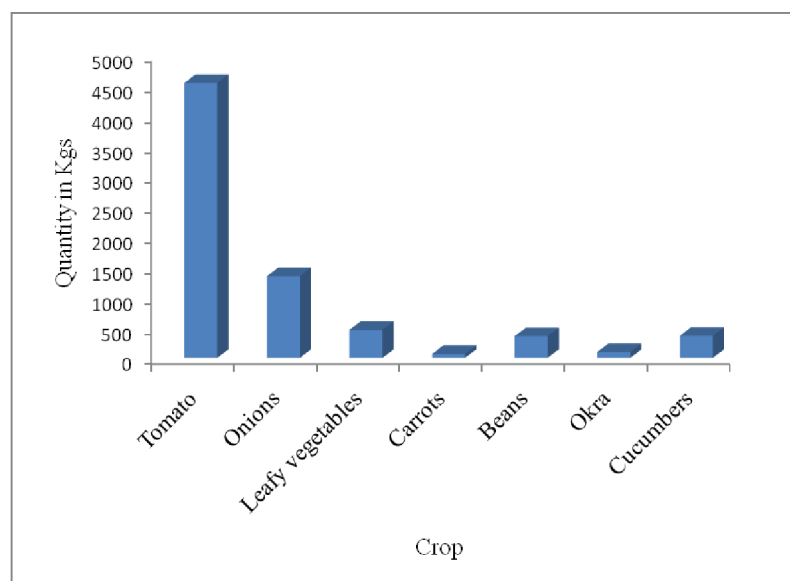


Fig – 2 Average annual vegetable output per household per acre

Strategies used to enhance vegetable productivity

Wetland farming is mainly performed during winter season in order to utilize available water. Dryland farming is mainly done in summer as farmers take advantage of rain-fed watering. Irrigation is required in dryland fields despite the availability of rainfall during this period as the area normally experience mid-season dry spells. However, some sections of dryland fields are put under irrigation production during the winter period. This is achieved by constructing small dams upslope of river channels and siphon water into their fields using gradient induced pressure hosepipes. In order to reduce costs, farmers with adjacent fields formed teams, pooled together their resources and bought irrigating pipes extending up to four kilometers. Constructed irrigating pipes pass through farms of farmers who have contributed in investment towards the project.

Farmers introduced the principle of water sharing, whereby watering is done during designated time for each farmer. Water sharing prompted watering of vegetables during the evening in order for farmers to replenish and maintain moisture in their fields. This again means that farmers managed to put large hectares of land under vegetable farming throughout the year. However, some farmers use garden cans and buckets to water vegetables from small dams in their gardens. Mulching is done using crop residue, grass and leaves from pastures to reduce excessive loss of moisture in summer due to high temperatures experienced in the area.

As a result of shortage and high costs incurred in acquiring farming inputs, farmers now generate seeds for selected crops such as tomatoes, beans, cucumbers and leafy vegetables from previous yields. Eighty-five percent of the farmers primarily use organic manure from composts, cow dung and tree leaves to improve vegetable output levels. Despite their lack of formal knowledge on environmental issues, farmers are practicing environmentally sound techniques. On average each farmer use three thousand kilogrammes (kgs) of organic manure for all vegetables grown per season. However, inorganic fertilizers are used to supplement organic manure despite their high costs and shortage on the market. Generated organic manure especially from composts is sometimes not adequate to cover large portions of land under vegetable cropping. Fifteen percent of the farmers resorted to use of inorganic fertilizers and these were mainly high producers, therefore had the liquidity to procure adequate chemicals. There are wide variations in applications of inorganic fertilizer amongst farmers as this depends on the soil type being treated, even when different soil types coexist in the same field.

Pesticides are intensively used to control problem horticultural pests to enhance quality and therefore a fair price on the market. Competition on the urban market is quite stiff since the farmers involved have suddenly increased due to the economic hardships currently obtaining and therefore poor quality products are easily outcompeted and therefore fetch very low prices or fail to sale at all. Thirty-seven percent of the farmers indicated that crop diseases are more rampant in summer due to humid and hot conditions. However, they use agro-chemicals to control outbreaks of pests and diseases. All farmers agreed that vegetable farming is less costly during winter as crops are less vulnerable to diseases as a result of cool and dry conditions.

Contribution of vegetable outputs to dietary diversity

Horticultural outputs can be categorised into direct and indirect consumption. Vegetable outputs remain the main source of food nutrients for the majority of households in the study area. All vegetables produced by farmers are primarily used for family consumption. However, the bulk of vegetable produce is channeled into local and urban markets. Average amount of vegetables directly consumed by each household per season were quantified as illustrated in Fig 3.

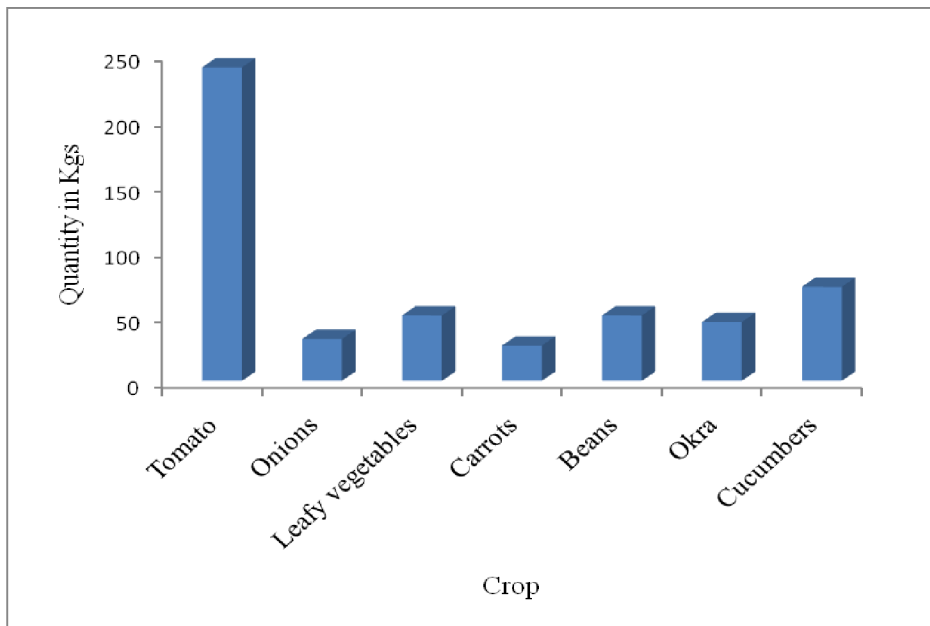


Fig 3 - Household vegetable consumption per season

Tomato is the most consumed crop as it is an important ingredient in almost all the basic daily meals. Other vegetables like Beans, onions, okra and leafy vegetables are less frequently consumed since they alternate with other foodstuffs.

Vegetable farming transformed the communities' food consumption patterns since inception of small scale intensive farming in mid-1990s. However, the impact on households' food availability, access and consumption became more pronounced at the turn of the twenty-first century as more people became involved. Ninety six percent of households now afford at least three basic decent daily meals with nutritious components such as meat, bread, butternuts among others that a lot of other rural households cannot afford. However, the main challenge associated with some horticultural crops grown in this area is their seasonality. Crops such as sweet potatoes and yams are summer crops that become mainly available after harvesting in winter whilst butternuts become available for consumption in summer. This brings about fluctuation in the availability and composition of food whilst at the same time guarantees the availability of food throughout the year though of varying types and nutritional composition.

Ninety-six percent of households' food for lunch is more identical to what they consume at breakfast. Two major explanations were given for the duplication in meals at breakfast and lunch. The new food culture emerged as farmers now spend most of their daytime in the fields. Tea preparation has been considered as less time consuming and less laborious as it mainly involves boiling of water. This is contrary to the conventional food consumption pattern whereby thick porridge traditionally known as "*sadza*" was consumed at lunch. Scarcity of mealie-meal in the country in year 2008 also compelled farmers to adopt this consumption pattern.

Sadza meals were mainly limited to supper due to scarcity of mealie-meal in the country in year 2008. Relish for sadza meals is composed of beans, leafy vegetables and meat from family's domesticated animals and local butcheries. Since the inception of the current practice of vegetable farming, ninety-six of the families now afford at least three decent meals per day in the order of breakfast, lunch and supper. This is different from the previous food culture whereby non vegetable growing families were assured of at most two meals supplemented by seasonal wild fruits.

Contribution of vegetable sales to household income

The research revealed that the average annual income from sales for each household is equivalent to US\$10 089, 04 and US\$1 831, 77 at official and parallel market rates respectively. This translates into US\$27, 64 for official rate conversions and US\$5, 02 for parallel market rates as daily expenditure for each household. Since the average number of persons in each household is 4.51 (Central Statistical Office, 2002), an individual's daily income is US\$6, 13 and US\$1.11 basing on official and black market rates respectively. These figures do not embrace monetary value for output directly consumed from fields by households as shown in table 1.

Table 1 - Monetary value for vegetable produce directly consumed from farms

Crop	Annual household consumption (kg)	Parallel market price in (US\$) per kg	Total parallel market price (US\$)	Official market rate price in (US\$) per kg	Total official market price (US\$)
Tomatoes	960	2,67	2563,20	14,70	14 112,00
Onions	128	0,50	64,00	2,76	353,28
Beans	200	0,23	44,00	1,24	248,00
Leafy vegetables	192	2,88	552,96	15,88	3048,96
Carrots	108	0,37	39,96	2,03	219,24
Okra	180	0,55	99,00	7,60	1 368,00
Cucumbers	288	0,75	215,34	4,12	118,56
Total	2 048		3 578,46		19 468,04

Total value for produce from direct consumption is US\$3 578, 46 (parallel market rates) and US\$19 468, 04 (official market rates) (Table 1). Therefore, combined monetary value of vegetable produce from both direct consumption and sales is US\$5 410, 23 and US\$29 557, 08 for parallel and official market rates respectively. These translate into US\$14, 84 for parallel market rates and US\$81, 09 for official market rates as daily household income. Therefore individual daily expenditure is US\$3, 29 and US\$17, 98 for parallel and official market rates respectively in a country where more than 80% of population is living on less than US\$2 a day (Distressed Volatility, 2008). This showed that vegetable farming has transformed both household and individual income for farming families.

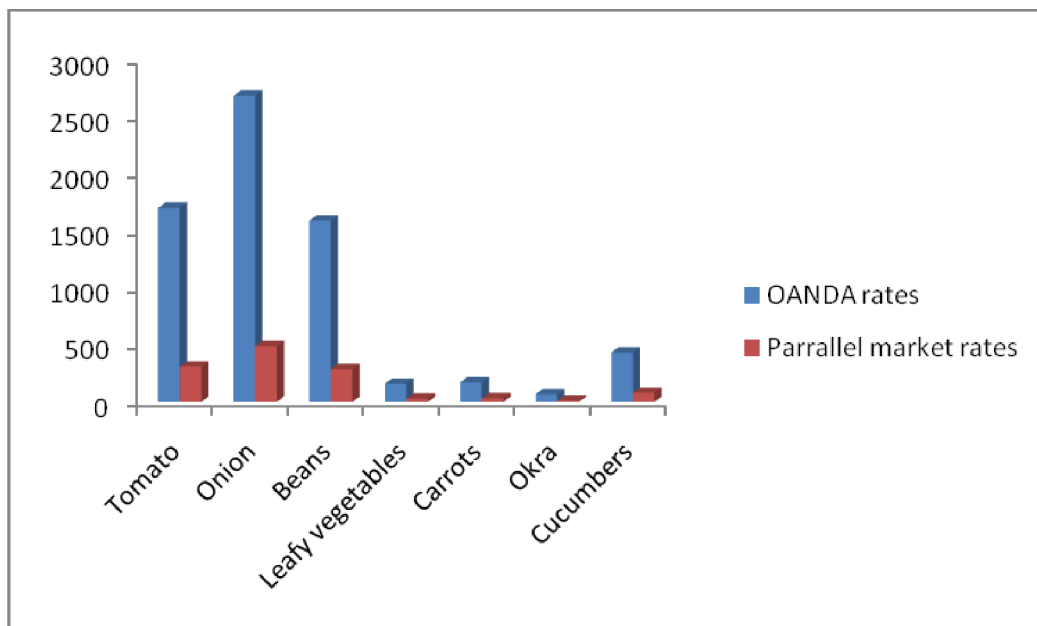


Fig – 4 Average annual income per crop per household from sales

Tomatoes, onions and beans distinguished themselves as major income crops for the families in Chikwira and Manyika wards (Fig 4). The pattern emerged because tomatoes are grown annually and have got multiple harvests. Onions and beans have high market value irrespective of their low yield quantities compared to tomatoes. Income from leafy vegetables and okra is low as these are mainly sold locally where prices are relatively low compared to urban market where the bulk of other crops are marketed.

Use of income from vegetables by households

Questionnaire survey results indicated that seventy-three percent of the families acknowledged that vegetable farming significantly improved their income status. The communities' income is used for purchasing and supplementing basic non-vegetable household requirements in order to boost their nutritional status. Ability to purchase non-vegetable products has improved the families' food quality and nutritional diversity. In these days of HIV/AIDS prevalence, growing of vegetables is contributing significantly to balanced diet required by AIDS patients.

Moreover, in the event that families have acquired enough food for consumption, income is used to buy assets such as farming implements, livestock, furniture, housing construction and to meet other social requirements such as paying for school fees and medical expenses. Accumulated assets act as security to buy food in times of food shortage, especially due to climatic constraints as in 2007-2008 farming season when the country experienced an early and abrupt end of rains midway through the rain season. Some income is used to meet social obligations such as paying for outstanding lobola, investing in their children's education and entertainment. However, thirteen percent of the farmers could not ascertain their positions regarding contribution of vegetable farming to their income as continuous hyperinflation in the country was triggering market price fluctuations rendering their profits negligible.

Challenges encountered by households in vegetable farming and marketing

Notwithstanding the fact that vegetable farming has transformed local communities' livelihoods, their activities have not been spared by national economic meltdown experienced in Zimbabwe. Farmers rely on hired transport to ferry their products to the market. Therefore fuel shortages and high costs for transport maintenance resulted in

transport shortage and high expenses for hiring. Some of the unpaved roads become inaccessible during the rain season further affecting the timeous transportation of the perishable horticultural products from the area. This has resulted in vegetable output losses due to rotting as a number of days elapse before their produce is transported. In some cases high inflation rates erodes all income, as fluctuating market prices makes profit insignificant as it would be used to meet production and transport costs only.

Since the area has predominantly poor soils, high costs and shortage of inorganic fertilizers signals that farmers retain low yields than expected due to limited soil nutrients. High costs for chemicals to spray pests and diseases meant increased output losses as a result of their absence. Uncontrolled domestic animals during winter also account for substantial destruction in vegetable crops. Loss in output is compounded by rampant thefts by people who do not reside in these communities' vicinity.

Conclusion

Commercialized small-scale vegetable farming system has had a positive impact on rural food security and livelihoods in the study area. This is clearly evidenced by improved socio-economic status of households involved in market gardening. Farming families improved on food availability and consumption patterns as a result of increased income and assets accumulation. The significance of vegetable farming as a survival strategy in Chikwira and Manyika wards shows that sustainable reduction in hunger can be achieved in the context of supporting local initiatives. However, financial, mechanical and technical support needs to be given to families in order to boost farming production from current levels and reduce gross vegetable output losses incurred. Lastly, local communities must integrate indigenous crops due to increased experienced changes in weather conditions and need to improve nutritional security for HIV/AIDS related illness.

Policy considerations or recommendations;

- Training farmers on proper storage, use and application of chemicals to reduce negative environmental impacts and on personal safety
- Training farmers on budgeting, grading, packaging and marketing for them to expand supply to big retail shops which sale fresh products
- Formation of social organizations or clubs to draw sponsorship for projects improvement; e.g. buying of own transport for members to ferry produce to market
- Improvement in mechanization in order for farmers to enhance productivity and increase competitiveness on market e.g. they must buy engines to efficiently pump water to irrigate dryland fields upslope

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CLOSING REMARKS

The Acting Director of Research and Postgraduate Studies applauded the Social Sciences Faculty for the job well done. She stated that most of the papers were of high quality. She however, noted that the researchers lacked research skills seminar in order to train academics. She commended the leadership in the Faculty of Social Sciences and also promised to publish a special volume of the Dyke on the proceedings of the 6th Social Science Research Seminar Series.

The Director officially closed the seminar at 17:03 pm.

10. The list of participants for the 6TH SOCIAL SCIENCES RESEARCH SEMINAR SERIES

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MR D. MAWERE	LECTURER	GENDER STUDIES
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MR C. MANYUMWA	LECTURER	EDUCATIONAL FOUNDATIONS
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