Assessing the level of participation in the regulation of African Traditional Medicines in South Africa: focus on African Traditional Health Practitioners in the villages of Thembisle Hani Local Municipality in Mpumalanga

Fikile Mabel Vilakazi

Student No. 9311775

A mini-thesis submitted in partial fulfilment of the requirements for the degree of Magister Atrium in Development Studies at the University of the Western Cape.

Supervisor: Dr Mulugeta Fitamo Dinbabo

November 2013
# TABLE OF CONTENTS

- List of Tables .............................................................................................................................. vii
- List of Figures............................................................................................................................. vii
- Acknowledgements ...................................................................................................................... x
- Meaning of Concepts .................................................................................................................. xi
- Glossary of Acronyms ................................................................................................................. xiii
- Key Words ..................................................................................................................................... xiv
- Abstract ....................................................................................................................................... xv

**CHAPTER 1: INTRODUCTION, BACKGROUND AND SIGNIFICANCE OF STUDY** ................. 1

1.1. Contextualisation of study ........................................................................................................ 1

1.2. Rationale and Significance of the Study .............................................................................. 3

1.3. Background and Contextualisation ....................................................................................... 6
   1.3.1. The Thembisile Hani Local Municipality ................................................................ 6
   1.3.2. The Vondo and InkomoyoLwandle Traditional Healers Association ....................... 8

1.4. Problem statement, research questions, aims, hypotheses and objectives of the study .......... 9
   1.4.1. Problem statement .................................................................................................... 9
   1.4.2. Research questions ................................................................................................. 10
   1.4.3. Aims of the research ............................................................................................... 10
   1.4.4. Hypotheses ............................................................................................................. 10
   1.4.5. Specific objectives of the study .............................................................................. 12

1.5. Thesis breakdown structure ............................................................................................... 12
CHAPTER 2: LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1. Introduction

2.2. Literature Review

2.2.1. African Traditional Medicine in Theory

2.2.2. Empirical Studies on African Traditional Medicine Globally

2.2.3. Public Participation in Theory

2.2.4. Empirical Studies on Public Participation in South Africa

2.3. The Role of Social Capital Theory in Public Participation

2.3.1. What is social capital?

2.3.2. Types of social capital

2.3.2.1. Bonding social capital

2.3.2.2. Bridging social capital

2.3.2.3. Linking social capital

2.4. The role of trust in social capital

2.5. The norm of reciprocity in social capital

2.6. A social capital theoretical model for public participation

2.7. Conceptualisation of Variables

2.8. Operationalisation of Variables

2.8. Conclusion
3.1. Introduction

3.2. Research Design

3.2. Research Methodology

3.2.1. Self-administered questionnaire ............................................................................. 54

3.2.2. Sampling ................................................................................................................. 54

3.3. Data Analysis Methods

3.4. Limitation of the study

3.5. Ethical statement

3.5 Conclusion

CHAPTER 4: PRESENTATION OF RESULTS AND ANALYSIS .......................................... 57

4.1. Introduction

4.2. Data Presentation

4.2.1. Demographic data ........................................................................................................ 57

4.2.2. Level of public participation by ATHPs in the regulation of African traditional medicines .................................................................................................................. 58

4.2.3. Trust and reciprocity indicators .............................................................................. 60

4.2.4. Level of power consciousness amongst ATHPs ..................................................... 61

4.3. Data Analysis

4.3.1. Classical linear regression analysis ......................................................................... 62

4.3.1.1. Lack of income reduces levels of public participation ......................................... 63

4.3.1.2. Income inequalities result in a class structure that inhibits participation for people without an income ........................................................................................................ 64
4.3.1.3. Trust and reciprocity do not automatically ensure active participation, they require ‘conversion’ to critical consciousness ................................................................. 65

4.3.1.4. ATHP’s level of power consciousness determines whether they are actively or passively involved in public decisions................................................................. 67

4.3.1.5. Confirmed hypotheses: Based on the results and analysis above, the three alternative hypotheses (3 and 4) of this study are accepted: ............................................ 68

4.4. Conclusion 69

CHAPTER 5: DISCUSSION AND RECOMMENDATIONS................................................... 71

5.1. Introduction 71

5.2. The link between social capital theoretical model for public participation and results of this study ......................................................................................................... 71

5.2.1. Politicisation of trust and reciprocity in public participation ............................................ 71

5.2.2. Class status can be an inhibiting factor in public participation ........................................ 72

5.2.3. Invoking citizen power consciousness for public participation ........................................ 73

5.2. Recommendations 75

5.2.1. Scientific Recommendations .................................................................................. 75

5.2.2. Policy Recommendations ....................................................................................... 75

5.2.2. Strategy recommendations ...................................................................................... 76

5.3. Conclusion 76

REFERENCES ........................................................................................................................... 78

Annexure A Structured survey questionnaire – English version ........................................ 92

Annexure B: Structured survey questionnaire – Zulu version.............................................. 94
Annexure C: Informed consent form for participants/institutions ............................................... 96
Annexure D: Information sheet for participants/institutions .......................................................... 97
Annexure E: Photos of ATHPs during data collection process ...................................................... 99
Annexure F: STATA do file .................................................................................................... 108
Annexure G: STATA data set in excel format ........................................................................... 127

List of Tables

Table 1. Demographic Data ..................................................................................................... 58

List of Figures

Figure 1: Map of Thembisile Hani local municipality ............................................................... 7
Figure 2: ATMs developments in Africa by 2005 ................................................................. 17
Figure 3: Progress made in Africa during the first Africa decade on traditional medicine ..... 18
Figure 4: Arnstein's ladder of participation ........................................................................ 20

Figure 5. Social capital ......................................................................................................... 29
Figure 6: Types of social capital .......................................................................................... 35
Figure 7: 'Critical Trust': Interplay between belief (trust) and interest (power with) .......... 39
Figure 8: 'Critical Reciprocity': Interplay between power, class consciousness and reciprocity 46
Figure 9: Social capital theoretical model for public participation ....................................... 47

Figure 10. The level of public participation amongst ATHPs ............................................. 59
Figure 11: The level of trust and reciprocity ........................................................................ 60
Figure 12: The level of power consciousness amongst ATHPs ........................................... 61
Figure 13: Linear regression analysis - involvement, income, education, age, gender, trust and reciprocity

Figure 14: Linear regression - involvement, income, education and power
Declaration

I, Fikile Vilakazi, declare that “Assessing the level of participation in the regulation of African Traditional Medicines in South Africa: focus on African Traditional Health Practitioners in the villages of Thembisile Hani Local Municipality in Mpumalanga” is my own work. It has not been submitted for any degree or examination in any other university, and all the sources I have used or quoted have been indicated and acknowledged by complete references.

Full name: Fikile Vilakazi

Signed: Date: 03 November 2013
Acknowledgements

I would like to thank my supervisor Dr Mulugeta Fitamo Dinbabo for his diligent support, wisdom, passion, commitment and for believing in my thoughts, ideas and actions throughout the writing of this mini-thesis. I will not have made it without your support. Thank you very much. This work would not have been possible without the advice of Dr Razack Karriem who provided an ear to listen, a thought to consider and cautions to be mindful of along the way. Thank you Dr Karriem.

Professor Julian May, thank you for listening, hearing and acting to make this thesis possible.

To Mrs. Priscilla Kippie, my sincere gratitude for your administrative support and willingness to support when requested to do so. You have really made a difference in the life of this thesis. The Division for Postgraduate Studies for your PET support program. Thank you Professor Lorna Holtman, Dr Nasiema Allie and Peter Johnson-Smith.

To my adorable lover and friend Zodwa Ndlovu-Dlamini, indlondlo enkulule, makhulu uGodongwane, nogogo uMangema! Thokozani makhehla’ makhulu! I love you baby. Thank you for your endurance, love and support when I was away from home pursuing my dream and vision through the writing of this thesis. I am forever grateful to have you in my life. My brother, Sipho Vilakazi, you are a true gift in my life. I adore you. Thank you. My spirit guides, ancestors, goddesses and gurus, bogogo namakhehla, mabhele, namabhelakazi! Maphephethwa’ mahle! Thokozani!

To my late mother, Queen Rachel Shabangu, and my grandmother, Mabel Nobunkani Molelekoa: Rest in peace! The meaning of your lives rests in me! To my loving father, David Vilakazi, thank you. My mentor and mother Wynnecent Amod, you have been a true anchor. Above all, the National Research Foundation for financing this research. I thank you.
Meaning of Concepts

**Bonding social capital:** “attachment to, commitment to, involvement with and belief in” individuals that a person is connected to (Hirschi, 1969:251-256).

**Bridging social capital:** “informal networks of weak bridging ties connecting friends and acquaintances’ and ‘bringing together of groups that are different from one another” (Sabatini, 2006:23)

**Class:** “social categories sharing subjectively-salient attributes used by people to rank those categories within a system of economic and (social) stratification” (Wright, 2003:1).

**Critical trust:** The ability to believe that other people have our best interest at heart and they will not deliberately hurt us based on a shared sense of class and power consciousness

**Critical Reciprocity:** The ability to return favours to another person based on a sense of shared power and class consciousness.

**Linking social capital:** “linking social capital is formal networks connecting members of voluntary organizations and formal networks of activists in political parties” and also “includes vertical connections to formal institutions” (Sabatini, 2006:23).

**Traditional Health Practitioner:** “a person defined under the Traditional Practitioners Act No 22 of 2007 as a diviner [umporofithi], herbalist [igedla], traditional birth attendant [umbelethisi], traditional surgeon [inyanga/isangoma] and traditional tutor [ugobela]” (Presidency, 2008:6).
*Traditional medicine:* “means an object or substance used in traditional health practice for (a) the diagnosis, treatment or prevention of a physical or mental illness; or (b) any curative or therapeutic purpose, including the maintenance or restoration of physical or mental health or well-being in human beings, but does not include a dependence-producing or dangerous substance or drug” (Presidency, 2008:6).

*Traditional philosophy:* “means indigenous African techniques, principles, theories, ideologies, beliefs, opinions and customs and uses of traditional medicines communicated from ancestors to descendants or from generations to generations, with or without written documentation, whether supported by science or not, and which are generally used in traditional health practice” (Presidency, 2008:6).
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCORD</td>
<td>African Center for Constructive Resolution of Disputes</td>
</tr>
<tr>
<td>AMCST</td>
<td>African Ministers Conference on Science and Technology</td>
</tr>
<tr>
<td>ATHP</td>
<td>African Traditional Health Practitioner</td>
</tr>
<tr>
<td>ATHPA</td>
<td>African Traditional Health Practitioners Association</td>
</tr>
<tr>
<td>ATM</td>
<td>African Traditional Medicine</td>
</tr>
<tr>
<td>AU</td>
<td>The African Union</td>
</tr>
<tr>
<td>CPP</td>
<td>Center for Public Participation</td>
</tr>
<tr>
<td>CSIR</td>
<td>Center for Scientific and Industrial Research in South Africa</td>
</tr>
<tr>
<td>HSRC</td>
<td>Human Sciences Research Council</td>
</tr>
<tr>
<td>ICTHP</td>
<td>Interim Council for Traditional Health Practitioners</td>
</tr>
<tr>
<td>IKS</td>
<td>Indigenous Knowledge Systems</td>
</tr>
<tr>
<td>MRC</td>
<td>Medical Research Council of South Africa</td>
</tr>
<tr>
<td>NDH</td>
<td>National Department of Health</td>
</tr>
<tr>
<td>NEPAD</td>
<td>New Partnership for Africa Development</td>
</tr>
<tr>
<td>PSC</td>
<td>Public Service Commission</td>
</tr>
<tr>
<td>PPU</td>
<td>Public Participation Unit</td>
</tr>
<tr>
<td>SALGA</td>
<td>South African Local Government Association</td>
</tr>
<tr>
<td>WHA</td>
<td>World Health Assembly</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organisation</td>
</tr>
<tr>
<td>WRCA</td>
<td>WHO Regional Committee for Africa</td>
</tr>
<tr>
<td>WROA</td>
<td>WHO Regional Office for Africa</td>
</tr>
</tbody>
</table>
Assessing the level of participation in the regulation of African Traditional Medicines in South Africa: focus on African Traditional Health Practitioners in the villages of Thembisile Hani Local Municipality in Mpumalanga

Fikile Mabel Vilakazi

Key Words

African traditional medicine

African traditional health practitioner

Class

Critical trust

Critical reciprocity

Participation

Power

Social capital

Traditional medicine
Abstract

Assessing the level of participation in the regulation of African Traditional Medicines in South Africa: focus on African Traditional Health Practitioners in the villages of Thembisile Hani Local Municipality in Mpumalanga

F.M. Vilakazi

MA mini-thesis, Institute for Social Development, University of the Western Cape

This mini-thesis provides empirical evidence on the level of public participation and its correlation with trust, reciprocity, class and power amongst African traditional health practitioners (ATHPs) in the regulation of African traditional medicines (ATMs) in South Africa. Data on public participation of ATHPs was collected and analysed, using a social capital theoretical model created from an adaptation of Putnam’s (2000) concepts of trust and reciprocity as central to social capital theory. The analysis further employed Bourdieu’s (1968) thinking to link power and class to the concept of social capital and borrowed from feminist and historical materialism theories. The thesis sought to test how the analysis of power and class, once politicised, could be used to convert Putnam’s notion of trust and reciprocity into “critical trust” and “critical reciprocity”, based on hyper-reflexive engagement of social agents with their own reality within social networks. ATHPs were requested to rank themselves from a scale of high to low to determine their level of involvement. Public participation (the dependant variable) was tested against acts of reciprocity, trust, power and income or class (the independent variables) to ascertain correlation. Data was analysed using STATA, a computer-based programme for analysing quantitative data. The findings of the study showed that income and power play a significant role in determining public participation. The level of one’s income and power determines whether one is active or passive in participation. The high levels of trust and reciprocity demonstrated by ATHPs towards government had no particular significance in facilitating active participation instead trust, in particular, played a negative role, in that it demobilised ATHPs from active participation since they trusted that government will protect their best interest in the regulation process. The argument in this thesis is that trust and reciprocity has to be converted into ‘critical trust’ and ‘critical reciprocity’ through active questioning and analysis of power and class dynamics for it to activate and invoke conscious active participation. A follow-up study is necessary to test the possibility and success of such a conversion for public participation.

November 2013
CHAPTER 1: INTRODUCTION, BACKGROUND AND SIGNIFICANCE OF STUDY

“Every social act is an exercise of power, every social relationship is a power equation, and every social group or system is an organization of power” (Hawley, 1963: 422).

1.1. Contextualisation of study

The National Department of Health has embarked in a process of regulating African traditional healing practice in South Africa. The regulation process started in 2003. The area of interest for the department includes the scientific validation, efficacy and safety in the use and application of African traditional medicine by the public. South Africa has a rich plant biodiversity of more than 24000 indigenous plants, representing about 10% of all higher plants on earth (National Department of Health, MRC & the CSIR, 2005:3).

The Department of Health has committed to investigate these plant species to ascertain their scientific validity (National Department of Health, 2008:6). As a result, the department inaugurated a newly appointed Interim Council for Traditional Health Practitioners (ICTHP) of South Africa in 2013, which has as one of its mandates to develop a pharmacopeia of African traditional medicinal plants that exist in South Africa as part of the scientific validation process (Makhubu, 2013:1).

It is estimated that about 200 000 African traditional health practitioners [ATHPs] are actively practicing and providing traditional primary health care to citizens in South Africa (Khemisi, 2011:3), presumably using some of the medicinal plants that may be of concern to the National Department of Health. Most ATHPs are found in associations which are registered as non-profit organisations or close corporations in the country.
The membership to these associations is mostly for network purposes. No scientific data are available on the existence and practices of these associations. Based on anecdotal information, the assumption is that the majority of traditional health associations do not seem to engage with issues of scientific validation of African traditional medicines administered by its members, hence the drive by the National Department of Health to implement regulations. Most ATHPs consider the discovery of traditional medicinal plants as spiritual knowledge and wisdom given to them by their ancestors.

This is what Babbie and Mouton (2001:5) term “experiential knowledge”, which is derived from people’s experiences in the world with other people, nature and other beings (living and dead). This gift is reserved as specialised knowledge that offers a competitive advantage for each ATHP to survive in the traditional health market. Added to this is that, for most ATHPs, the traditional health practice, in which knowledge and administration of medicinal herbs forms a fundamental source, is their only source of income for survival.

The annual trade in raw medicinal plants is estimated to be valued at R520m, traditional health practitioners prescribe traditional medicine worth R2.6bn a year, while the annual sales of herbal medicines is worth R588m, making the total contribution of traditional medicine more than R3bn to the economy of South Africa (National Department of Health: 2008:12). The Department of Health further reveals that the health-care services rendered by approximately 200,000 traditional health practitioners make it the biggest health service industry in the country.

Sambo (2010:1) indicates that “80% of the populations in Asia, Africa and Latin America use traditional health care services to meet their primary health care needs”.
The majority of users are located in rural and peri-urban areas, suggesting that this population may be exposed to possible dangers of consuming unsafe traditional medicines, as alleged by Doctors for Life (DFL, 2003:1). The consumption estimates mentioned above suggest that there is an elasticity of demand for traditional health-care services, particularly in rural areas, because it is affordable, accessible and offers an added spiritual and cultural benefit to patients. Given the prominence of African traditional health in primary health-care provision and economic development, as indicated above, it is critical that the ATHP’s experiences and knowledge of the traditional health practice actively inform the regulation of ATMs in South Africa.

This research study was conducted to investigate the levels of involvement of ATHPs in the regulation of ATMs in South Africa. The specific focus was on selected ATHPs in identified villages of the Thembisile Hani local municipality. The purpose was to measure public participation through the lens of social capital theory in a way that indicates the roles of trust and reciprocity as enablers or inhibitors of public participation. The study is equally concerned with the roles of power, class and gender in the building of social capital in a democracy.

1.2. Rationale and Significance of the Study

In 1978, the World Health Assembly adopted a declaration on primary health care known as the Alma-Ata Declaration. The declaration called on countries and governments to include the practice of traditional medicines within their primary health-care approach (World Health Assembly, 1978:2).
Subsequently, the World Health Organisation [WHO] adopted guidelines for member countries to implement the Alma-Ata Declaration, focusing on the recognition of ATMs, the training of ATHPs and biomedical practitioners and on the appropriate use of ATMs in primary health care and creation of awareness within communities of ATMs, inter alia (WHO, 1978:14-15, WHO, 2004:1-109).

In the year 2001, the AU Summit adopted a *Plan of action on the AU decade of traditional medicine for the period 2001-2010* (AU, 2001: 1). Subsequently, in 2007, the African ministers of health attending a conference organised by the WHO Regional Committee for Africa in Congo Brazzaville adopted a declaration on traditional medicine (WRCA, 2007:1), committing their respective countries to improving the institutionalisation and integration of traditional medicines in primary health-care services.

In addition, the New Partnership for Africa Development [NEPAD] adopted an Africa Health Strategy for the period 2007-2015, which asserts that “it is essential to strengthen structures of traditional medicine through analysis of the prevailing systems and with the involvement of traditional health practitioners and communities, focussing on strengthening the best practices of traditional medicine” (NEPAD, 2007:15). Thus, there appears to be a strong political will from policy and decision makers internationally and regionally to support the institutionalisation of traditional medicines to promote integrated primary health care globally.

Against this background, the National Department of Health in South Africa introduced draft legislation in 2003 for the regulation of ATMs called the Traditional Health Practitioners Bill. In 2004, the Traditional Health Practitioners Act was enacted by parliament (SA Presidency, 2005:1-48).
The process leading to the enactment of that Act attracted criticism from the public for lacking adequate public participation. One official critique came from Doctors for Life in their submission to the constitutional court of South Africa. The Honourable Justice Ngcobo (2006:3) notes in his judgement in the case between Doctors for Life vs. The Speaker of the National Assembly that:

“the applicant’s complaint is that during the legislative process leading to the enactment of these statutes (including the Traditional Health Practitioners Act of 2004), the NCOP (the National Council of Provinces) and the provincial legislatures did not comply with their constitutional obligation to facilitate public involvement in their legislative processes as required by the provisions of sections 72(1) (a) and 118 (1) (a) of the constitution respectively”.

As a result, the constitutional court declared the Traditional Health Practitioners Act of 2004 invalid and unconstitutional.

Whilst the Traditional Health Practitioners Act was re-enacted in 2007 (Presidency, 2008:1-48), this background provides a glimpse of how public participation may be compromised in the regulation process of ATMs. The central aim of this study was to examine the level of participation by ATHPs in the regulation of ATMs and factors that inhibit or promote such participation. The study has become particularly significant in that on the 13th of February 2013, the Deputy Minister of Health Gwen Ramokgopa inaugurated the Interim Council for Traditional Health Practitioners in South Africa (Makhubu: 2013:1). The Interim Council has a mandate to ‘fast-track’ regulation of ATMs of ATHPs and related compliance.
Given the culture of marginal participation embedded in the history of the regulation process, key critical political and development questions emerge:

a) To what extent are ATHPs informing public decisions in this process?

b) Is the newly appointed council truly leading the regulation process or is it one of those acts of tokenism?

c) Can the regulation process be trusted to be in the best interest of ATHPs?

These questions arise in a context where “institutions to safeguard the rights of indigenous knowledge holders are weak in most countries” (Africa’s Science and Technology Consolidated Plan of Action, 2005:17).

Furthermore, there is a scarcity of scientific knowledge on indigenous knowledge systems [IKS] and processes generally and, more specifically, on political and public participation specific to IKS in South Africa. Whilst literature on public participation is vast, knowledge gaps exist in relation to traditional health participatory processes in policy and law. The significance of this study is in that it will, it is hoped, contribute to reducing this knowledge deficit and to improving existing scholarship in this area. In the following section, the context of the study area is explored.

1.3. Background and Contextualisation

1.3.1. The Thembisile Hani Local Municipality

Babbie and Mouton (2001:166) suggest that it is appropriate “to select a sample on the basis of one’s knowledge of the population and its elements”.

In this case, the target population for the study is ATHP residents of three semi-villages of Thokoza, Vezubuhle and Thembaletu, situated at the Tweefontein settlements located between KwaMhlanga and Kwaggafontein in the local municipality of Thembisile Hani in the Mpumalanga province (See Figure 1). These villages are relatively well known to the researcher, by virtue of being a resident of the municipality, hence the selection.

The Thembisile Hani Municipality is one of six local municipalities found in the Nkangala District Municipality (Nkangala District Municipality, 2010: 46).

Figure 1: Map of Thembisile Hani local municipality

The municipality is situated about 80 kilometres to the northeast of the Tshwane metropolitan area and about 80 kilometres to the north of Witbank town in Emalahleni Local Municipality. The local municipality has a total population of about 278 517 people (about 25.2% of the total population in Nkangala District) living in about 57 different towns and villages throughout the municipality (Thembisile Hani Local Municipality, 2010:1). The targeted semi-villages of Thokoza, Vezubuhle and Thembaletu are located in the area between kwaMhlanga and Kwaggafontein-A on the map above.
The isolated spatial patterns of the identified villages are a critical part of the criteria that inform the selection of the target population. The Thembisile Hani Municipality settlement pattern is mainly attributable to apartheid legislation, which forced people to settle in dispersed small rural settlements and villages in the former KwaNdebele homeland area. Most of the land in the municipality belongs to the State (Nkangala District Municipality, 2010: 49).

The isolation of the study population assumes the need for deliberate efforts by the State to encourage and foster public participation within such a community. The fact of spatial isolation may contribute to marginalisation of this population from public processes of the State. The ATHPs in the identified villages belong to associations that service ATHPs in the Thembisile Hani municipal area. The study was focused on two of them, namely (1) the Vondo Traditional Healers Association and (2) the Inkomoyolwandle Traditional Healers Association. In the next section, the organisational context of the associations is described.

1.3.2. The Vondo and Inkomoyolwandle Traditional Healers Association

Very little is documented about the above-mentioned associations. This renders their functionality invisible at municipal, regional and national level. Both associations have been in existence since the 1960s. The associations are generally isolated from local socio-economic and political activities of the municipality. Their main activities revolve around providing support, training, recognition and regulation for their members. The individual ATHP members possess enormous individual indigenous knowledge of the medicinal plants that they use to treat their patients. The traditional practice is the main source of income for the majority. Outside of the traditional practice, most members form part of a larger strata of the 37% unemployed people in the municipality (SALGA, 2012:39).
1.4. Problem statement, research questions, aims, hypotheses and objectives of the study

1.4.1. Problem statement

Since 1996, South Africa has enacted various pieces of legislation (Nyalunga, 2006: 2) to foster and encourage public participation by citizens on matters affecting people’s daily lives. The Constitution of South Africa provides, in section 72(1) (a), that the “National Council of Provinces must facilitate public involvement in the legislative and other processes of the council and committees” and in section 118 (1) (a) that provincial legislatures must do the same (SA Presidency, 1997:25). Despite such provisions, public participation remains a constitutional right that has not been realised and experienced by the majority of South Africans. A huge disjuncture exists between legislative and policy guarantees and the real experiences of people within communities, particularly in isolated, poor settlements.

Justice Sachs (2006: 4) expressed a similar concern in a concurring judgement in the re-demarcation process of the Matatiele municipal borders from Kwa-Zulu Natal: “stating that the legitimacy of legislation came not from awe but from openness”, meaning in this instance openness and engagement with the people affected by that legislation. In addition, Scott (2009:2) found that “no public participation framework exists in the country to guide the legislative sector in its public participation drive. The constitutional court has thus far played a role of developing legal standards for public participation”. The courts can only act once approached, often by individuals and organisations who can afford legal costs associated with seeking court remedies on socio-economic matters. Unfortunately, this is not an option for the poor majority in isolated settlements.

Unless the situation changes; the voices of ordinary people in public decision-making will continue to be marginalised, as observed by Siphuma (2009:43).
1.4.2. Research questions

An empirical question is defined as “one which seeks to resolve problems in real life experiences … and requires collection of new data or analysis of existing data that depicts experiences in the real world” (Babbie & Mouton, 2001:75). In the context of the research problem identified above, the main purpose of this research was to provide an answer to the following questions:

- RQ1: What is the level of participation amongst ATHPs in the regulation of ATMs in South Africa?
- RQ2: Do trust, reciprocity, power and class play any particular role in determining the levels of public participation?

1.4.3. Aims of the research

The aim of this research was to measure the level of participation amongst ATHPs at Thembisile Hani local municipality in Mpumalanga and examine whether trust, reciprocity, power and class affect public participation in the regulation of ATMs in South Africa.

1.4.4. Hypotheses

Creswell (2003:108) defines hypotheses as predictions the researcher holds about the relationship between variables.

He further states that there are two forms, namely, the null hypothesis, which “predicts that no relationship exists between variables” (2003:109) and an alternative hypothesis “which predicts a causal relationship between variables” (2003:110). As a result, the hypotheses in this research are based on both the null and alternative hypotheses, as indicated below.
**H₀₁** (Null hypothesis 1): There is no correlation between trust and public participation in the context of the regulation of African traditional medicines in South Africa. The equation here is that if X (trust) exists, no observable change in Y (public participation) will be noted.

**H₁₁** (Alternative hypothesis 1): The level of participation (dependent variable) amongst ATHPs is very low due to high levels of trust (independent variable) in the democratic government to protect their best interests as African traditional health practitioners. The equation here is that if X (trust) exists, an observable change in Y (public participation) will be noted.

**H₀₂** (Null hypothesis 3): There is no correlation between class and public participation in the context of the regulation of African traditional medicines in South Africa. The equation here is that if X (class) exists, no observable change in Y (public participation) occurs.

**H₂₂** (Alternative hypothesis 3): ATHPs are willing and eager to respond to and engage in government’s invitations to public processes in the regulation of ATMs but they do not have the financial resources and sufficient education required to attend and engage in public meetings and thereby undermine their own ability to engage at government level. The equation here is that if X (class) exists, an observable change in Y (public participation) occurs.

**H₀₃** (Null hypothesis 4) = there is no correlation between power and public participation in the context of the regulation of African traditional medicines in South Africa. The equation here is that if X (power) exists, no observable change in Y (public participation) occurs.
**H1.3** (Alternative hypothesis 4): ATHPs do not believe that they have the power to influence decision making in the regulation of ATMs because government will do what they want regardless of what people think or say. The equation here is that if X (power) exists, an observable change in Y (public participation) occurs.

### 1.4.5. Specific objectives of the study

- To provide the research with a solid and comprehensive theoretical framework and measure the level of participation amongst ATHPs.
- To examine whether and how ATHP’s ideas of public trust and reciprocity affect their ability to participate meaningfully in public processes
- To test whether and how class status amongst ATHPs determines the ability to participate meaningfully in public processes
- To ascertain the role of power dynamics in facilitating or inhibiting participation
- To make recommendations for policies and strategies that will contribute to the improvement of public participation of ATHPs in the regulation of ATMs in South Africa.

### 1.5. Thesis breakdown structure

This thesis is divided into five chapters.

**Chapter 1** introduces the study and presents a discussion on the significance of the study, an analysis of its context and a description of the Vondo and InkomoyoLwandle Traditional Healers Association.
Chapter 2 provides a literature review and a theoretical framework that underpins the study. Its aim is to give a theoretical and intellectual background to the study and build a logical framework for the research. In general, in this chapter, a set of conceptual and empirical research, conducted by other scholars, are reviewed and analysed to highlight the most relevant analogies with the research topic.

Chapter 3 gives an indication of the research design that was used in approaching this research. This includes methodology and tools that were utilised in collecting data.

Chapter 4 presents the data collected and provides an analysis through a classical linear regression model, using STATA, a statistical package available for quantitative data analysis.

Chapter 5 presents recommendations for policy and strategy development to the Department of Health and the Interim Council on Traditional Health Practitioners based on the results of the study.

The next chapter reviews existing literature on public participation and ATMs in South Africa. The section also provides a theoretical framework for assessing public participation.

1.6. Conclusion

The study is motivated by a growing pattern of lack of public participation observed in public processes generally in South Africa and more specifically in the history of the regulation of ATMs since 2003. Albeit, there is demonstrated political will from the World Health Organisation, the African Union and nationally from the national department of health, public participation seems to be a constitutional right that is still not enjoyed by the majority of people in the country, particularly in remote communities.
It is for this reason that Thokoza, Thembalethu, Vezubuhle and Kwaggafontein communities in Tweefontein were chosen as study sites given their remote location at Thembisile Hani local municipality. The assumption is that most people within those communities would battle to engage meaningfully in public processes due to the spatial pattern of their settlement.
CHAPTER 2: LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1. Introduction

The purpose of this chapter is to give an indication of empirical studies that have been conducted globally on public participation. In addition, the role of social capital theory is explored, with specific attention to public participation. It begins with an analysis of African traditional medicine in theory followed by empirical studies on African traditional medicine globally. It then proceeds to an analysis of participation in theory and an outline of empirical studies on public participation in South Africa, where the assessment was conducted.

This is followed by an analysis of the social capital theory and suggestions on how it can play a role in building public participation. A model for strengthening public participation is presented as a framework for analysis thereafter. The final section of the chapter provides the problem statement, research question, aims and objectives of the study. The next section looks at African traditional medicine in theory.

2.2. Literature Review

2.2.1. African Traditional Medicine in Theory

Kale (1995:1182) observes that advocates for traditional medicine believe that “disease is a supernatural phenomenon that results when there is disharmony (or imbalance) between ancestral spirits, the living person, animals, plants and other objects”. The practice further entails that ‘ingredients from animals and plants combined with ancestral spirits can heal a sick person, and therefore have medicinal properties”.

15
In view of this, Gibson (2011:134) supports Latour (1999:40) in the argument that the best starting point in the making of ATMs in South Africa is to move away from the traps of the binary of fact and belief and rather attend to associations between humans and nonhumans by declining the antagonism between e.g. subject/object, epistemology/ontology, belief/science and nature/culture.

Frequently, knowledge of African traditional medicines “is attributed to the influence of spirits who reveal cures in dreams [and visions] or guide the healer … to appropriate [medicinal] plants [and animals]” (Bourdillon, 1989:30). This phenomenon indicates balance and integration between human body, mind, spirit and the natural environment. Mhame, Busia, and Kasilo (2010: 33) add that “healing (through traditional medicine) does not only involve recovery from symptoms of illness, but (re-alignment) of human beings and their community (spirit, body and environment)”.

The African traditional medicine philosophy has similarities with Chinese and Ayurvedic traditional medicine theory. Both emphasise “balance between two opposing yet complementary forces of the yin-yang and the human/environment connection with the five elements of fire, metal, water, earth and air, as the elements are seen to correspond with specific human organs and body parts” (Gaseholm, 2012:4, National Health Institute & National Centre for Complementary and Alternative Medicine, 2010: 2;).

2.2.2. Empirical Studies on African Traditional Medicine Globally

A survey conducted by the World Health Organisation revealed that out of 46 countries which participated in the WHO Africa Regional Office survey on ATMs, “12 had national policies, 10 had law or regulation mechanisms, 15 had national programs on ATMs, 25 had national offices, 16 had expert committees, 18 had national research institutes, 12 had laws or
regulation of herbal medicines and 8 had registration of herbal medicines” (WHO, 2005: 56).

(See Figure 2 below).

Figure 2: ATMs developments in Africa by 2005

![Diagram showing ATMs developments in Africa by 2005]


In addition, recent surveys conducted by the WHO Regional Office for Africa office, based in Congo Brazzaville, to assess the progress made in the first decade of African Traditional Medicines (2000-2010) show significant improvements in some of the developments listed above. For instance, out of 46 countries, “the development of national policy had increased to 39, national laws to 28, national programs to 24, national office to 39, expert committees to 25, national research institutes to 28, regulation and registration of herbal medicine to 20 and 15 respectively, with new developments including listing of ATMS in the National Essential Medicines List (NEML) by four countries and 17 local productions of traditional medicines” (WROA, 2010: 5) (see Figure 3 below).
Further to this, various countries in Africa have focused on the development and improvement of research on the safety and efficacy of African traditional medicines and other related concepts. A considerable amount of academic literature on empirical studies in this area is available. This includes studies on “safety, efficacy, pharmacological screening and toxicology of traditional medicinal plants” (Fennell, Lindsey, McGaw, Sparg, Stafford, Elgorashi, Grace, & Van Staden, 2004: 205-217), on traditional treatment of diarrhoea (Simenya & Maroyi, 2012:395-401) and on gynaecological problems (Steenkamp, 2003: 97-108), amongst many others subjects.
Some of the findings of studies conducted in selected parts of Africa on ATMs are summarised in the next section. In Burkina Faso, a quantitative assessment of household reliance on traditional medicines revealed that “51.5% of respondents consume traditional medicines, primarily at home through self-care (31.4%) but also through health care services provided by traditional healers (20.1%)” (Pouliot, 2011:1504). In Tanzania, secondary data analysis reveals that traditional medicines were officially “regulated in 2005 under the Traditional and Alternative Medicines Act of 2005, although there are still tensions between allopathic and traditional health care practitioners in practice” (Stangeland, Dhillion, & Reksen, 2008:294).

In Ghana, a “quantitative market survey indicates that the herbal market has an annual value on the domestic market of almost US$ 7.8 million (excluding chewing sticks and pre-packed herbal medicine) and an export value around US$ 15 million” (Van Andel, Myren, & van Onselen, 2012:376). In South Africa, the market value is “estimated at R588m per annum” (National Department of Health: 2008:12). Essentially, a large amount of research has been done and more is underway in different parts of the African continent in an attempt to accelerate the institutionalisation and safe use of traditional medicines for the public.

However, a shortage of studies exists that are focused on public participation in the development of mechanisms for ATMs at international, regional and national levels, particularly the role of traditional practitioners in shaping such mechanisms. A brief discussion follows on the theory of public participation, pointing out the empirical evidence on public participation in recent years, with a specific focus on South Africa, as it is the research site for this study.
2.2.3. Public Participation in Theory

Mohan and Hickey (2004:5) indicate that “participation has a longer and more varied genealogy in development than usually acknowledged and has been regenerated around new schools of thought and changing political circumstances”. The concept of public participation is “based on the belief that those who are affected by a decision have a right to be involved in the decision-making process” (IAP, 2007:1). The theory of participation was made popular by the work of Arnstein in the 1960s through the concept of the “ladder of participation” (Arnstein, 1969: 261-224).

Figure 4: Arnstein’s ladder of participation

Essentially, Arnstein’s ladder of participation presents three different types of participation, including ‘passive participation, tokenism and citizens control’ (Cornwall, 2008: 270), with the latter being viewed as an ideal state of active participation in which citizens have full control in the participation process. Burns, Hambleton and Hoggart (1994:69) introduced the concept of “citizen power” in the participation ladder instead of “citizen control”.

Source: Arnstein, 1969.
In addition, Penderis (2012: 5) argues that “it is becoming increasingly clear that engaging, consulting and involving local people rarely results in anticipated goals of empowerment and transformation”, confirming the need to focus on the type of participation that fosters citizen power and control. Some scholars argue that it is time “to jump off the Arnstein’s ladder due to its insufficient ability for making sense of participation at a conceptual and practical level” (Collins & Ison, 2006:2).

My assertion is that participation is about power and its distribution amongst those involved. ‘Citizen Power’ is one factor in Arnstein’s ladder of participation that is as valid in today’s context as it was 44 years ago. However, a further theoretical development is required to interrogate the effective distribution and sharing of power in ways that enable and trigger effectiveness, efficiency, justice and fairness in collective involvement and decision-making. Chambers (1994a: 2) proposes a “paradigm shift from things to people … and … a transfer of power from tops to bottoms [in participation such that it produces] people centred participation”.

This proposition resulted in the development of a participatory model known as “participatory rural appraisal which emphasises the concept of reversal of learning from top to bottom” (Chambers, 1994b: 1204). Kapoor (2002:102), on the other hand, thinks that Chambers puts too much emphasis on practice and argues that “the danger of fetishising practice is that it tends to posit a ‘pure’ practice that can proceed without bias or theoretical abstractions, independent of, and unfettered by, political concerns about justice and legitimacy”. I think there is a need to find balance between practice and theory to make public participation a philosophically conscious process.
2.2.4. Empirical Studies on Public Participation in South Africa

A couple of studies on public participation were conducted in South Africa between 2006 and 2008 by different organisations. The first study was conducted by the Center for the Study of Violence and Reconciliation [CSVR] in 2006 (Tadesse, Ameck, Christensen, Masiko, Matlhakola, Shilaho, & Smith, 2006:1). The second study that will be looked at is one that was conducted by the Human Sciences Research Council in 2007 (Buccus, Hempson, Hicks, & Piper, 2007:1). The third study examined is the one that was conducted by the Public Service Commission in 2008 (PSC, 2008:1).

The intention of engaging with these studies is to acknowledge their contribution in analysing the state of public participation in the country and also to reveal gaps that inform the need and significance of this study. In this section, a brief elaboration on the findings and conclusions of these studies is given.

Tadesse et al. (2006:15; 35) found that “lack of awareness” and “the state’s reluctance to engage civil society” thwarted public participation. Buccus et al. (2007:18) discovered that citizens view public participation as an act of being “used to legitimate decisions that have already been taken at higher (government) level”. In addition, the PSC (2008:18) found that “75% of government departments; both national and provincial did not have guidelines or policies on public participation”. Essentially, they all pointed to the fact that public participation remains an important element in service delivery, policy formulation and enhancing good governance in the country. Whilst noting such importance, they also make it clear that public participation requires improvements in terms of policy development and inclusion of communities in public decision-making. It appears that the challenge is an absence of a guiding framework for public participation.
In this study, the attempt is to demonstrate how a social capital theoretical model can be used as a viable framework for promoting public participation. The section below elaborates on social capital theory and its role in encouraging public participation.

2.3. The Role of Social Capital Theory in Public Participation

Social capital theory, made popular by Pierre Bourdieu and Robert Putnam, inter alia, asserts that the role of networks governed by norms of reciprocity and trust are pivotal for advancing social cohesion in society (Putnam, 2000:19). Bourdieu added to the concept the fact that these networks are based on exchange of resources, thereby resulting in relationships of inequality amongst those involved (Bourdieu, 1968:53). The difference between the theoretical stances of Bourdieu and Putnam is that Putnam places the idea of trust and reciprocity at the centre of these relationships whilst Bourdieu is interested in unequal exchanges of resources that result in social struggles amongst those involved.

In section 2.3.1, social capital theory is discussed based on these two theorists, comparing and contrasting their analyses and finding points of convergence between the two for the purpose of advancing social capital in society. In the discussion, Putnam’s stance is aligned to theories of functionalism, in which society is expected to function harmoniously as a whole (Block, 1975:171). Bourdieu’s idea is aligned to rational choice theories (Scott, 2000:3), social exchange theories, social movement theories (McCarthy & Zald, 1977:1218) and the Marxist theory of historical materialism (Lin, 1999:28) by pointing out similarities of thought between Bourdieu and those theories.

In section 2.3.2, a detailed elaboration of the different types of social capital is developed based on Putnam’s theory. This includes “bonding, bridging and linking social capital” (Sabatini, 2006:23).
The discussion here is focused on the different types of social capital and their strengths and limitations in building social cohesion. A link is made here with Bourdieu’s idea of social capital in relation to the idea of inequalities that arise in the formation of social capital in society (Daly & Silver, 2008:545).

In section 2.3.3, and 2.3.4, the concept of inequality is explored further by linking the concepts of trust and reciprocity to those of power (Bilgic 2013:8) and class (Ollman, 1968:573), as well as borrowing from feminist and historical materialism theories. The idea is to demonstrate that trust and reciprocity in social capital do not function only as naturalised cosmic concepts, as suggested by Neusner and Chilton (2008:732), but rather, they are socially constructed through a hyper-reflexive process of social agents as they seek to make sense of their reality in social collectives (Spivak, 1988:3).

The result is a conversion of trust into ‘critical trust’ and reciprocity to ‘critical reciprocity’ through consciousness. Lastly, in section 2.3.5, a case is made for why social capital theory should be accepted as relevant for building effective public participation processes in society. This is done through the invention of a social capital theoretical model to depict an ideal horizontally and vertically connected relationship between the different types of social capital, based on critical trust and critical reciprocity as the centre.

2.3.1 What is social capital?

Theorising social capital is not a new development in academic literature. The intellectual thinking first emerged in the work of Hanifan (1916:130) when he made reference to “good will, fellowship, sympathy and social intercourse as tangible forces that count for most in daily life”.

24
It may even be traced back as early as the 1800s from classical Marxist writings, including “Marx’s idea of class consciousness (Ollman, 1968:1-572-580), Lenin’s concept of the vanguard (Cliff, 1973:34-38) and Gramsci’s notion of ideological hegemony” (Gundogan, 2008:45-60). Various scholars have written widely about the idea of social capital, including Loury, 1977, Coleman, 1988, and Becker, 1996, amongst others. Whilst the concept may be worth retrospection, the scope of this thesis is limited to theoretical insights provided by Putnam (2000) and Bourdieu (1968), although comparisons are also made with other theories in academic literature related to collective action and networks.

Putnam (2000:19) presents social capital as “connections among individuals-social networks and the norms of reciprocity and trustworthiness that arise from them”. The idea of social capital here is presented as the actual actions of reciprocal exchanges amongst collectives of people who are connected by virtue of trusting one another. A group in Putnam’s definition can be two individuals, a family, an association, a political party and/or a government. Portes (2007:1), however, is persuaded that “the greatest theoretical promise of social capital lies at an individual level”. My sense is that the concept can be stretched far beyond individual relationships to include various forms of collectives in society, as listed above.

Nonetheless, the challenge with Putnam’s concept of social capital is that it places too much emphasis on trust and reciprocity without stressing other variables that are possible enablers or inhibitors of trust and reciprocity in society, such as power, inequality, class, gender, sexism, patriarchy and heterosexism, inter alia. There is an assumption that societal collectives are naturally ordered and can function cohesively by virtue of inherent trust and reciprocity. This view is similar to that of functionalist theory in which parts of a system are viewed as capable of functioning by virtue of being integrated with one another (Block, 1975:171).
Franklin (2007:12), likewise, indicates that the functionalist nature of Putnam’s social capital “undermines (the power) of conflict and contradictions that persist” in social collectives ensuing from capitalist developments over the years. As a result, Putnam’s theoretical version of social capital may be obsolete and irrelevant in the highly stratified capitalist societies of the modern world. Furthermore, the neoliberal economic theories of the 1970s produced “neoliberal (social relations) that favour strong individual private property rights, the rule of law, and the institutions of freely functioning markets and free trade” (Harvey, 2007:64).

In their study on aid dependency, Action Aid made a critical observation to consider for social capital theory: that “when services are funded in considerable part by aid, this undermines the normal relationship whereby citizens hold their own governments accountable for delivering services … this is because governments focus their attention on relations with aid donors rather than with their own people” (Cowan, 2011:18). This is what the most popular dependency theorist, Frank (1966:31), refers to as “development of underdevelopment”.

The point is that conditions for building social cohesion based on Putnam’s social capital theory have been weakened by radical shifts towards capitalist development since the 1950s. It is a huge developmental task to reorganise social conditions to favour social cohesion under the circumstances, but certainly not entirely impossible, as will be demonstrated through a social capital theoretical model for public participation in section 2.2.6. In the next section, I elaborate on Bourdieu’s concept of social capital compared to that of Putnam.

Bourdieu (1968:51) defines social capital as “an aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition”.

26
Unlike Putnam, Bourdieu’s idea of social capital is not the “networks” in themselves but rather the link that these networks can make with a set of resources available at hand. The assumption is that without “the actual availability of resources”, networks on their own do not constitute social capital. This is a view that can be linked with resource mobilisation theory, which asserts that “since social movements deliver collective goods, few individuals will on their own bear the costs of working to obtain them … it (therefore) is crucial to aggregate resources such as labour and money for collective purposes” (McCarthy & Zald, 1977:1218). It is this dialectical relationship between networks and resources that inform Bourdieu social capital theory.

In addition, Bourdieu (1968:54) makes a sophisticated distinction between economic, cultural and social capital, where he argues that “economic capital produces all other types of capital”, where capital is understood in Marxist terms to mean “surplus value captured by capitalists, the bourgeoisie, who control production means, in the circulation of commodities and monies between the production and consumption processes” (Lin, 1999:28). In other words, people’s labour, as a form of social capital, requires financial remuneration in the form of economic capital in order to be functional and existent. Putnam however, considers labour to be social capital in itself that can exist and function on a voluntary basis based on “mutual trust” between citizens (Siisiainen, 2000:2).

Bourdieu’s analysis suggests that social capital is subservient to economic capital. If capital is understood in Marxist terms, as mentioned above, then Bourdieu’s analysis of the causal interrelationship between economic and social capital resembles that of the bourgeoisie and the proletariat in Marxist theory of historical materialism, about which Shimp (2009:41) notes that “as economic forces develop, class struggles become more intense”.
It can also be framed as an asymmetrical relationship between the "centre” and the “periphery”, as defined by dependency theorists, whereby economic capital (aid, international relief, business sector funding) form the centre and social capital (labour, civic networks and associations) form the periphery (Tansey & Haymen, 1994: 28).

The essence of Bourdieu’s concept of social capital is that social relationships are stratified and embedded with inequalities and power dynamics that sometimes serve to sustain the very existence of such relationships through cultural and traditional beliefs, as described by Marxist social stratification theorists (Saunders, 1990:1). Daly and Silver (2008:545) agree that, unlike Putnam, “Bourdieu sees social networks as exclusive, often class-based, and is interested in social capital primarily for how social resources and 'distinctions’ lead to exchanges that are both reflective of and affect the constant struggle for domination” in society. Essentially, Putnam views social networks as cohesive by virtue of inherent trust and reciprocity, whilst Bourdieu perceives them as a site of struggle based on asymmetrical relationships of power and inequality.

Apart from Putnam and Bourdieu, other economists assert that the concept of social capital is “a misleading metaphor” because it is not “capital” in the true sense of the word; it only describes relationships between people, which are not capital (Haynes, 2009:4). Others claim the opposite – that the theoretical benefit of the concept of social capital is in its ability to unite social sciences (sociology, psychology and economics in particular) in ways that have not been possible in the history of social sciences in the past. As a result, it presents the potential to unite socio-economic forces like business, labour and civil society at community level.
Siisiainen (2000:16) thinks that Bourdieu tries to overcome the juxtaposition of “structuralism”, “phenomenologism”, “economism” and “semiologism” in his concept of social capital. My sense is that he successfully reveals the embedded socio-economic tension in the process of social capital formulation but does not necessarily attempt to resolve it. Nonetheless, based on the theories of Bourdieu and Putnam, social capital can be understood to mean social networks and the norms of reciprocity and trust that are connected to them combined with aggregate “tangible” and “intangible” resources at their disposal.

The categories of resources that are “tangible” include physical resources (financial, human and technical), whilst the “intangible” category includes metaphysical resources (spirituality, belief, passion, enthusiasm, commitment, creativity, and zeal). Figure 5 below summarises social capital.

*Figure 5. Social capital.*

A compelling argument presented in this thesis is that social capital requires both tangible and intangible resources in order to survive. The next theoretical provision offered by Putnam and Bourdieu is the distinction between types of capital.
Whilst Bourdieu (1968:54) has demonstrated the causal interrelationship between economic and social capital, Putnam focuses primarily on social capital and distinguishes the different types, namely, bonding, bridging and linking types (Dahal & Adhikari, 2008:4). Whilst it may be valuable to interrogate all capital types (e.g., economic and cultural) in Bourdieu’s analysis, the focus in this paper is on social capital. As a result, the next section covers the different types of social capital in detail.

2.3.2. Types of social capital

There are various interpretations of social capital types from different scholars. Sabatini (2006:23) explains the different types of social capital as “informal networks of strong family ties (bonding social capital), informal networks of weak bridging ties connecting friends and acquaintances (bridging social capital), formal networks connecting members of voluntary organizations and formal networks of activists in political parties (linking social capital)”. Woolcock and Sweetser (2002:26) and Granovetter (1973:1370) support this interpretation.

Putnam (2000:23) makes a similar distinction, where “bonding” is associated with horizontal connections from within groups with identical interests (families and friends), “bridging” connection is a horizontal collective of groups with heterogeneous interests (black, white, Christian, atheist etc.) and “linking” is a vertical collective of groups with different interests (business, labour, government). In the next section, identified social capital types will be elaborated on in detail.

2.3.2.1. Bonding social capital

The use of the term bonding in social theory can be traced back to the theory of bonding and social control in the 1960s from the intellectual work of a criminal sociologist, Travin Hirschi (1969:57).
Hirschi (1969:251-256) defines bonding as “attachment to, commitment to, involvement and belief in” individuals that a person is connected to. He speaks of bonding in psycho-social terms to be interrelated to internalisation of norms in society, meaning that people are able to attach to, commit to, involve with and believe in others, in so far as they are capable, to internalise norms that operate in such a collective (Hirschi, 1969:252). This rationale is deeply embedded in Putnam’s analysis of social capital, in which “norms of reciprocity” and the value of “trust” are essential in building social capital (Putnam, 2000:19). Bonding, in this instance, is essentially a derivative of existent shared norms and values and the inherent ability to uphold them. In view of this analysis, it is logical to conclude that bonding is a philosophically binding construct based on natural laws of existence. This is what Portes (2007:8) refers to as “bounded solidarity”.

Lollo (2012: 12) thinks that for bonding to occur, added to the normative aspect, there must be a sense of frequency and recognition of hierarchical relationships. She insists that “the perfect example of bonding social capital is found in family networks in which roles are defined, individuals feel that they share a common (normative) identity and they meet frequently, thus reinforcing the strength of expectations and obligations among them”. This confirms Bourdieu’s theory of social capital (Bourdieu, 1968:53).

Essentially, there is a dimension of time investment and conscious establishment and recognition of a hierarchy that is required for bonding social capital to develop and sustain, which Bourdieu (1968:58) refers to as “expenditure of time” and the “plenipotentiary”, charged with “plenapotentas agendi et loquendi”. Given its cosmic nature, bonding social capital is seen as risky by most economists.
Adler and Kwon (2009:22) argue that social bonds take time to “convert to economic capital”, and because they are “dependent on familial networks, they can easily dismantle by simple defection of key parties in the collective”. Coleman (1990:320) supports this critique when noting that “disruptions of social relations can be highly destructive to social capital”. Portes (2007:15) indicates as well that bonding social capital can act as a site of “exclusion, restriction to individual freedom and downward levelling of norms”, and thereby thwart possibilities for sustained bonding. Narayan (1999:5) adds that social capital has the ability to “explain social exclusion in that the same ties that bind can also exclude”. Again, the interplay between Putnam and Bourdieu’s analysis of social capital can be seen here.

Nevertheless, most scholars have found bonding social capital to be a useful theoretical tool to analyse and explain sustainable bonds within different homogeneous groups in society. (Brisson & Usher, 2005:644-653; Edward, Franklin & Holland, 2003:1-35; Dhakal & Lilith, 2011:1-11).

2.3.2.2. Bridging social capital

Sabatini (2006:23) defines bridging social capital as “informal networks of weak bridging ties connecting friends and acquaintances”. Woolcock and Sweetser (2002:26) speak of bridging social capital as bringing together of groups that are different from one another.

An ideal social capital bridge, in this instance, would be putting two differently bonded social capitals (e.g., networks of working and middle-class groups, gendered groups) into one form such that they open up to unfamiliar ways of connecting. Hence, bridging social capital is considered more fragile, “risky and contingent” than bonding social capital (Franklin, 2007:11).
It takes familial groups (bonded social capital) out of their comfort zone into more challenging and complex areas of solidarity and togetherness, often characterised by distinctions of class, gender, ethnic, and sexual-orientation hierarchies (Bourdieu, 1968:53).

The strength of bridging social capital lies in its ability to promote inclusivity of diverse groups and to access external resources often not present in bonding social capital. Bohn (2008:7) indicates that “any instance of differentiation and demarcation entails forms of inclusion and exclusion”. She (2008:7) further asserts that processes of inclusion and exclusion do not happen “accidentally or arbitrarily”; they are a product of consciously reasoned enforcement of norms and values intended to bridge the divide and incubate a culture of collectivity. Similarly, the formation of bridging social capital should be a conscious effort that entails deliberateness of working across the divide.

The problem with the concept of bridging social capital is that it takes time to build a sense of shared values and norms that enable people from diverse backgrounds to function as a collective. It is an “investment” whose benefit accrues over time (Bourdieu, 1968:53). In addition, it often requires a high degree of “trust and reciprocity” (discussed later in this chapter) to arrive at a place where bridging initiatives are functional, particularly where resources are involved (Bourdieu 1968:54; Putnam, 2000:24). Furthermore, in some instances, the “bridge” is a false theoretical construct that does not correspond with reality.

As a result, in a bridged collective, power lies with the strongest social groups, arranged along class, gender, sexual orientation and racial lines, amongst others. To keep the bridge intact is a volatile but possible task. It is an act of struggle metaphorically resembling a tug of war.
Nonetheless, “social capital's greatest merit” is in uniting divides within social sciences (economics, sociology, political science, psychology, theology) at the same time as it provides a theoretical base to do the same within social spaces, a task that “has been suppressed over the last one-hundred-and-fifty years” (Woolcock, 1998:188).

2.3.2.3. Linking social capital

Sabatini (2006:23) explains linking social capital as “formal networks connecting members of voluntary organizations and formal networks of activists in political parties”. This means that “linking social capital” can potentially include vertical relationships between government, labour, business and civil society or a mix of one or two of them. In the same way as bridging social capital, linking social capital is embedded with structural hierarchies of inequality, exclusion, class distinctions, gender polarities and sexual orientation disparities (Bourdieu, 1968:53).

The essence of “linking social capital” is organised collective effort between people’s collectives and structures of decision-making. Putnam’s intellectual work in Italy, where he studied the role of civic participation to advance democracy and good governance, demonstrates this idea (Putnam, Leornardi, & Nanetti, 1993:53). The main discovery in Putnam et al.’s study is that the development of “linking social capital” is not an arbitrary process; it is consciously planned (Bohn, 2008:7).

Social movement theorists generally disagree with such an approach; they assert, on the contrary, that “revolutions are not made by revolutionary theorists or by dedicated bands of revolutionaries, but rather they are the outcomes of complex interactions between social and political structural conditions” (Roots, 1990:2).
Linking social capital clearly offers a more organised version of relations between social and political structures than that presented by the social movement theory. The problem with linking social capital is that it can easily be manipulated by powerful forces within the collective in that binding ties like “trust and reciprocity” are far weaker in a vertical relationship than those found in bonding and bridging social capital (Granovetter, 1973:1373). This increases possibilities for vulnerabilities and inconsistencies within such collectives, particularly for the less powerful. Powerful, in this instance, is measured as a disjuncture between those who own the means and those who do not (Lin, 1999:28).

However, the challenges of power and inequalities in vertical alliances can be subverted by the role of “agency” within a collective (Bourdieu, 1968:54). Agency, in this context, is defined as “actions of individuals or groups, and their capacities to influence events” (Thomas & Allen, 2000:122). In the end, this is an act of struggle, not just based on trust and reciprocity but also on confrontation and conflict. Thus, linking social capital is embedded with all these dynamics and they act both as strengths and as weaknesses, depending on the

Figure 6: Types of social capital
Finally, it is crucial not to view bonding social capital as limited only to families and individuals. It can extend to identity-based groups that are not necessarily based on family lines. Bilgic (2013:8) asserts, for instance, that feminist collectives share “bounded solidarity” emanating from a sense of shared identity. As a result, most feminist collectives can be “exclusively” feminist, which confirms that “ties that bind can also exclude” (Narayan, 1999:5).

In view of the discussion above, it appears that the norms of reciprocity and the value of trust remain intrinsic for building and sustaining social capital in society (Putnam, 2000:19). Many scholars tend to support Putnam by indicating that the value of trust and reciprocity is paramount in building cohesive societies.

On the other hand, other researchers express serious concerns regarding reliance on “trust and reciprocity” as the exclusive essentials for social capital to exist. In the next section, the role of trust in social capital is explored.

### 2.4. The role of trust in social capital

Bourdieu wrote little on the role of trust in social capital; however, he comments on the interplay of social inequalities embedded in social capital. On the contrary, Putnam (2000:19) centres “trustworthiness” as a fundamental aspect of social capital. However, he also does not take the analysis of trust further than making it an endowment for social capital. Nonetheless, it is critical to analyse trust and locate it within collective social action from an understanding of trust as a powerful force for change, not just a given. If trust is seen in this way, it is then regarded as both a personal and political entity.
According to Kleinman (2007:2), “The personal is political captures the idea that matters we usually consider personal (emotional expression, relationships with intimate partners, division of household labour, child rearing, sex[uality] and gender) are shaped by systemic power relations”. Bearing that in mind, in this section, I will examine trust from the perspective of critical feminist theory, acknowledging Bourdieu’s (1968:53) analysis that social capital is not a neutral terrain. In this way, I will provide an argument that trust is important in social capital theory and can only be effective for social transformation if applied from a lens of critical feminist theory, that is, if converted to “critical trust”.

It is important to understand that ‘trust’ is essential for building and sustaining social capital in society, but because trust, once constructed, lives in people’s hearts, it is therefore personal and because it has influence in social relations, it is also political (Kleinman, 2007:2).

Bilgic (2013:10) is convinced that trust is a force that makes collective life possible; without it, “egocentrism marks relations between individuals in a collective”. Democratic theory suggests that democracies need trustful citizens. This is the case because, symbolically, governments and parliaments have to enjoy legitimacy between one election and the next but also because, pragmatically, mistrustful citizens tend to pay less tax (Della Porta, 2012:34). Given this scenario, the value of trust cannot be underestimated as a pre-requisite for social capital in society. It can build or destroy democracies.

Mollering (2001:404) defines trust as “a state of favourable expectation regarding other people’s actions and intentions”. Furthermore, trust is said to be “blind” (Giddens, 1990:33), thereby causing unquestioning acceptance of the status quo. My suspicion is that Putnam’s version of trust tends to lean towards this idea of trust.
Whilst there is no doubt that trust should form a fundamental aspect of social collectives, it is potentially dangerous to abandon its analysis, as set out in the work of Giddens (1990), and Putnam (2000). The one obvious danger is that the power of “social agency” disappears in this analysis, where agency is defined as “the power of individuals or groups to influence events” (Thomas & Allen, 2000:122). This is problematic.

On the contrary, feminist theory introduces the concept of “emotional liberation” (Flam & King, 2005:31). The idea behind the theory of emotional liberation is the opposite of Giddens’ idea that “trust is blind” – in fact, he said “all trust is blind” (1990:33). In the process of emotional liberation, trusting individuals are capable of “detaching themselves from old loyalties” and forging new trustworthy social bonds (Flam & King, 2005:31). In this way, trust is not seen as bound by social contract, as purported by Durkheim; it can be freed through the power of agency. Anheier and Kendall (2000:9) caution that “trust is fragile; once violated, [it] is difficult to re-establish”.

However, “trustworthiness” is always present but not static (Putnam, 2000:19). In the words of Stahl (2009:12), “Trust is a dynamic and continually changing property of human relationships”. It is made fluid by the process of “emotional liberation”. This poses both a challenge and an opportunity for social capital in that it may collapse under intense periods of struggle or revolution when agents undergo emotional liberation or it may reproduce itself as a powerful collective of critically trusting agents.

In addition, it is critical to place “trust” next to “power” and examine the interplay between them, the results of which are critical for social capital to exist and be sustained. Bilgic (2013:8) looks at different dimensions of power (power-to; power-over and power-with), where “power-with is defined as the kind of power that stems or emerges from collective
action”. Critical to add is a dimension of ‘power within’ which is the kind of power that resides ‘within’ each person. This is the kind of power that enables “agency”; thereby creating “power-with” in a collective. Grosz (2010:19) asserts that the aim of feminism is to “reorder power and not eliminate it, to focus on the [communal] use of power and its infinite capacity for transformation and not to dismantle it”.

Similar to the idea of power-with, “critical trust” is a collective effort. Where trust is seen as a “favourable expectation” (Mollering, 2001:404), critical trust is seen as a collective “belief that by protecting and promoting other’s interests, there is an expectation that others will act in a similar way” (Bilgic, 2013:10). The intersection of “belief” and “interest” demonstrates the equivalent interplay between trust and power-with, where “critical trust” is an effect. In this instance, belief and trust share a similar linguistic identity, in the same way as interest and power do.

Interest is defined as “a power aspect of something that attracts attention” and belief is defined as “acceptance by the mind that something is true or real, often underpinned by an emotional or spiritual sense of certainty” (Encarta Dictionary, 2013). A compelling argument here is that critical trust is what is needed in social capital. Figure 7 below demonstrates this interplay.

Figure 7: ‘Critical Trust’: Interplay between belief (trust) and interest (power with)
On another note, institutional and cultural theories of democracy tend to differ on the genesis and exodus of trust in democracy. Cultural theories view “trust as intergenerationally transmitted and deeply embedded in society, whereas institutional theories hold that trust is produced by the same influences that generate support for democratic regimes; it is a rational response to institutional performance” (Mishler & Rose, 2005:5).

The latter view partially resonates with feminist theory where trust is seen to be converted into “critical trust”, which can only emerge from the process of “power-with” (Bilgic, 2013:8), so it a derivative of collective action. The difference is that in feminist theory, this is not seen as “response to institutional performance”, as in theories of democracy; but rather as a reflexive and “conscious” thinking act of questioning institutional performance (Spivak, 1988:1-5), thereby making hierarchies of power visible within social collectives and “opening power up for (re)production of critical trust” (Grosz, 2010:19).

The problem with trust in social collectives is that some people generally do not like to be trusted; they find it “burdensome”, an act of violence and ‘manipulation’ and to some extent ‘coercive’ (Flores & Solomon, 1997: 69). This can have a negative effect on collective processes, as those who dislike being trusted tend to neglect the interests of the collective as an act of subversion, thereby offsetting the equilibrium in a collective. In addition, Hinman (1998:36) cautions that trust has a negative effect in collectives in that it easily promotes “nepotism” and “corruption”. The assumption is that the more people trust each other, the more likely they are to engage in illicit actions. Again, this can work in disfavour of collective actions.

Furthermore, the problem in centering “trust” in social process is that usually trust is understood as an “ethical” concept derived from cosmic forces of nature (Stahl, 2009:14).
As a result, it can be potentially divisive in religiously and/or spiritually heterogeneous collectives, mostly found in bridging and linking social capital. However, the idea of ‘critical trust’ as produced by ‘emotional liberation’ from feminist theory presents a viable mechanism for building a conscious, informed, engaged and critical base that is required for effective social capital to take off and be sustained.

Given the some theoretical disapproval of ‘trust’, as indicated above, it becomes clear that building social capital based on trust as a centre is a gigantic task, but not impossible. The limitation in Putnam’s analysis of social capital is that he places “trustworthiness” as fundamental to social capital but does not interrogate the potent nature of the concept and its potential to promote either social cohesion or social stratification (Putnam, 2000:19). Having looked at the value of trust in social capital in detail, the next section will proceed to elaborate on the norm of reciprocity and its usefulness for collective action and social capital in this instance in the next section.

2.5. The norm of reciprocity in social capital

Putman (2000:19) speaks about the necessity of reciprocity for the building of social capital. There are various intellectual interpretations of reciprocity in academic literature. A classic functionalist thinker, such as Gouldner (1959:70), describes reciprocity as a “social rule that maintains, among other things that people should return favours and other acts of kindness”. The challenge is that “modern social relationships seem too complex, too strongly institutionally or systemically mediated to be capable of being traced back to arrangements of reciprocity” (Adloff & Mau, 2013:95). This is caused by the fact that most ancient arrangements of reciprocity are based on ethical codes of tradition, religion and culture.
The principle of the “Golden Rule-love thy neighbour as God loves you and do unto others as I have done to you” found in most orthodox religions ‘(Judaism, Greek mythology and philosophy, Zoroastrianism, Christianity, Islam, Buddhism, Hinduism, and Confucianism)’ for, instance, tends to be interpreted as an act of unconditional reciprocity motivated by a reward from a cosmic force (Neusner & Chilton, 2008:732).

This presents a scenario where reciprocity can be perceived as an orthodox theoretical concept. Its use may be potentially divisive in social groups of diverse ethical backgrounds, and it can be obsolete in unorthodox social relations if understood in this way. Furthermore, there is an almost generalised sense that the practice of reciprocity has been part of human history since the beginning of time. Molm, Collett and Schaefer (2007:205) argue that “‘from the kinship structures of primitive peoples,..., to the vast sharing of software and information on the modern internet, systems of generalized exchange have always been a ubiquitous part of social life’.

In addition, there is an almost symbiotic theoretical analysis amongst scholars in relation to reciprocity and trust. Perhaps this is because trust and reciprocity have a bilateral relationship, characterised by similar traits and attributes, that is, “sharing, giving, expectation”, and so on (Mollering, 2001:404). Yet they are different. The explanation of the distinction may be that trust is purely an ‘expectation’, a psychological state of anticipation, whilst reciprocity is an ‘expectation met’, a physical action of returning a favour. Unfortunately, Putnam did not do justice to these concepts in his idea of social capital; he simply placed them as naturalised acts (Putnam, 2000:19), whereas, they are actually socially constructed.
Boghossian (1999:1) explains that:

“to say something is socially constructed is to emphasise its dependence on contingent aspects of our social selves. It is to say, this thing could not have existed had we not built it; and we need not have built it at all, at least not in its present form. Had we been a different kind of society, had we had different needs, values, or interests, we might well have built a different kind of thing, or built this one differently. The inevitable contrast is with a naturally existing object, something that exists independently of us and which we did not have a hand in shaping”.

This is the essence of social constructionism theory (Gergen, 2009), with which Putnam did not engage in his concepts of trust and reciprocity in social capital theory. Nonetheless, this thesis selectively addresses the concept of reciprocity as a social construct, albeit being conscious of prevalent naturalised theories related to it. The premise is based on social exchange theory and its interpretation of reciprocity as “whether (direct) – where two actors exchange resources with each other, or, (indirect) – where the recipient of the benefit does not return the benefit back to the giver but to another actor” (Molm, Collett, & Schaefer 2007:207). However, this relationship is interpreted as a “cost-benefit” arrangement based on competitive social systems that lead to differentiation of power and privilege within social collectives (Yakubovich, 2002, 4).

The assumption is that people are likely to participate in social exchanges that benefit their self-interest and needs in social collectives. This confirms Bourdieu’s analysis of social capital as a site of struggle, power and domination (Bourdieu, 1968:53). As a result, the practice of reciprocity becomes a highly politicised act based on profound unequal exchanges in society rather than on mere acts of “kindness”, as suggested by Gouldner (1959:70).
It becomes imperative therefore to assess the roles of power and class and determine how these affect reciprocity in social capital. To do this, one needs to return to Bourdieu’s (1968:53) analysis of social capital.

Laswell and Kaplan (1950:75), reminds us that ‘politics as a theoretical study is concerned with relations of (people) in association and competition, submission and control, in so far as they seek, not (only) the consumption of something, but to have their way with their fellows … what (people) seek in their political negotiations is power’.

This is as true today as it was in the 1950s. Mann (1986:1) traces the history of power in social relations back from AD1760 and concludes that “societies are organised power networks”. This again invokes the idea that matters usually considered “personal thereby political (emotional expression, relationships with intimate partners, division of household labour, child rearing, sex[uality] and gender) are shaped by systemic power relations” (Kleinman, 2007:2). What is true for private individuals is also true for public social relations in this instance.

In view of the above, acts of reciprocity in social capital become politicised and lifted from a perceived neutral naturalised state of kindness, as asserted by Gouldner (1959:70), to a state of “critical solidarity” based on shared consciousness, critical analysis and understanding of power relations in collectives. Therefore, it is critical to then place ‘reciprocity’ next to ‘power’ and examine the interplay between them, the results of which are critical for social capital to exist and be sustained. A return to Bilgic (2013:8) to look at different dimensions of power (power-to; power-over- and power-with), where “‘power-with’ is defined as the kind of power that stems or emerges from collective action” becomes necessary, as it was in the concept of trust described in 2.6.3.
The dimension of ‘power within’ needs to be added, that is the kind of power that resides ‘within’ each of us. This is the kind of power that enables ‘agency’ and thereby creates ‘power-with’ in a collective. The next aspect to consider is the relationship between\textit{reciprocity} and \textit{class} and its importance in social capital. The concept of class was first popularised by the work of Karl Marx, in the \textit{Das Kapital} in 1867, who analysed it as being an important feature of capitalist societies where only two classes exist, the “bourgeoisie”-capitalist and the “proletariat”- the labourer (Ollman, 1968:573).

Although Marx limited the concept to economic relations of production, it has evolved over time to encompass different meanings and interpretations of class beyond the binary of the “bourgeoisie and the proletariat” to include the “\textit{petit bourgeoisie}” and other forms of class differentiations across centuries. Wright (2003:2) depicts this evolution by presenting social class as “(1) subjective location, (2) objective position within distributions, (3) the relational explanation of economic life chance, (4) a dimension of historical variation in systems of inequality, and (5) a foundation of economic oppression and exploitation”

As indicated in Bourdieus’s (1968:53) analysis of social capital, where there is an exchange of resources in social relations, “class struggles” exist. Therefore, the ability to reciprocate in social capital, particularly in the bridging and linking types of social capital, will be determined by the prevalence of class-consciousness within social networks. People within social groups have a tendency to “subjectively locate and rank themselves and others” within a shared sense of attributes, whether based on religion, ethnicity, gender, sexuality, occupation, income, or race, thereby constructing a class structure (Wright. 2003:1).
This level of consciousness requires attention in social capital as it determines the levels and nature of reciprocity prevalent within social networks. A compelling argument here is that the interplay between power and class-consciousness and reciprocity in social groups results in critical reciprocity in the same way as it produces critical trust. Figure 8 below demonstrates that interplay.

Figure 8: 'Critical Reciprocity': Interplay between power, class consciousness and reciprocity

In the end, the concepts of critical reciprocity and critical trust form a foundation for the development and sustainability of social capital in society.

In the next section, a social capital theoretical model for public participation is developed, based on critical trust and reciprocity as its centre. The idea is to demonstrate the role that can be played by social capital in public participation.
2.6. A social capital theoretical model for public participation

In order to link public participation to the concept of social capital, it becomes vital that the concepts of critical trust and critical reciprocity, as described above, play a central role in social and political relationships in society. This is displayed through the model presented in Figure 9 below.

Figure 9: Social capital theoretical model for public participation

The model above displays an ideal social capital scenario to enhance public participation in society. The model depicts social cohesion that may result from investing in critical trust and critical reciprocity building as a starting point.
This means investing in collective consciousness raising and shared analysis of power and class differentiations embedded in social relationships as a fundamental base (Bourdieu, 1968:53; Kleinman, 2007:2; Ollman, 1968:573; Wright, 2003:1), not just on “naturalised acts of kindness, based on anticipated rewards from cosmic forces” (Neusner & Chilton, 2008:732). The result of such an investment is a kind of trust and reciprocity that is collectively constructed based on critical reflections and analysis of group dynamics, such as power and class differences. It is through such shared consciousness that a process of ‘conversion’ can occur resulting in critical trust and critical reciprocity within networks. This theory can apply to both state and non-state networks as illustrated in the model.

Why, one may ask, is the link between social capital and public participation needed? There are a couple of reasons. First, the popularity of the concept of social capital in social theory stems from an empirical study of civic participation conducted in Italy (Putnam, Leornardi, & Nanetti 1993:53). Although the concept was used far earlier than that in social sciences (Cliff, 1973:34-38; Gundogan, 2008:45-60; Hanifan, 1916:130; Ollman, 1968:1-572-580), it was through the study in Italy that it gained popularity, interest and relevance to the role of social networks in social relations. For this reason, it is relevant to apply and test it in public participation processes.

Second, the nature of public participation demands that social processes are organised in the form of networks to enhance broad-based decision-making, involvement and social inclusion in democratic societies. In South Africa, for instance, ‘post 1994 legislative frameworks provided a space for the proliferation of community based organizations and created a platform for public participation in local governance through legitimate bodies that exist in the communities such as political parties, cultural groups, civic forums, business, youth organization, women’s organizations, and NGOs’. (Nyalunga, 2006:4)
The theory of social capital as embedded in the role of social networks becomes central to analysing and enhancing broad-based public participation of such community structures and formations in society. It makes logical sense to draw on the strength of social networks to strengthen democracy and good governance; after all, democracy is defined as “government of the people by the people” (Becker & Raveloson, 2008).

Third, social capital theory presents the ability to openly confront issues of trust and reciprocity critically in addressing power and class dynamics common in social networks (Bourdieu, 1968:53; Putnam, 2000:19). As a result, it lays the foundation for informed, conscious, deliberate and honest participation. It is said that citizen involvement in the local community and its voluntary activities teaches the “habits of the heart” (Bellah, Madsen, Sullivan, Swindler, & Tipton, 1985: 23) and of social behaviour—trust, reciprocity, solidarity, and cooperation (Newton, 2001:2002). Social capital theory does exactly that, it invokes both the heart and mind in political processes, a unique presentation of emotional analysis in public and political matters, often missed in most positivist social theories that usually relegate it to the private sphere, is what is appreciated in social capital theory.

In addition, the “high levels of corruption” (Tiscornia 2010:2) observed in public governance and social networks warrants a theory brave enough to confront ethical dilemmas faced by most democracies globally. Treisman (1998:3-10) cites “lack of trust in the political system” as one of the possible causes of corruption.

Perhaps when the question of trust becomes confronted and addressed in social relations, as anticipated by social capital theory, there will be redress of currently observed social problems in democratic societies.
2.7. Conceptualisation of Variables

Babbie and Mouton (2001:111) define the term *conceptualisation* as “the process through which we specify what we will mean when we use particular terms; … (noting that sometimes day to day communication) … occurs through … vague … agreements about the use of terms”. In view of this, the terms *public participation* (dependant variable), *trust*, *reciprocity*, *power*, and *class* (independent variables), as employed in this study, are defined to avoid vagueness and confusion in their application throughout. International Association for Public Participation [IAP] (2007:1) defines public participation as “based on the belief that those who are affected by a decision have a right to be involved in the decision-making process”.

The concept that is of interest to form indicators for this study, in this definition, is that of “the right to be involved in decision making”. On the other hand, Gouldner (1959:70) describes reciprocity as a “social rule that maintains, among other things that people should return favours and other acts of kindness”. My assertion is that when these acts are based on a sense of shared consciousness of power and class within social groups; they can be considered ‘critical reciprocity’.

Similarly, where trust is defined as “a state of favourable expectation regarding other people’s actions and intentions”” (Mollering, 2001:404), it converts into ‘critical trust’ once such an expectation is based on a shared sense of power and class consciousness. The concepts that are of interest in this study are that of *favourable expectation* in trust and *return of favour* in reciprocity.
In addition, the concept of class is defined as “social categories sharing subjectively-salient attributes used by people to rank those categories within a system of economic and (social) stratification” (Wright, 2003:1). Lastly, power is defined as “the ability to influence and control social and (economic) activities” (Islam, 2008:1-2).

2.8. Operationalisation of Variables

In the end, the concepts identified above have various dimensions to them, but in this study, I chose dimensions that are relevant and applicable to it, as indicated by Babbie and Mouton (2001:113). The definition of participation above, for instance, has two attributes to it, namely, “involvement”, and “decision making” (IAP, 2007:1). For this study, I was interested in both and used them as indicators to measure public participation. In addition, the attribute that will be used as an indicator of trust is favourable expectation, and for reciprocity, it is return of favour. These were the indicators used to measure trust and reciprocity. In relation to class, the indicators used were the social categories people use to rank themselves socially when relating to others, such as levels of income and education, for instance. An indicator of power for this study is the level of influence in decision-making.

2.8. Conclusion

In this chapter, it is demonstrated that African traditional medicine theory tells us that ‘disease is a supernatural phenomenon that results when there is disharmony (or imbalance) between ancestral spirits, the living person, animals, plants and other objects’. The analysis further entails that ‘ingredients from animals and plants combined with ancestral spirits can heal a sick person, and therefore have medicinal properties’ Kale (1995:1182). Secondly, we discussed participation theory and presented three different types of participation including ‘passive participation, tokenism and citizens control’ (Cornwall, 2008: 270) with the latter
being viewed as an ideal state of active participation where citizens have full control in the participation process.

In addition, Penderis (2012: 5) argues that ‘it is becoming increasingly clear that engaging, consulting and involving local people rarely results in anticipated goals of empowerment and transformation’ confirming the need to focus on the type of participation that fosters citizen power and control. Furthermore, there seems to be a challenge of fostering a culture of public participation in South Africa emanating from an absence of a guiding national framework for public participation. The PSC (2008:18) found that ‘75% of government departments; both national and provincial did not have guidelines or policies on public participation’. A public participation model based on social capital theory was presented as a viable option to consider in the development of a public participation framework.

The model depicts social cohesion that may result from investing in critical trust and critical reciprocity building as a fundamental base and starting point towards building stronger collectives. This means investing in collective consciousness raising and shared analysis of power and class differentiations embedded in social relationships as a fundamental base (Wright. 2003:1; Bourdieu, 1968:53; Ollman, 1968:573; Kleinman, 2007:2), not just on naturalised acts of kindness based on anticipated rewards from cosmic forces as insinuated by Neusner & Chilton (2008:732). The result of such an investment is a kind of trust and reciprocity that is collectively constructed based on critical reflections and analysis of group dynamics such as power and class differences.
CHAPTER 3: THE RESEARCH DESIGN AND METHODOLOGY

3.1. Introduction

In this chapter, the research design and the methodology employed to collect data are outlined and the method of data collection and analysis described. Limitations and ethical considerations for the study are also discussed.

3.2. Research Design

Research design is often referred to as a “plan and blueprint that guides the implementation of a research project” (Chilisa, 2012: 133). Other scholars refer to it as “a map that provides direction to the path a research project is intended to follow” (Malinga, 2011: 67). It essentially gives structure, form and a logical flow to the research process.

3.2. Research Methodology

The study employed a quantitative methodology. The rationale for selecting a quantitative method is that the study was primarily looking for quantities of ATMs involved in the regulation of traditional medicines. Moreover, due to the fact that the study used a non-probability purposive sampling, which permits the selection of a sample from the population based on the “researcher’s judgment and purpose of the study” (Babbie & Mouton, 2001: 166), the use of a structured questionnaire was a deliberate attempt to minimise subjectivity in the research process. The following section gives an indication of research tools that were used to collect data.
3.2.1. Self-administered questionnaire

Babbie and Mouton (2001, 233) indicate that a “self-administered questionnaire is a written compilation of questions by a researcher administered to respondents for self-completion”. A self-administered questionnaire (see Annexures A and B) was used for this research as a data collection tool. The questionnaire is structured in themes, followed by a set of questions under each theme to guide respondents to respond effectively.

There are four themes identified for this study, namely: (1) biographical data, (2) public participation, (3) the role of trust and reciprocity in public participation, and (4) the role of class status and power in public participation.

3.2.2. Sampling

The study used non-probability purposive sampling, which permits the selection of a sample from the population based on the “researcher’s judgment and purpose of the study” (Babbie & Mouton, 2001:166). This is to recognise the fact that the researcher is known to the study population and this, as a result, facilitates making judgements on sample selection. However, the use of a structured questionnaire is a deliberate attempt to minimise subjectivity in the research process.

3.3. Data Analysis Methods

The survey data was analysed with STATA, “a full-featured statistical programme for Windows, Macintosh and Unix computers” (Hamilton, 2009:1) designed to analyse quantitative data statistically. Yang (2010:7) indicates that “statistics is a tool for discovering meaningful information from a large amount of numeric data. It is most useful for obtaining concise and precise information about a large number of cases”. STATA assists in
determining, from the data set, whether a positive or negative correlation between dependent and independent variables exists.

3.4. Limitation of the study

The limitation of the study is that it relies on quantitative methods, which do not always provide detailed narratives of the responses given, thereby missing important nuances and motives for responses.

3.5. Ethical statement

The practice of social research can be a very sensitive and complicated engagement for both the people who are being researched and for the person conducting research. Babbie and Mouton (2001:521) note that “it often, though not always, represents an intrusion into people’s lives”. Social research often involves divulging of people’s personal experiences, which constitute the fundamental aspects of people’s livelihoods and identities. Denzin & Lincoln (2008:463) assert that it needs a model that “aligns the ethics of research with a politics of the oppressed and fosters accountability, caring and empathy”.

General ethics guidelines were given due respect to avoid causing any harm to those parties involved in the process. Research participants took part in the study voluntarily and without any coercion. The researcher sought the consent of the participants before disclosing or revealing any confidential information. Participants were therefore informed about the nature, duration and purpose of the study. They were also informed about their rights to withdraw at any time. Informed consent was obtained as well as informed decisions. During the process of data collection and information gathering, all the parties involved were informed about the purpose of the study and anonymity and confidentiality were ensured.
In view of the above, an informed consent form for participants/institutions was developed for this study (see Annexure C). In addition, an information sheet was designed to give to participants should they have a need to contact the researcher for any inquiries regarding the study after the data collection process (see Annexure D).

3.5 Conclusion

In conclusion, a quantitative research methodology and analysis were used in this study. A self-administered questionnaire was created as a data collection tool and a consent form, to ensure ethical considerations, was distributed to all participants. The limitation of the study was identified as the lack of detailed narratives for responses given because of the quantitative approach used. The next chapter presents data and analysis of the findings.
CHAPTER 4: PRESENTATION OF RESULTS AND ANALYSIS

4.1. Introduction

In this chapter, data collected from participants is presented and analysed. The information presented in this data was self-reported. The presentation begins with an outline of demographic data to give a sense of who participated in the study. It proceeds to indicate the levels of participation, trust, reciprocity and power discovered amongst ATHPs. This is followed by a regression analysis to determine the correlation between public participation, trust, reciprocity, class and power. The determination of class status is made through the analysis of income and education variables.

4.2. Data Presentation

4.2.1. Demographic data

Table 1 below demonstrates that the study sample was comprised of 75 respondents from the villages of Thokoza, Thembalethu, Vezubuhle and Kwaggafontein. The majority were female at 67% and youth at 32%. The level of unemployment was very high. It stood at 96%, and the few of those who were employed earned just above the minimum wage of between R3, 000 and R5, 000 a month. The level of education was very low as about 60% of respondents had no formal education and only 4% had obtained post-Grade 12 education.
Table 1. Demographic Data

<table>
<thead>
<tr>
<th>Gender</th>
<th>No</th>
<th>%</th>
<th>Age</th>
<th>No</th>
<th>%</th>
<th>Income per month</th>
<th>Education</th>
<th>No</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>50</td>
<td>67%</td>
<td>15-35</td>
<td>24</td>
<td>32%</td>
<td>R500.00 - R1,000.00</td>
<td>Less than grade 12</td>
<td>23</td>
<td>31%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>36-45</td>
<td>22</td>
<td>29%</td>
<td>R1,000.00 - R3000.00</td>
<td>Grade 12</td>
<td>4</td>
<td>5%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>46-60</td>
<td>21</td>
<td>28%</td>
<td>R3,000.00 - R5,000.00</td>
<td>Post-grade 12</td>
<td>3</td>
<td>4%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Above</td>
<td>8</td>
<td>11%</td>
<td>Unemployed</td>
<td>No education</td>
<td>45</td>
<td>60%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>75</td>
<td>100%</td>
</tr>
</tbody>
</table>

Male 25 33% 75

Total: 75 100%

4.2.2. Level of public participation by ATHPs in the regulation of African traditional medicines

The level of participation was measured through two indicators, namely, involvement and decision-making. In figure 10 below, public participation results indicate that 16% of ATHPs are actively involved in the regulation of ATMs in Mpumalanga and about 19% have direct influence in decision making in the regulation process. However, a high rate of 67% of ATHPs are not active, of which 44% were engaged with the process at a very low level and 23% did not know anything about the regulation of African traditional medicines in the country.
Figure 10. The level of public participation amongst ATHPs.

**public involvement**
- High: 67%
- Moderate: 16%
- Low: 17%
- Don’t know about the regulation of ATMs: 44%

**decision making**
- Low: 41%
- Moderate: 15%
- High: 19%
- Don’t know about the regulation of ATMs: 25%
4.2.3. **Trust and reciprocity indicators**

The results for trust measured the level in which ATHPs believe that the regulation of African traditional medicines by government is of benefit to their traditional practices or not. Reciprocity, on the other hand, assessed ATHPs willingness to attend government meetings and other related public processes that are about the regulation of traditional medicines should they be invited to do so.

The findings displayed in figure 11 below show that 91% of ATHPs in Mpumalanga trust government’s regulation of African traditional medicines, whilst about 7% were not sure whether to trust the regulation process or not. An overwhelming 100% indicated that they would be willing to engage with public processes that promote the regulation of African traditional medicines and the traditional health practice in general.

**Figure 11: The level of trust and reciprocity**
4.2.4. Level of power consciousness amongst ATHPs

The power variable was concerned with measuring the ability of ATHPs to influence and control social processes, in this instance, decisions regarding the regulation of traditional medicines. The results in figure 12 below show that 36% of respondents indicated low belief in their ability to influence decisions in the regulation of traditional medicines. Some of the reasons given included the fact that the government always does what they want to do regardless of what citizens think or say. On the other hand, about 57% believed that they have the power to influence decisions made by government in the regulation of traditional medicines in the country. The 57% majority cited their constitutional right to know and be involved about and in government legislative processes that have a direct impact on their lives.

Figure 12: The level of power consciousness amongst ATHPs
4.3. Data Analysis

This section provides an analysis of data presented above, using a linear regression model to determine the correlation between dependent and independent variables. The purpose was to determine how levels of public participation (public involvement and public decision making) are influenced by trust in government, willingness by ATHPs to respond to and engage in government regulation processes, levels of income, education and the power of ATHPs. The interest in this case is the statistical significance of the influence of class, power, trust and reciprocity in public participation. This is represented by the $P>|t|$ value in the regression analysis. Also of interest was to find out how much of the variation in the independent variables explains the changes in the dependent variable. This is displayed as an (R-square value) in the regression.

4.3.1. Classical linear regression analysis

In analysing collected data, a classical regression model was used, where: $Y = a + bK + cX + dL + \mu$, where $a$ is the intercept of the model, $b$, $c$, and $d$ represent regression coefficients, and $\mu$ is the random error term.

However, the focus of the study was on the public participation regression coefficient ($c$), whose value gives the effect of public participation in the regulation of African traditional medicines in South Africa.
Figure 13: Linear regression analysis - involvement, income, education, age, gender, trust and reciprocity

```plaintext
.regress involvement income education age gender trust reciprocity power
note: reciprocity omitted because of collinearity

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>17.9672247</td>
<td>6</td>
<td>2.99453746</td>
</tr>
<tr>
<td>Residual</td>
<td>54.6994419</td>
<td>68</td>
<td>.804403558</td>
</tr>
<tr>
<td>Total</td>
<td>72.6666667</td>
<td>74</td>
<td>.981981982</td>
</tr>
</tbody>
</table>

Number of obs = 75
F( 6, 68) = 3.72
Prob > F = 0.0029
R-squared = 0.2473
Adj R-squared = 0.1808
Root MSE = .89689

| involvement | Coef. | Std. Err. | t     | P>|t| | [95% Conf. Interval] |
|-------------|-------|-----------|-------|------|-----------------------|
| income      | .6927712 | .1922682 | 3.60  | 0.001 | .3091061 - 1.076436  |
| education   | -.1266826 | .0924104 | -1.37 | 0.175 | -.3110847 - .0577195 |
| age         | -.1469936 | .1058584 | -1.39 | 0.169 | -.3582308 - .0642435 |
| gender      | .2015958  | .2349617  | 0.86  | 0.394 | -.267263 - .6704546  |
| trust       | -.0578377  | .1380545  | -0.42 | 0.677 | -.3333212 - .2176459 |
| reciprocity | 0 (omitted) |          |       |       |                       |
| power       | .3580614  | .1350112  | 2.65  | 0.010 | .0886508 - .627472   |
| _cons       | -.7923628 | 1.036778  | -0.76 | 0.447 | -2.861221 - 1.276495 |
```

4.3.1.1. Lack of income reduces levels of public participation

The regression analysis above (figure 13) shows a strong positive correlation between involvement and income and that this relationship is confirmed to be significant statistically. This is demonstrated by the P>|t| value of 0.001. In research statistics, once a P>|t| value is less than 0.005, it is accepted that its results are significant and reliable. On the other hand, a P>|t| value that goes beyond 0.005 is concluded to be of no significance to the variation that occurs between the dependent and independent variables. This means that if the value of X (independent variable) decreases by one unit, the value of Y (dependent variable) will decrease by the value of the coefficient of X.
In the regression above (figure 13), the coefficient of variable X (income) is 6927712 and determines the variation in which variable Y (involvement) will decrease when the value of X decreases by one unit. The results of this study, for instance, revealed that about 96% of respondents were unemployed, meaning that they did not receive an income. According to the regression analysis, the more ATHPs do not receive an income, the more the level of public involvement in the regulation of traditional medicines will reduce. The regression confirms a strong relationship between having an income and being able to participate and become involved in public processes.

The R-square value indicates that only 24% of the variation between involvement and income is explained by the regression model above. There is a significant gap of information, standing at 76%, that is needed to explain the low levels of involvement amongst African traditional health practitioners, other than having an income. However, one can conclude, based on the model above, that income plays a very significant role in facilitating public involvement amongst citizens.

**4.3.1.2. Income inequalities result in a class structure that inhibits participation for people without an income**

Inevitably, those who have income are more likely to have access to public processes than those who do not, thereby creating a class structure within communities, giving power to those with income and relegating those without to a state of marginalisation. Returning to the link between reciprocity and class in social capital, Wright (2003:2) presents social class as “(1) subjective location, (2) objective position within distributions, (3) the relational explanation of economic life chance, (4) a dimension of historical variation in systems of inequality, and (5) a foundation of economic oppression and exploitation”.

64
As indicated in Bourdieu’s (1968:53) analysis of social capital, where there is an exchange of resources in social relations, “class struggles” exist.

Therefore, the ability to reciprocate in social capital, particularly in ‘bridging and linking’, types of social capital will be determined by the prevalence of class-consciousness within social networks. People within social groups have a tendency to “subjectively locate and rank themselves and others” within a shared sense of attributes, whether based on religion, ethnicity, gender, sexuality, occupation, income or race, thereby constructing a class structure (Wright. 2003:1).

This level of consciousness requires attention in social capital as it determines the levels and nature of reciprocity prevalent within social networks. In the context of regulation of traditional medicines, it is pivotal that government becomes conscious of the need to address the financial resource gap amongst African traditional health practitioners in order to enhance increased public participation. Interestingly, other independent variables in the regression model like age, gender, power, trust and reciprocity did not show any statistical significance in relation to public involvement when measured together.

4.3.1.3. Trust and reciprocity do not automatically ensure active participation, they require ‘conversion’ to critical consciousness

The level of trust and reciprocity in government by ATHPs for instance stood at 91% and 100% respectively, however, that does not seem to facilitate public involvement amongst ATHPs, and instead the opposite seems to be true. The high levels of reciprocity demonstrated by ATHPs indicate that they are willing to engage in public processes if invited and enabled to do so.
However, it is not clear from the results of this study why such willingness and trust does not facilitate active involvement. My assertion is that trust and reciprocity require a process of conversion in order to effect collective action. Such a conversion begins with collective analysis of various differentiations within a social network, including class, gender, sexuality, power and many others forms of inequality. In the context of this study, the focus was on testing a public participation model that indicated that by investing in critical-trust and critical-reciprocity building as a starting point, active social capital will result.

This means investing in collective consciousness raising and shared analysis of power and class differentiations embedded in social relationships as a fundamental base (Wright, 2003:1; Bourdieu, 1968:53; Ollman, 1968:573; Kleinman, 2007:2), not just on naturalised acts of kindness based on anticipated rewards from cosmic forces, as suggested by Neusner and Chilton (2008:732). The result of such an investment is a kind of trust and reciprocity that is collectively constructed, based on critical reflections and analysis of group dynamics such as power and class differences and the ability to create, deliberately, an environment that responds to various needs that are presented by differentiations in a network.
4.3.1.4. ATHP’s level of power consciousness determines whether they are actively or passively involved in public decisions.

However, Figure 14 above shows that when income, education and power are combined as independent variables against involvement to measure the relationship of class and power in involvement, income and power acquire a statistical significance of P>|t| 0.001 and 0.004 respectively. A strong positive correlation between involvement, income and power emerges. Power in the context of this study was defined as “the ability to influence and control social and (economic) activities” (Islam, 2008:1-2). Similarly, this means that when ATHP’s power (independent variable) decreases by one unit, the value of Y (dependent variable) will decrease by the coefficient of variable X (power), which is 3824048 in the regression model above.
Again, it can be seen here that only 21% of the variation between the dependent and independent variables is explained by this model. There is a need for further interrogation on other factors that may be responsible for low levels of public participation amongst African traditional health practitioners. Nevertheless, based on the regression model above, one can conclude that power, as an independent variable, plays a significant role in determining the levels of participation. The results above revealed that 36% of respondents do not believe that they have the power to influence decisions in the regulation of traditional medicines. The regression model used in this study suggests that if this percentage can increase, the levels of involvement will also continue to drop amongst traditional health practitioners by 3824048 units.

4.3.1.5. Confirmed hypotheses: Based on the results and analysis above, the three alternative hypotheses (3 and 4) of this study are accepted:

**H13** (Alternative hypothesis 3): ATHPs are willing and eager to respond to and engage in government’s invitations to public processes in the regulation of ATMs but they do not have the financial resources and sufficient education required to attend and engage in public meetings and thereby undermine their own ability to engage at government level. The equation here is that if X (class) exists, an observable change in Y (public participation) occurs.

**H14** (Alternative hypothesis 4): ATHPs do not believe that they have the power to influence decision making in the regulation of ATMs because government will do what they want regardless of what people think or say. The equation here is that if X (power) exists, an observable change in Y (public participation) occurs.

The rationale for accepting the above hypotheses is strengthened by the statistical significance of $P>|t| < 0.001$ in income and 0.004 in power.
The results on the role of trust in social capital (public participation) require further investigation since they did not demonstrate any significance statistically in this study. Further interrogation of the link between high levels of trust and willingness to engage with government and the low levels of participation on the other hand is also essential. Such an interrogation needs to make direct links to the critical role of power and class in trust and reciprocity and test what happens when citizen’s trust and reciprocity is conscientised. This means that the investigation must be focused on testing why citizens trust so naturally without questioning things and why they are quite willing to support government even when government demonstrates very little interest in and commitment to engaging with them.

4.4. Conclusion

In total, 75 respondents were interviewed in this study. The majority were female at 67% and youth at 32%. The level of unemployment was very high and most people did not have formal education. The rate of unemployment was at 96% and about 60% had no formal education. The overwhelming majority of ATHPs (100%) demonstrated willingness to engage with the regulation of traditional medicines if invited and enabled to do so and most of them trust that the regulation process will be of benefit to their traditional practice. However, only 16% are currently engaged with the regulation process, and about 67% are not active, of which 44% indicated very low involvement and 23% did not know anything about the regulation of traditional medicines in the country.

The regression model used in analysis revealed that one of the reasons for lack of participation amongst traditional health practitioners was lack of income. As much as ATHPs were very willing to engage, they did not have the financial means to do so.
Secondly, the analysis revealed that ATHPs are not involved in the regulation process because they do not believe that they have the power to influence decisions made by the government since government has a tendency to do what they want regardless of what people say or think. Contrary to what Putman suggests in his theory of social capital, the fact that participants demonstrated high levels of trust and reciprocity in government did not translate to active social capital for the regulation process; instead the opposite was true. The regression analysis revealed no statistical significance for the role of trust and reciprocity in public participation.
CHAPTER 5: DISCUSSION AND RECOMMENDATIONS

5.1. Introduction

This chapter provides recommendations for policy and strategies that can improve public participation in the regulation of ATMs in South Africa, based on the outcomes of this study. As a starting point, a link to the social capital theoretical model presented in Chapter 2 above will be made with the results of this study and discussed to inform the recommendations made. A set of recommendations will then be presented, followed by a conclusion.

5.2. The link between social capital theoretical model for public participation and results of this study

5.2.1. Politicisation of trust and reciprocity in public participation

The first link to identify is that trust and reciprocity do not seem to play a significant role in social capital (Putnam, 2000:19), in this particular instance, linking social capital (Sabatini 2006:23; Woolcock, 2001:23; Mayoux, 2001: 108). In this study, it seems to have played a negative role in that people have decided to disengage from public processes on the basis of trust placed on the democratic government. The high level of trust in government demonstrated in this study subverts people’s willingness and eagerness to engage with public processes actively. As a result, the variables of ‘natural’ trust and reciprocity as understood by Patnum become insignificant in ensuring that active participation occurs amongst citizens in the South African context. The observed demand therefore is a need for government to play a more active role in ensuring that people inform public decisions and engage in public processes, albeit, they have high levels of trust in the democratic state to represent their interests.
In addition, my analysis of the findings on trust and reciprocity is that ATHPs seem to not engage with aspects of power that is embedded in public governance, especially when it comes to public decision making on the regulation of ATMs in South Africa. It is important to understand that ‘trust’ is essential for building and sustaining social capital in society, but because trust, once constructed, lives in people’s hearts, it is therefore personal and because it has influence in social relations, it is also political (Kleinman, 2007:2). In my mind political (critical) trust must be able to question, challenge and actively engage those who are placed in public power and trusted to deliver.

This means investing in collective consciousness raising and shared analysis of power and class differentiations embedded in social relationships as a fundamental base for trust and reciprocity in democratic processes (Wright, 2003:1; Bourdieu, 1968:53; Ollman, 1968:573; Kleinman, 2007:2), not just on naturalised acts of kindness based on anticipated rewards from cosmic forces, as suggested by Neusner and Chilton (2008:732). This must entail active politicisation of citizen’s trust and reciprocity.

5.2.2. Class status can be an inhibiting factor in public participation

Secondly, the argument that was presented by Bourdieu (1968:54) that ‘economic capital produces all other types of capital’ where capital is understood in Marxist terms to mean ‘surplus value captured by capitalists, the bourgeoisie, who control production means, in the circulation of commodities and monies between the production and consumption processes’ (Lin, 1999:28), was confirmed in this study. In other words, people’s labour as a form of social capital requires financial remuneration in a form of economic capital in order to be functional and existent. So, the fact that 96% of the study sample were unemployed and 60% had no formal education, is something that requires governments attention in the context of improving public participation amongst ATHPs in the regulation process. It is vital that the
state allocates sufficient resources to ensure that citizens participate equally and effectively in public processes, particular in rural and other spatially isolated areas in the country.

The rationale is that people within social groups have a tendency to “subjectively locate and rank themselves and others” within a shared sense of attributes, whether based on religion, ethnicity, gender, sexuality, occupation, income or race, thereby constructing a class structure (Wright. 2003:1). The extent to which people engage in collective social processes is dependent on the class structure that they find themselves in society. The results of this study clearly tell us that the lower the class status (unemployed at 96% and illiterate at 60%), the higher the likelihood of public disengagement (44% - low and 23% did not know about the regulation process), even though trust in government (91%) and willingness to participate (100%) was high in the context of this study.

In view of the above, my assertion is that trust and reciprocity in their natural state are not adequate; they require a process of ‘conversion’ in order to effect collective action and participation. A social conversion process will only occur when “trust and reciprocity” are placed next to “power” and examine the interplay between them, the results of which are critical for social capital to exist and be sustained. The argument in this thesis is that such a conversion will result into ‘critical trust’ and ‘critical reciprocity’ through active questioning and analysis of power and class dynamics in public decision-making. A follow-up study is necessary to test the possibility and success of such a conversion for public participation.

5.2.3. Invoking citizen power consciousness for public participation

It is critical to return to Bilgic (2013:8) to look at different dimensions of power (power-to; power-over and power-with), where “power-with is defined as the kind of power that stems or emerges from collective action”. Critical to add is a dimension of ‘power within’ which is the kind of power that resides ‘within’ each person.
This is the kind of power that enables “agency”; thereby creating “power-with” in a collective. In this study, 57% of ATHPs indicated that they have the power as citizens to influence public decision making on pertinent issues that affect their lives, which they stated emerges from their guaranteed constitutional right to be consulted and engaged in public decision making. The constitution of South Africa provides in sections 72 (1) (a) and 118 (1) (a) that the legislature must facilitate public involvement in their legislative processes (SA Presidency, 1997). This is a guaranteed human right for all South African citizens.

So, ATHP citizens know where their power lies with regards to constitutional guarantees to public participation. The missing link is to understand why is it that ATHPs are not utilizing their power effectively to get involved in the public regulation of traditional medicines. Alternatively, could it be that ATHP’s choice to trust government and live the decision-making in government’s hands is in itself an act of active participation on their part? On the contrary, how could that be the case when 100% of respondents in the study indicated willingness to actively participate in the public regulation of traditional medicines if they could be invited and supported to do so, which suggests that they are aware that they are currently not actively participating? On the other hand, could this be what Cornwall (2008:270) define as passive participation and tokenism? My sense is that Penderis (2012:7) was correct in asserting that there is an ‘explosion of depoliticised participatory development in favour of neoliberal development agendas’ in South Africa.

In view of the above, a further interrogation on the status of public and citizen power in the context of participation that exists in South Africa is essential. The aim of such an interrogation must be to seek ways to reorder power in such a way that democratic processes in South Africa work in favour and ensure active participation of the majority of citizens in the country, particularly the poor, vulnerable and marginalised communities.
The next section suggests a list of recommendations based on the discussion above

5.2. Recommendations

The following is the list of recommendations, divided into scientific, policy and strategy sections.

5.2.1. Scientific Recommendations

- Conduct a follow up research study that examines the ‘social conversion’ of trust and reciprocity in social capital into ‘critical trust’ and ‘critical reciprocity’ through careful observation of an interplay between trust, reciprocity, power and class-consciousness in public participatory processes that are geared towards collective decision making, movement building and social cohesion.
- Conduct a scientific review of state and citizen power in South Africa’s democratic governance in view of the country’s neoliberal economic and political context to assess the nature and success of South Africa’s democracy in relation to the promotion of democratic citizenship and participation.

5.2.2. Policy Recommendations

- Develop a public participation policy framework for the National Department of Health and the Interim Council of Traditional Health Practitioners to use as a guide to improve public participation in the regulation of ATMs.
- The social capital theoretical model presented in this study is recommended as a model to guide such a framework.
5.2.2. Strategy recommendations

- Develop a public participation unit [PPU] within the National Department of Health and the Interim Council of Traditional Health Practitioners to take a lead in engaging the public in the regulation process.

- Establish a budget for public participation that can be spent on direct public involvement and decision-making processes (technical, human and financial resources). It is recommended that such a budget is shared between the PPUs of both the National Department of Health and the Interim Council of Traditional Health Practitioners of South Africa.

5.3. Conclusion

The findings of the study suggest that the majority of ATHPs in Mpumalanga are unemployed and have no formal education. Whilst the level of trust in government and willingness to participate in government processes by ATHPs is high at 91% and 100% respectively, the reality is that unemployment (96%) and illiteracy (60%) play a significant role in determining whether people participate or not in public processes. The assumption is that class differences are bound to emerge between ATHPs who work and those who do not, those who have education qualifications and those who do not. Such class differences will inevitably determine a person’s nature and level of engagement within public processes as demonstrated by the findings of this study.
It is recommended that the national department of health develops a policy framework on public participation that will respond to the situation and close the social class gap by setting up public participation units within the national department of health and the Interim Council of Traditional Health Practitioners, and that a budget is set aside for their effective functioning and direct support of citizens to participate in public decision making. Besides the social class gap, it is not clear why else are ATHPs not actively involved in the public regulation of traditional medicines. A paradox exists in that ATHPs indicate a high level of willingness to participate and have high levels of trust in the current democratic government and yet the majority (67%) is not actively involved in the regulation process. Moreover, about 57% indicate awareness of their power as a citizen which is guaranteed in the constitutional right to be consulted by the legislature in all public decision making processes. However, this power seems not being utilized.

This raises questions about public and citizen power and its use in democratic South Africa. A myriad of questions emerge. Is South Africa a passive democracy, tokenism democracy or are citizens using their democratic power decisively? Alternatively, could it be that the neoliberal economic and political context that exists in South Africa stifles critical citizen power and participation? It is recommended that further scientific research be conducted to interrogate these questions further. Finally, it is argued in this thesis that trust and reciprocity in their natural state are not adequate; they require a process of ‘conversion’ in order to effect collective action and participation. A social conversion process will only occur when “trust and reciprocity” are placed next to “power” and examine the interplay between them, the results of which are critical for social capital to exist and be sustained. The argument is that such a conversion will result into ‘critical trust’ and ‘critical reciprocity’ through active questioning and analysis of power and class dynamics in public decision-making. A follow-up study is necessary to test the possibility and success of such a conversion for public participation.
REFERENCES


African Union (AU), 2001. The plan of action on the AU decade for traditional medicine. AU Heads of States Summit, Lusaka, Zambia


Bohn, C. 2008. *Inclusion and Exclusion: Theories and Findings From Exclusion from the Community to Including Exclusion*. University of Lucerne


Gaseholm, P. M. 2012: *A comprehensive study of Ayurveda, traditional Chinese medicine and comparison*. San Luis Obispo, CA California Polytechnic State University.


84


WRCA, 2007. *Declaration on Traditional Medicine*. Being an undertaking by ministers of health attending the WHO Regional Committee for Africa in Congo Brazzaville on


Yakubovich, V. (2002). *Between exchange and reciprocity: The interplay of institutions and social networks in the Russian labor market*. Phd dissertation, Stanford University, USA.
Annexure A Structured survey questionnaire – English version

STRUCTURED SURVEY QUESTIONNAIRE

Study Title: Assessing the levels of participation in the regulation of African Traditional Medicines in South Africa: focus on African Traditional Health Practitioners in the villages of Thembisile Hani Local Municipality in Mpumalanga

STUDY BACKGROUND

The national department of health is busy with the regulation of African Traditional Medicines in South Africa. The process involves (1) official registration of traditional health practitioners with the Interim Council of Traditional Health Practitioners of South Africa which operates under the auspices of the National Department of Health; (2) scientific testing and licensing of traditional medicinal plants used to treat patients; and (3) the development of a traditional medicinal pharmacopeia as a point of reference for a list of scientifically tested and safe traditional medicinal plants to administer for health care services amongst other things. The next three years beginning in February 2013, marks the first operational year of the Interim Council to perform its functions.

This questionnaire is designed to assess the level of participation by African Traditional Health Practitioners in the regulation process. The information that you provide will be used for statistical purposes to assess participation levels and the result will be used to make recommendations to the Interim Council and the National Department of Health to contribute to increased participation of African Traditional Health Practitioners in the regulation process.

It will take 15 to 20 minutes of your time to complete the questionnaire. Your time to fill in this questionnaire is truly appreciated.

FOR OFFICE USE ONLY

DATE: SEPTEMBER 2013

TIME:

VENUE:

DURATION:

REMEMBER!!!

“THE INFORMATION YOU WILL PROVIDE WILL BE TREATED CONFIDENTIALLY”
Please mark your preferred answer with an (x) and mark only one answer per question.

A: Biographical data

1. Gender

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>male</td>
</tr>
<tr>
<td>2</td>
<td>female</td>
</tr>
<tr>
<td>3</td>
<td>transgender</td>
</tr>
<tr>
<td>4</td>
<td>Gender non-conforming</td>
</tr>
</tbody>
</table>

2. Age

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>15 – 35 (youth)</td>
</tr>
<tr>
<td>2</td>
<td>36 – 45 (adult)</td>
</tr>
<tr>
<td>3</td>
<td>46 – 60 (senior citizen)</td>
</tr>
<tr>
<td>4</td>
<td>Above 60 (veteran)</td>
</tr>
</tbody>
</table>

3. Level of education

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Less than matric</td>
</tr>
<tr>
<td>2</td>
<td>Matric</td>
</tr>
<tr>
<td>3</td>
<td>Tertiary</td>
</tr>
<tr>
<td>4</td>
<td>No formal schooling</td>
</tr>
</tbody>
</table>

4. Level of Income

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>55 440 and 100 000 p/a</td>
</tr>
<tr>
<td>2</td>
<td>100 000 and 150 000 p/a</td>
</tr>
<tr>
<td>3</td>
<td>150 000 and 200 000 p/a</td>
</tr>
<tr>
<td>4</td>
<td>More than 200 000 p/a</td>
</tr>
</tbody>
</table>

B: Public participation in the regulation of ATMs

5. Please rate your level of involvement in government meetings that address legalization of traditional medicines in South Africa

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>high</td>
</tr>
<tr>
<td>2</td>
<td>moderate</td>
</tr>
<tr>
<td>3</td>
<td>low</td>
</tr>
</tbody>
</table>

C: The role of trust and reciprocity in public participation

7. Do you trust government when it comes to addressing issues of traditional healers in South Africa?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>No</td>
</tr>
<tr>
<td>3</td>
<td>Not sure</td>
</tr>
</tbody>
</table>

8. Are you prepared to attend government meetings to ensure that the regulation of traditional medicines is achieved in South Africa?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>No</td>
</tr>
<tr>
<td>3</td>
<td>Not sure</td>
</tr>
</tbody>
</table>

D: The role of power in public participation

9. How much power do you think you have to influence decisions taken by government in the regulation of African traditional medicines in South Africa?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>high</td>
</tr>
<tr>
<td>2</td>
<td>moderate</td>
</tr>
<tr>
<td>3</td>
<td>low</td>
</tr>
</tbody>
</table>

93
Annexure B: Structured survey questionnaire – Zulu version

IFOMU ELIHLELEKILE LEMIBUZO

Isihloko: Sihlola izinga lokusebenzisana kwezinyanga zesint u nohulumeni ekubekweni kwomthetho olawula ukusetshenziswa kwemithi yesint u ukulapha nokusebenza ngobunyanga emphakathini.

IMVELAPHI YALOCWANINGO

Uhulumeni uphasise umthetho olawula umsebenzi wezinyanga zesintu nokusetshenziswa kwemithi yesithu ukulapha umphakathini. Umthetho omusha udinga ukuthi izinyanga zibhalise nenhlangu nenhlange okuthiwa yI – Interim Traditional Health Council of South Africa. Yinhlangano le ezosebenzisana nomnyango wezempilo ukulawula indlela izinyanga ezisebenza ngayo ukulapha umpahakathini.

Uhulumeni ufuna ukuthi umsebenzi wezinyanga zesintu ngemithi yesintu ube sezingeni eliphile ekulapheni abantu. Lokho kusho ukuthi kufanele imithi yesintu esetshenziswa yizinyanga ihlolwe ngokwesayensi ukuze kube nobufakazi bokuthi iphephile ukuthi ingasetshenziswa ukulapha umphakathini.

Lefomu mezelwe ukubhala imibono yezinyanga ngaloluhlelo nokwazi ukuthi ngabe izinyanga zazi kangakanani ngaloluhlelo nokuthi izinga lazo lokusebenzisana nohulumeni kuloluhlelo likangakanani.

Imibono esizoyithola ngalelifomu sizoyisebenzisa ukuthumela imibono yezinyanga kuhulumeni ukuze uhulumeni asebenzisane nezinyanga zesintu kanye nemibono yazo ngaloluhlelo.


FOR OFFICE USE ONLY

DATE: SEPTEMBER 2013

VENUE:

TIME

KHUMBULA!!

“IMIBONO YAKHO SIZOYISEBENZISA NGOKUFIHLAKELE NANGENHLONIPHO UKUZE UHLALE UPHEPHILE”

94
Khetha impendulo eyodwa uma uphendula bese ubhala u (x) eceleni kwempendulo yakho.

| 1 | kakhulu          |
| 2 | phakathi nendawo |
| 3 | kancane          |
| 4 | Angazi lutho ngaloluhlelo |

A: Imininingwane yakho

1. Ubulili bakho

| 1 | Umfana/Indoda/Ubaba          |
| 2 | Intombazane/inkosikazi/Umama/ |
| 3 | Unqingili                    |
| 4 | Okunye                       |

2. Iminyaka

| 1 | 15 – 35 (um’ntomusha)       |
| 2 | 36 – 45 (um’ntomdala)       |
| 3 | 46 – 60 (ugogo/unkhulu)     |
| 4 | Phezu kwaka 60 ( )          |

B: Ukuhlanyela kwakho emihlanganweni kahulumeni mayelana nomthetho olawula ukusebenza kwezinyanga nemithi yesintu emphakathini

5. Khetha izinga ohlanganyela ngalo kuloluhlelo lukahulumeni lokulawula ukusebenza kwezinyanga nemithi yesintu emphakathini

6. Khetha izinga ohlanganyele ngalo ekuthatheni izinqumo kanye nohulumeni kuloluhlelo lokulawula ukusebenza kwezinyanga nemithi yesintu emphakathini

C: Izinga lemfundo yakho

| 1 | Yebo                      |
| 2 | Cha                       |
| 3 | Angazi ukuthi ngicabange inl |

8. Uzimisele ukuhlanyela nohulumeni kuloluhlelo lokulawula ukusebenza kwezinyanga nemithi yesintu emphakathini uma ngabe ugangamenya ukuthi uzoveza imibono yakho mayelana nezingumo ezithathwayo.
CONSENT BY RESEARCH PARTICIPANT/INSTITUTION

I ____________________________ agree to participate in the research study that examines the levels of public participation of traditional health practitioners in the regulation of African traditional medicine in South Africa. I am a resident of the Thembisile Hani local municipality. It is my decision to freely participate in this study; I have not been forced by anyone to do so. I am aware that I have the right to withdraw from the study at any point should I wish to do so during the study. I am aware that I can contact the researcher (Fikile Vilakazi, 083 581 6161) should I have any queries regarding this research.

Signature of participant                      Date of interview and/or focus group
Annexure D: Information sheet for participants/institutions

Private Bag X17, Bellville 7535, Cape Town, South Africa

Telephone: (021) 959 3858/6 Fax: (021) 959 3865

E-mail: pkippie@uwc.ac.za or spenderis@uwc.ac.za

INFORMATION SHEET FOR PARTICIPANTS/INSTITUTIONS

DATE: 16 September to 4 October 2013

RESEARCH TITLE

Assessing the level of participation in the regulation of African traditional medicines in South Africa: Focus on African traditional health practitioners in the villages of Thembisile Hani Local Municipality in Mpumalanga

STUDY BACKGROUND AND PURPOSE

The national department of health is busy with the regulation of African traditional medicines in South Africa. The process involves (a) official registration of traditional health practitioners with the Interim Council of Traditional Health Practitioners of South Africa,
which operates under the auspices of the National Department of Health; (b) scientific testing and licensing of traditional medicinal plants used to treat patients; and (c) the development of a traditional medicinal pharmacopeia as a point of reference for a list of scientifically tested and safe traditional medicinal plants to administer for health-care services, amongst other things. The next three years, beginning in February 2013, mark the first operational period of the Interim Council to perform its functions. This study is designed to measure the levels of public participation amongst African traditional health practitioners in the regulation process.

Details of the Researcher

Name and Surname : Fikile Vilakazi, Master of Arts (Development Studies) student
Institution : Institute for Social Development, University of the Western Cape
E-mail : fikile.vilakazi@gmail.com
Tel : 083 581 6161

Details of the Supervisor

Name and Surname : Dr Mulugeta Dinbabo, Research Supervisor
Institution : Institute for Social Development, University of the Western Cape
Email : mdinbabo@uwc.ac.za
Tel : 021 959 3858
Annexure E: Photos of ATHPs during data collection process
Honorable Chief Mr Thobane, chief of Thokoza community authorised the use of his premises for data collection in Thokoza.
Honorable Chief Mr Thobane engaged with the questionnaire
Fikile Vilakazi, researcher, presenting purpose of research and conducting ethical clearance and establishing consent with respondents
ATHPs engaged with the research questionnaire
ATHPs listening to the purpose of research and engaging with ethical and consent questions
ATHP listening to the research presentation

ATHPs engaged with questionnaire pre-conversation
Herbalists asking questions during research engagements

Research ceremonial dance
Research traditional ceremonial dance preparations
Annexure F: STATA do file

log using atms-participation-mpumalanga-2013

gen var1=gender

gen var1=1

gen var2=2

gen var3=3

gen var4=4

gen var5=5

gen var6=6

gen var7=7

gen var8=8

ren var9=9

rename var1 gender

rename var2 age

rename var3 education

rename var4 income

rename var5 involvement

rename var6 decmak

rename var7 trust

rename var8 reciprocity

rename var9 power

label variable gender "gender of african traditional health practitioner"

label define gender 1 "female" 2 "male" 3 "transgender" 4 "other"

label values gender gender

label variable age "age of traditional health practitioner"

label define age 1 "15-35 (youth)" 2 "36-45 (adult)" 3 "46-60 (senior citizen)" 4 "above 60 (veteran)"

label values age

label variable education "level of education of african traditional health practitioner"

label define education 1 "less than grade 12" 2 "grade 12" 3 "post grade 12" 4 "no education"

label values education

label variable income "level of monthly income for african traditional health practitioner"

label define income 1 "500-1000" 2 "1000-3000" 3 "3000-5000" 4 "above 5000" 5 "unemployed"

label values income

label variable involvement "level of involvement in public processes regarding regulation of ATMs"

label define involvement 1 "high" 2 "moderate" 3 "low"

label values involvement

label variable decmak "level of influence in decision making by ATHP in the regulation of ATMs in RSA"

label define decmak 1 "high" 2 "moderate" 3 "low"
label values decmak decmak
label variable trust "level of trust by ATHPs that gvt's regulation of ATMs is beneficial to THP"
label variable trust "belief by ATHPs that gvt's regulation of ATMs is beneficial to their practice"
label variable reciprocity "willingness to participate in gvt public processes on the regulation of ATMs"
label variable reciprocity "willingness to respond to gvt public processes on the regulation of ATMs"
label variable power "ATHPs ability to challenge and influence power in the regulation of ATMs in SA"
label define power 1 "high" 2 "moderate" 3 "low"
label values power power
label define trust 1 "high" 2 "moderate" 3 "low"
label values trust trust
label define reciprocity 1 "high" 2 "moderate" 3 "low"
label values reciprocity reciprocity

set obs 1
replace gender = 2 in 1
replace gender = 1 in 1
replace age = 4 in 1
replace education = 4 in 1
replace income = 4 in 1
replace income = 5 in 1
replace involvement = 1 in 1
replace decmak = 1 in 1
replace trust = 1 in 1
replace reciprocity = 1 in 1
replace power = 1 in 1
set obs 2
replace gender = 1 in 2
replace age = 3 in 2
replace education = 4 in 2
replace income = 4 in 2
replace income = 5 in 2
replace involvement = 4 in 2
label define involvement 1 "high" 2 "moderate" 3 "low" 4 "i dont know about the regulation of ATMs in South Africa"
replace
label define decmak 1 "high" 2 "moderate" 3 "low" 4 "i dont know about the regulation of ATMs in South Africa"
replace
label define trust 1 "high" 2 "moderate" 3 "low" 4 "not sure", replace
label define reciprocity 1 "high" 2 "moderate" 3 "low" 4 "not sure", replace
label define reciprocity 1 "high" 2 "moderate" 3 "low" 4 "not sure", replace
label define age 1 "15-35 (youth)" 2 "36-45 (adult)" 3 "46-60 (senior citizen)" 4 "above 60 (veteran)"
replace
label define power 1 "high" 2 "moderate" 3 "low" 4 "not sure", replace
label define decmak = 4 in 2
replace trust = 1 in 2
replace reciprocity = 1 in 2
replace power = 1 in 2
set obs 3
replace gender = 1 in 3
replace age = 1 in 3
replace education = 2 in 3
replace income = 5 in 3
replace involvement = 3 in 3
replace decmak = 1 in 3
replace trust = 1 in 3
replace reciprocity = 1 in 3
replace power = 1 in 3
set obs 4
replace gender = 1 in 4
replace age = 2 in 4
replace education = 3 in 4
replace income = 5 in 4
replace involvement = 2 in 4
replace decmak = 2 in 4
replace trust = 1 in 4
replace reciprocity = 1 in 4
replace power = 2 in 4
set obs 5
replace gender = 1 in 5
replace age = 2 in 5
replace education = 2 in 5
replace income = 5 in 5
replace involvement = 2 in 5
replace decmak = 2 in 5
replace trust = 1 in 5
replace reciprocity = 1 in 5
replace power = 2 in 5
set obs 6
replace gender = 2 in 6
replace age = 2 in 6
replace education = 4 in 6
replace education = 3 in 6
replace education = 1 in 6
replace income = 5 in 6
replace involvement = 2 in 6
replace decmak = 1 in 6
replace trust = 1 in 6
replace reciprocity = 1 in 6
replace power = 1 in 6
set obs 7
replace gender = 2 in 7
replace age = 1 in 7
replace education = 1 in 7
replace income = 2 in 7
replace involvement = 1 in 7
replace decmak = 1 in 7
replace trust = 1 in 7
replace reciprocity = 1 in 7
replace power = 1 in 6
replace power = 1 in 7
set obs 8
replace gender = 2 in 8
replace age = 4 in 8
replace education = 4 in 8
replace income = 5 in 8
replace involvement = 4 in 8
replace decmak = 4 in 8
replace trust = 1 in 8
replace reciprocity = 1 in 8
replace power = 1 in 8
set obs 9
replace gender = 1 in 9
replace age = 1 in 9
replace education = 1 in 9
replace income = 5 in 9
replace involvement = 3 in 9
replace decmak = 3 in 9
replace trust = 1 in 9
replace reciprocity = 1 in 9
replace power = 1 in 9
set obs 10
replace gender = 1 in 10
replace age = 1 in 10
replace education = 1 in 10
replace income = 5 in 10
replace involvement = 4 in 10
replace decmak = 4 in 10
replace trust = 1 in 10
replace reciprocity = 1 in 10
replace power = 1 in 10
set obs 11
replace gender = 1 in 11
replace age = 2 in 11
replace age = 1 in 11
replace education = 4 in 11
replace income = 5 in 11
replace involvement = 1 in 11
replace decmak = 4 in 11
replace trust = 3 in 11
replace reciprocity = 1 in 11
replace power = 1 in 11
set obs 12
replace gender = 2 in 12
replace age = 2 in 12
replace education = 1 in 12
replace income = 1 in 12
replace involvement = 1 in 12
replace decmak = 4 in 12
replace trust = 4 in 12
replace trust = 4 in 11
replace education = 1 in 15
replace power = 3 in 12
replace income = 3 in 15
replace involvement = 1 in 15
replace decmak = 1 in 15
replace trust = 1 in 15
replace reciprocity = 1 in 15
replace power = 1 in 15
tab age
set obs 13
tab gender
tab involvement
tab decmak
set obs 16
replace gender = 1 in 16
set obs 17
replace gender = 1 in 17
set obs 18
replace gender = 1 in 18
set obs 19
replace gender = 1 in 19
set obs 21
replace gender = 1 in 21
set obs 22
replace gender = 1 in 20
set obs 22
replace gender = 1 in 20
set obs 23
replace gender = 1 in 23
replace gender = 2 in 23
set obs 24
replace gender = 2 in 24
set obs 25
replace gender = 1 in 25
set obs 26
replace gender = 1 in 26
set obs 27
replace gender = 1 in 27
set obs 28
replace gender = 1 in 28
set obs 29
replace gender = 2 in 29
set obs 30
replace gender = 2 in 30
set obs 31
replace gender = 2 in 31
set obs 32
replace gender = 1 in 32
set obs 33
replace gender = 1 in 33
set obs 34
replace gender = 1 in 34
set obs 36
replace gender = 1 in 36
replace gender = 1 in 35
set obs 37
replace gender = 1 in 37
set obs 38
replace gender = 1 in 38
set obs 39
replace gender = 1 in 39
set obs 40
replace gender = 1 in 40
set obs 42
replace gender = 1 in 42
replace gender = 1 in 41
set obs 43
replace gender = 1 in 43
set obs 44
replace gender = 1 in 44
set obs 45
replace gender = 1 in 45
set obs 46
replace gender = 1 in 46
set obs 47
replace gender = 1 in 47
set obs 48
replace gender = 1 in 48
set obs 49
replace gender = 1 in 49
set obs 51
replace gender = 2 in 51
replace gender = 2 in 50
set obs 52
replace gender = 2 in 52
set obs 53
replace gender = 2 in 53
set obs 54
replace gender = 1 in 54
set obs 55
replace gender = 2 in 55
set obs 56
replace gender = 1 in 56
set obs 57
replace gender = 2 in 57
set obs 58
replace gender = 1 in 58
set obs 59
replace gender = 1 in 59
set obs 60
replace gender = 1 in 60
set obs 61
replace gender = 1 in 61
set obs 62
replace gender = 1 in 62
set obs 64
replace gender = 2 in 64
replace gender = 2 in 63
set obs 65
replace gender = 2 in 65
set obs 66
replace gender = 2 in 66
set obs 67
replace gender = 1 in 67
set obs 68
replace gender = 1 in 68
set obs 69
replace gender = 1 in 69
set obs 70
replace gender = 1 in 70
set obs 71
replace gender = 2 in 71
set obs 72
replace gender = 2 in 72
set obs 73
replace gender = 2 in 73
set obs 74
replace gender = 2 in 74
set obs 75
replace gender = 1 in 75
set obs 76
replace age = 2 in 16
replace age = 2 in 17
replace age = 2 in 18
replace age = 2 in 20
<table>
<thead>
<tr>
<th>Age</th>
<th>Replacement Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1 in 19</td>
</tr>
<tr>
<td>1</td>
<td>1 in 21</td>
</tr>
<tr>
<td>1</td>
<td>1 in 22</td>
</tr>
<tr>
<td>1</td>
<td>1 in 23</td>
</tr>
<tr>
<td>4</td>
<td>1 in 24</td>
</tr>
<tr>
<td>4</td>
<td>1 in 25</td>
</tr>
<tr>
<td>4</td>
<td>1 in 26</td>
</tr>
<tr>
<td>3</td>
<td>1 in 27</td>
</tr>
<tr>
<td>3</td>
<td>1 in 28</td>
</tr>
<tr>
<td>3</td>
<td>1 in 29</td>
</tr>
<tr>
<td>1</td>
<td>1 in 30</td>
</tr>
<tr>
<td>2</td>
<td>2 in 31</td>
</tr>
<tr>
<td>3</td>
<td>3 in 32</td>
</tr>
<tr>
<td>1</td>
<td>1 in 33</td>
</tr>
<tr>
<td>1</td>
<td>1 in 34</td>
</tr>
<tr>
<td>1</td>
<td>1 in 35</td>
</tr>
<tr>
<td>1</td>
<td>1 in 36</td>
</tr>
<tr>
<td>3</td>
<td>3 in 37</td>
</tr>
<tr>
<td>3</td>
<td>3 in 38</td>
</tr>
<tr>
<td>3</td>
<td>3 in 39</td>
</tr>
<tr>
<td>3</td>
<td>3 in 40</td>
</tr>
<tr>
<td>3</td>
<td>3 in 41</td>
</tr>
<tr>
<td>3</td>
<td>3 in 42</td>
</tr>
<tr>
<td>3</td>
<td>3 in 43</td>
</tr>
<tr>
<td>3</td>
<td>3 in 44</td>
</tr>
<tr>
<td>3</td>
<td>3 in 45</td>
</tr>
<tr>
<td>1</td>
<td>1 in 46</td>
</tr>
<tr>
<td>1</td>
<td>1 in 47</td>
</tr>
<tr>
<td>1</td>
<td>1 in 48</td>
</tr>
<tr>
<td>3</td>
<td>3 in 49</td>
</tr>
<tr>
<td>3</td>
<td>3 in 50</td>
</tr>
<tr>
<td>3</td>
<td>3 in 51</td>
</tr>
<tr>
<td>3</td>
<td>3 in 52</td>
</tr>
<tr>
<td>3</td>
<td>3 in 53</td>
</tr>
<tr>
<td>3</td>
<td>3 in 54</td>
</tr>
<tr>
<td>3</td>
<td>3 in 55</td>
</tr>
<tr>
<td>4</td>
<td>4 in 56</td>
</tr>
<tr>
<td>4</td>
<td>4 in 57</td>
</tr>
<tr>
<td>1</td>
<td>1 in 58</td>
</tr>
<tr>
<td>1</td>
<td>1 in 59</td>
</tr>
<tr>
<td>2</td>
<td>2 in 60</td>
</tr>
<tr>
<td>2</td>
<td>2 in 61</td>
</tr>
<tr>
<td>2</td>
<td>2 in 62</td>
</tr>
<tr>
<td>2</td>
<td>2 in 63</td>
</tr>
<tr>
<td>2</td>
<td>2 in 64</td>
</tr>
<tr>
<td>2</td>
<td>2 in 65</td>
</tr>
<tr>
<td>1</td>
<td>1 in 66</td>
</tr>
<tr>
<td>1</td>
<td>1 in 67</td>
</tr>
<tr>
<td>1</td>
<td>1 in 68</td>
</tr>
<tr>
<td>1</td>
<td>1 in 69</td>
</tr>
<tr>
<td>1</td>
<td>1 in 70</td>
</tr>
<tr>
<td>2</td>
<td>2 in 71</td>
</tr>
</tbody>
</table>
replace age = 2 in 72
replace age = 2 in 73
replace age = 2 in 74
replace age = 2 in 75
set obs 76
replace age = 3 in 76
replace age = . in 76
replace education = 3 in 17
replace education = 3 in 16
replace education = 2 in 18
replace education = 2 in 19
replace education = 1 in 20
replace education = 1 in 21
replace education = 1 in 22
replace education = 1 in 23
replace education = 1 in 24
replace education = 1 in 25
replace education = 1 in 26
replace education = 4 in 27
replace education = 4 in 28
replace education = 4 in 30
replace education = 4 in 29
replace education = 4 in 31
replace education = 4 in 32
replace education = 4 in 33
replace education = 4 in 35
replace education = 4 in 34
replace education = 4 in 36
replace education = 4 in 37
replace education = 4 in 38
replace education = 1 in 40
replace education = 1 in 39
replace education = 1 in 41
replace education = 1 in 42
replace education = 1 in 43
replace education = 1 in 44
replace education = 1 in 45
replace education = 1 in 46
replace education = 4 in 48
replace education = 1 in 47
replace education = 1 in 49
replace education = 1 in 45
replace education = 1 in 47
replace education = 4 in 50
replace education = 4 in 51
replace education = 4 in 52
replace education = 4 in 53
replace education = 4 in 54
replace education = 4 in 55
replace education = 4 in 56
replace education = 4 in 57
replace education = 4 in 58
replace education = 4 in 59
replace education = 4 in 60
replace education = 4 in 61
replace education = 4 in 63
replace education = 4 in 62
replace education = 4 in 65
replace education = 4 in 64
replace education = 4 in 66
replace education = 4 in 67
replace education = 4 in 68
replace education = 4 in 69
replace education = 4 in 70
replace education = 4 in 71
replace education = 4 in 72
replace education = 4 in 73
replace education = 4 in 74
replace education = 4 in 75
replace income = 5 in 16
replace income = 4 in 16
replace income = 5 in 16
replace income = 5 in 17
replace income = 5 in 18
replace income = 5 in 19
replace income = 5 in 21
replace income = 5 in 20
replace income = 5 in 22
replace income = 5 in 23
replace income = 5 in 24
replace income = 5 in 25
replace income = 5 in 26
replace income = 5 in 27
replace income = 5 in 28
replace income = 5 in 29
replace income = 5 in 30
replace income = 5 in 31
replace income = 5 in 32
replace income = 5 in 33
replace income = 5 in 34
replace income = 5 in 35
replace income = 5 in 36
replace income = 5 in 37
replace income = 5 in 38
replace income = 5 in 39
replace income = 5 in 40
replace income = 5 in 41
replace income = 5 in 42
replace income = 5 in 43
replace income = 5 in 44
replace income = 5 in 45
replace income = 5 in 46
replace income = 5 in 47
replace income = 5 in 48
replace income = 5 in 49
replace income = 5 in 50
replace income = 5 in 51
replace income = 5 in 52
replace income = 5 in 53
replace income = 5 in 54
replace income = 5 in 55
replace income = 5 in 56
replace income = 5 in 57
replace income = 5 in 58
replace income = 5 in 59
replace income = 5 in 60
replace income = 5 in 61
replace income = 5 in 62
replace income = 5 in 63
replace income = 5 in 64
replace income = 5 in 65
replace income = 5 in 66
replace income = 5 in 67
replace income = 5 in 68
replace income = 5 in 69
replace income = 5 in 70
replace income = 5 in 71
replace income = 5 in 72
replace income = 5 in 73
replace income = 5 in 74
replace income = 5 in 75
replace involvement = 4 in 16
replace involvement = 4 in 17
replace involvement = 4 in 18
replace involvement = 4 in 19
replace involvement = 4 in 20
replace involvement = 4 in 21
replace involvement = 4 in 22
replace involvement = 2 in 24
replace involvement = 3 in 25
replace involvement = 1 in 26
replace involvement = 1 in 27
replace involvement = 2 in 28
replace involvement = 2 in 29
replace involvement = 3 in 30
replace involvement = 2 in 32
replace involvement = 2 in 33
replace involvement = 2 in 34
replace involvement = 2 in 35
replace involvement = 3 in 36
replace involvement = 3 in 37
replace involvement = 3 in 38
replace involvement = 1 in 39
replace involvement = 1 in 40
replace involvement = 1 in 41
replace involvement = 3 in 42
replace involvement = 3 in 43
replace involvement = 3 in 44
replace involvement = 3 in 45
replace involvement = 3 in 46
replace involvement = 3 in 47
replace involvement = 3 in 48
replace involvement = 3 in 49
replace involvement = 3 in 50
replace involvement = 3 in 51
replace involvement = 3 in 52
replace involvement = 3 in 53
replace involvement = 3 in 54
replace involvement = 3 in 55
replace involvement = 3 in 56
replace involvement = 3 in 57
replace involvement = 3 in 58
replace involvement = 3 in 59
replace involvement = 3 in 60
replace involvement = 3 in 61
replace involvement = 3 in 62
replace involvement = 3 in 63
replace involvement = 3 in 64
replace involvement = 3 in 65
replace involvement = 3 in 66
replace involvement = 3 in 67
replace involvement = 3 in 68
replace involvement = 3 in 69
replace involvement = 3 in 70
replace involvement = 3 in 71
replace involvement = 3 in 72
replace involvement = 3 in 73
replace involvement = 3 in 74
replace involvement = 3 in 75
replace involvement = 4 in 16
replace involvement = 3 in 76
replace involvement = 4 in 17
replace involvement = 4 in 18
replace involvement = 4 in 19
replace involvement = 4 in 20
replace involvement = 2 in 21
replace involvement = 4 in 22
replace involvement = 4 in 23
replace involvement = 2 in 24
replace involvement = 2 in 25
replace involvement = 2 in 26
replace involvement = 2 in 27
replace involvement = 2 in 28
replace involvement = 2 in 29
replace involvement = 4 in 30
replace involvement = 3 in 31
replace involvement = 2 in 32
replace involvement = 2 in 33
replace involvement = 2 in 34
replace involvement = 2 in 35
replace decmak = 3 in 36  replace decmak = 2 in 60
replace decmak = 3 in 37  replace decmak = 2 in 61
replace decmak = 3 in 38  replace decmak = 1 in 62
replace decmak = 3 in 39  replace decmak = 1 in 63
replace decmak = 1 in 39  replace decmak = 3 in 64
replace decmak = 1 in 40  replace decmak = 3 in 65
replace decmak = 1 in 41  replace decmak = 3 in 66
replace decmak = 3 in 42  replace decmak = 3 in 67
replace decmak = 3 in 43  replace decmak = 3 in 68
replace decmak = 3 in 44  replace decmak = 3 in 69
replace decmak = 3 in 45  replace decmak = 3 in 70
replace decmak = 3 in 46  replace decmak = 3 in 71
replace decmak = 3 in 47  replace decmak = 3 in 72
replace decmak = 3 in 48  replace decmak = 3 in 73
replace decmak = 3 in 49  replace decmak = 3 in 74
replace decmak = 3 in 50  replace decmak = 3 in 75
replace decmak = 3 in 51  replace trust = 1 in 16
replace decmak = 3 in 52  replace trust = 1 in 17
replace decmak = 3 in 53  replace trust = 1 in 18
replace decmak = 3 in 54  replace trust = 1 in 19
replace decmak = 4 in 55  replace trust = 1 in 20
replace decmak = 4 in 56  replace trust = 1 in 21
replace decmak = 4 in 57  replace trust = 1 in 22
replace decmak = 4 in 58  replace trust = 1 in 23
replace decmak = 4 in 59  replace trust = 1 in 24
replace decmak = 3 in 60  replace trust = 1 in 25
<table>
<thead>
<tr>
<th>Trust Value</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 in 26</td>
<td></td>
</tr>
<tr>
<td>1 in 28</td>
<td></td>
</tr>
<tr>
<td>1 in 30</td>
<td></td>
</tr>
<tr>
<td>1 in 31</td>
<td></td>
</tr>
<tr>
<td>1 in 29</td>
<td></td>
</tr>
<tr>
<td>1 in 32</td>
<td></td>
</tr>
<tr>
<td>1 in 33</td>
<td></td>
</tr>
<tr>
<td>1 in 35</td>
<td></td>
</tr>
<tr>
<td>1 in 34</td>
<td></td>
</tr>
<tr>
<td>1 in 36</td>
<td></td>
</tr>
<tr>
<td>1 in 37</td>
<td></td>
</tr>
<tr>
<td>1 in 38</td>
<td></td>
</tr>
<tr>
<td>1 in 39</td>
<td></td>
</tr>
<tr>
<td>1 in 27</td>
<td></td>
</tr>
<tr>
<td>1 in 40</td>
<td></td>
</tr>
<tr>
<td>1 in 41</td>
<td></td>
</tr>
<tr>
<td>1 in 42</td>
<td></td>
</tr>
<tr>
<td>1 in 43</td>
<td></td>
</tr>
<tr>
<td>1 in 44</td>
<td></td>
</tr>
<tr>
<td>1 in 45</td>
<td></td>
</tr>
<tr>
<td>1 in 46</td>
<td></td>
</tr>
<tr>
<td>1 in 47</td>
<td></td>
</tr>
<tr>
<td>1 in 48</td>
<td></td>
</tr>
<tr>
<td>3 in 49</td>
<td></td>
</tr>
<tr>
<td>4 in 50</td>
<td></td>
</tr>
<tr>
<td>4 in 51</td>
<td></td>
</tr>
<tr>
<td>1 in 52</td>
<td></td>
</tr>
<tr>
<td>1 in 53</td>
<td></td>
</tr>
<tr>
<td>1 in 54</td>
<td></td>
</tr>
<tr>
<td>1 in 55</td>
<td></td>
</tr>
<tr>
<td>1 in 56</td>
<td></td>
</tr>
<tr>
<td>1 in 57</td>
<td></td>
</tr>
<tr>
<td>1 in 58</td>
<td></td>
</tr>
<tr>
<td>1 in 59</td>
<td></td>
</tr>
<tr>
<td>1 in 60</td>
<td></td>
</tr>
<tr>
<td>1 in 61</td>
<td></td>
</tr>
<tr>
<td>1 in 62</td>
<td></td>
</tr>
<tr>
<td>1 in 63</td>
<td></td>
</tr>
<tr>
<td>1 in 64</td>
<td></td>
</tr>
<tr>
<td>1 in 65</td>
<td></td>
</tr>
<tr>
<td>4 in 66</td>
<td></td>
</tr>
<tr>
<td>1 in 66</td>
<td></td>
</tr>
<tr>
<td>1 in 67</td>
<td></td>
</tr>
<tr>
<td>1 in 68</td>
<td></td>
</tr>
<tr>
<td>1 in 69</td>
<td></td>
</tr>
<tr>
<td>1 in 70</td>
<td></td>
</tr>
<tr>
<td>1 in 71</td>
<td></td>
</tr>
<tr>
<td>1 in 72</td>
<td></td>
</tr>
<tr>
<td>1 in 73</td>
<td></td>
</tr>
<tr>
<td>1 in 74</td>
<td></td>
</tr>
<tr>
<td>1 in 75</td>
<td></td>
</tr>
<tr>
<td>4 in 76</td>
<td></td>
</tr>
<tr>
<td>. in 76</td>
<td></td>
</tr>
</tbody>
</table>
replace reciprocity = 1 in 16
replace reciprocity = 1 in 17
replace reciprocity = 1 in 18
replace reciprocity = 1 in 19
replace reciprocity = 1 in 20
replace reciprocity = 1 in 21
replace reciprocity = 1 in 22
replace reciprocity = 1 in 23
replace reciprocity = 1 in 24
replace reciprocity = 1 in 25
replace reciprocity = 1 in 26
replace reciprocity = 1 in 27
replace reciprocity = 1 in 28
replace reciprocity = 1 in 29
replace reciprocity = 1 in 30
replace reciprocity = 1 in 31
replace reciprocity = 1 in 32
replace reciprocity = 1 in 33
replace reciprocity = 1 in 34
replace reciprocity = 1 in 35
replace reciprocity = 1 in 36
replace reciprocity = 1 in 37
replace reciprocity = 1 in 38
replace reciprocity = 1 in 40
replace reciprocity = 1 in 39
replace reciprocity = 1 in 41
replace reciprocity = 1 in 68
replace reciprocity = 1 in 69
replace reciprocity = 1 in 71
replace reciprocity = 1 in 70
replace reciprocity = 1 in 72
replace reciprocity = 1 in 73
replace reciprocity = 1 in 74
replace reciprocity = 1 in 75
replace power = 1 in 17
replace power = 1 in 16
replace power = 1 in 18
replace power = 1 in 19
replace power = 1 in 20
replace power = 1 in 22
replace power = 1 in 21
replace power = 1 in 23
replace power = 1 in 24
replace power = 1 in 25
replace power = 1 in 26
replace power = 1 in 27
replace power = 1 in 28
replace power = 2 in 29
replace power = 1 in 30
replace power = 1 in 31
replace power = 1 in 32
replace power = 1 in 33
replace power = 1 in 34
replace power = 1 in 35
replace power = 3 in 36
replace power = 3 in 37
replace power = 3 in 38
replace power = 1 in 39
replace power = 1 in 40
replace power = 1 in 41
replace power = 1 in 42
replace power = 1 in 43
replace power = 1 in 44
replace power = 1 in 45
replace power = 1 in 46
replace power = 1 in 47
replace power = 1 in 48
replace power = 1 in 49
replace power = 1 in 50
replace power = 3 in 50
replace power = 3 in 51
replace power = 3 in 52
replace power = 3 in 53
replace power = 3 in 54
replace power = 3 in 55
replace power = 3 in 56
replace power = 3 in 58
replace power = 3 in 57
replace power = 3 in 59
replace power = 2 in 60
replace power = 2 in 61
replace power = 1 in 62
replace power = 1 in 63
replace power = 3 in 64
replace power = 3 in 65
replace power = 3 in 66
replace power = 3 in 67
replace power = 3 in 68
replace power = 3 in 69
replace power = 3 in 70
replace power = 3 in 72
replace power = 3 in 71
replace power = 3 in 73
replace power = 3 in 74
replace power = 3 in 75
	tab involvement
	tab decmak
	tab trust
	tab reciprocity
	tab power
	tab income
	regress involvement income gender trust reciprocity
	regress involvement education income power
	regress involvement income
	regress involvement trust reciprocity power
	regress involvement income education
	regress involvement income education trust
	regress involvement income
	saveold
"C:\Users\stephen69\Desktop\STATA12\data set\participation-atms-mpumalanga.dta"

*******************************first entry-02/10/2013*******************************
use "C:\Users\stephen69\Desktop\STATA12\data set\participation-atms-mpumalanga.dta", clear
	tab gender
	tab age
	tab education
	tab income
	tab involvement
	tab decmak
	tab trust
	tab reciprocity
	tab power
twoway (scatter involvement education)
twoway (scatter involvement education)
twoway (fit involvement education)
twoway (lfit involvement education) (scatter involvement income) (scatter involvement trust) (scatter involvement reciprocity) (scatter involvement power) (lfit involvement education) (lfit involvement income) (lfit involvement trust) (lfit involvement reciprocity) (lfit involvement power)

twoway (lfit involvement education)
twoway (lfit involvement income)
twoway (lfit involvement trust)
twoway (lfit involvement reciprocity)
twoway (lfit involvement power)

label variable power "ATHPs perception of their own power to influence regulation of ATMs"

histogram involvement, addplot((scatter involvement education) (scatter involvement income))

twoway (lfit involvement education) (lfit involvement income) (lfit involvement trust) (lfit involvement reciprocity) (lfit involvement power)

twoway (lfit involvement education) (lfit involvement income) (lfit involvement trust) (lfit involvement reciprocity) (lfit involvement power)

twoway (lfit involvement trust) (lfit involvement reciprocity) (lfit involvement power)

twoway (lfit decmak education) (lfit decmak income) (lfit decmak trust) (lfit decmak reciprocity) (lfit decmak power)

regress involvement education income
regress decmak education income
regress involvement trust reciprocity
regress decmak trust reciprocity
regress involvement power
regress decmak power
regress involvement education income trust reciprocity power
regress decmak education income trust reciprocity power
regress involvement power

125
save "C:\Users\stephen69\Desktop\STATA12\data set\participation-atms-mpumalanga.dta", replace

log close
do "C:\Users\stephen69\Desktop\STATA12\data set\participation-Atms-mpumalanga.do"

******************************************************************************
******************************************************************************
**********second entry 02/10/2013

use "F:\STATA12\data set\participation-atms-mpumalanga.dta", clear

regress involvement income education age gender trust reciprocity power

regress involvement income education power

save "F:\STATA12\data set\participation-atms-mpumalanga.dta", replace

******************************************************************************
******************************************************************************
***********third entry 16/10/2013
Annexure G: STATA data set in excel format
<table>
<thead>
<tr>
<th>N</th>
<th>gender</th>
<th>age</th>
<th>education</th>
<th>income</th>
<th>involvement</th>
<th>decmak</th>
<th>trust</th>
<th>reciprocity</th>
<th>power</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>female</td>
<td>above 60 (veteran)</td>
<td>no education</td>
<td>unemployed</td>
<td>high</td>
<td>high</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>2</td>
<td>female</td>
<td>46-60 (senior citizen)</td>
<td>no education</td>
<td>unemployed</td>
<td>i dont know</td>
<td>i dont know</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>3</td>
<td>female</td>
<td>15-35 (youth)</td>
<td>grade 12</td>
<td>unemployed</td>
<td>low</td>
<td>high</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>4</td>
<td>female</td>
<td>36-45 (adult)</td>
<td>post grade 12</td>
<td>unemployed</td>
<td>moderate</td>
<td>moderate</td>
<td>high</td>
<td>high</td>
<td>moderate</td>
</tr>
<tr>
<td>5</td>
<td>female</td>
<td>36-45 (adult)</td>
<td>grade 12</td>
<td>unemployed</td>
<td>moderate</td>
<td>moderate</td>
<td>high</td>
<td>high</td>
<td>moderate</td>
</tr>
<tr>
<td>6</td>
<td>male</td>
<td>36-45 (adult)</td>
<td>less than grade 12</td>
<td>unemployed</td>
<td>moderate</td>
<td>high</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>7</td>
<td>male</td>
<td>15-35 (youth)</td>
<td>less than grade 12</td>
<td>1000-3000</td>
<td>high</td>
<td>high</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>8</td>
<td>male</td>
<td>above 60 (veteran)</td>
<td>no education</td>
<td>unemployed</td>
<td>i dont know</td>
<td>i dont know</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>9</td>
<td>female</td>
<td>15-35 (youth)</td>
<td>less than grade 12</td>
<td>unemployed</td>
<td>low</td>
<td>low</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>10</td>
<td>female</td>
<td>15-35 (youth)</td>
<td>less than grade 12</td>
<td>unemployed</td>
<td>i dont know</td>
<td>i dont know</td>
<td>low</td>
<td>low</td>
<td>low</td>
</tr>
<tr>
<td>11</td>
<td>female</td>
<td>15-35 (youth)</td>
<td>no education</td>
<td>unemployed</td>
<td>high</td>
<td>i dont know</td>
<td>not sure</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>12</td>
<td>male</td>
<td>36-45 (adult)</td>
<td>less than grade 12</td>
<td>500-1000</td>
<td>high</td>
<td>i dont know</td>
<td>not sure</td>
<td>low</td>
<td>low</td>
</tr>
<tr>
<td>13</td>
<td>female</td>
<td>above 60 (veteran)</td>
<td>no education</td>
<td>unemployed</td>
<td>low</td>
<td>high</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>14</td>
<td>male</td>
<td>36-45 (adult)</td>
<td>less than grade 12</td>
<td>unemployed</td>
<td>moderate</td>
<td>high</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>15</td>
<td>female</td>
<td>15-35 (youth)</td>
<td>less than grade 12</td>
<td>3000-5000</td>
<td>high</td>
<td>high</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>16</td>
<td>female</td>
<td>36-45 (adult)</td>
<td>post grade 12</td>
<td>unemployed</td>
<td>i dont know</td>
<td>i dont know</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>17</td>
<td>female</td>
<td>36-45 (adult)</td>
<td>post grade 12</td>
<td>unemployed</td>
<td>i dont know</td>
<td>i dont know</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>18</td>
<td>female</td>
<td>15-35 (youth)</td>
<td>grade 12</td>
<td>unemployed</td>
<td>i dont know</td>
<td>i dont know</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>19</td>
<td>female</td>
<td>36-45 (adult)</td>
<td>grade 12</td>
<td>unemployed</td>
<td>i dont know</td>
<td>i dont know</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>20</td>
<td>female</td>
<td>36-45 (adult)</td>
<td>less than grade 12</td>
<td>unemployed</td>
<td>i dont know</td>
<td>i dont know</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>21</td>
<td>female</td>
<td>15-35 (youth)</td>
<td>less than grade 12</td>
<td>unemployed</td>
<td>i dont know</td>
<td>i dont know</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>22</td>
<td>male</td>
<td>15-35 (youth)</td>
<td>less than grade 12</td>
<td>unemployed</td>
<td>i dont know</td>
<td>i dont know</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>23</td>
<td>male</td>
<td>15-35 (youth)</td>
<td>less than grade 12</td>
<td>unemployed</td>
<td>i dont know</td>
<td>i dont know</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>24</td>
<td>male</td>
<td>15-35 (youth)</td>
<td>less than grade 12</td>
<td>unemployed</td>
<td>moderate</td>
<td>moderate</td>
<td>high</td>
<td>high</td>
<td>moderate</td>
</tr>
<tr>
<td>25</td>
<td>female</td>
<td>above 60 (veteran)</td>
<td>less than grade 12</td>
<td>unemployed</td>
<td>low</td>
<td>high</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>26</td>
<td>female</td>
<td>above 60 (veteran)</td>
<td>less than grade 12</td>
<td>unemployed</td>
<td>high</td>
<td>high</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>27</td>
<td>female</td>
<td>46-60 (senior citizen)</td>
<td>no education</td>
<td>unemployed</td>
<td>high</td>
<td>high</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>28</td>
<td>female</td>
<td>46-60 (senior citizen)</td>
<td>no education</td>
<td>unemployed</td>
<td>moderate</td>
<td>moderate</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>29</td>
<td>male</td>
<td>46-60 (senior citizen)</td>
<td>no education</td>
<td>unemployed</td>
<td>moderate</td>
<td>moderate</td>
<td>high</td>
<td>high</td>
<td>moderate</td>
</tr>
<tr>
<td>30</td>
<td>male</td>
<td>15-35 (youth)</td>
<td>no education</td>
<td>unemployed</td>
<td>i dont know</td>
<td>i dont know</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>31</td>
<td>male</td>
<td>36-45 (adult)</td>
<td>no education</td>
<td>unemployed</td>
<td>low</td>
<td>low</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>32</td>
<td>female</td>
<td>46-60 (senior citizen)</td>
<td>no education</td>
<td>unemployed</td>
<td>low</td>
<td>moderate</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>33</td>
<td>female</td>
<td>15-35 (youth)</td>
<td>no education</td>
<td>unemployed</td>
<td>moderate</td>
<td>moderate</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>34</td>
<td>female</td>
<td>15-35 (youth)</td>
<td>no education</td>
<td>unemployed</td>
<td>moderate</td>
<td>moderate</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>35</td>
<td>female</td>
<td>15-35 (youth)</td>
<td>no education</td>
<td>unemployed</td>
<td>moderate</td>
<td>moderate</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>36</td>
<td>female</td>
<td>15-35 (youth)</td>
<td>no education</td>
<td>unemployed</td>
<td>low</td>
<td>low</td>
<td>low</td>
<td>low</td>
<td>low</td>
</tr>
<tr>
<td>37</td>
<td>female</td>
<td>46-60 (senior citizen)</td>
<td>no education</td>
<td>unemployed</td>
<td>low</td>
<td>low</td>
<td>low</td>
<td>low</td>
<td>low</td>
</tr>
<tr>
<td>38</td>
<td>female</td>
<td>15-35 (youth)</td>
<td>no education</td>
<td>unemployed</td>
<td>low</td>
<td>low</td>
<td>low</td>
<td>low</td>
<td>low</td>
</tr>
<tr>
<td>39</td>
<td>female</td>
<td>46-60 (senior citizen)</td>
<td>less than grade 12</td>
<td>unemployed</td>
<td>high</td>
<td>high</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>40</td>
<td>female</td>
<td>46-60 (senior citizen)</td>
<td>less than grade 12</td>
<td>unemployed</td>
<td>high</td>
<td>high</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>41</td>
<td>female</td>
<td>46-60 (senior citizen)</td>
<td>less than grade 12</td>
<td>unemployed</td>
<td>high</td>
<td>high</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>42</td>
<td>female</td>
<td>46-60 (senior citizen)</td>
<td>less than grade 12</td>
<td>unemployed</td>
<td>low</td>
<td>high</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>43</td>
<td>female</td>
<td>46-60 (senior citizen)</td>
<td>less than grade 12</td>
<td>unemployed</td>
<td>low</td>
<td>high</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>44</td>
<td>female</td>
<td>46-60 (senior citizen)</td>
<td>less than grade 12</td>
<td>unemployed</td>
<td>low</td>
<td>high</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>45</td>
<td>female</td>
<td>46-60 (senior citizen)</td>
<td>less than grade 12</td>
<td>unemployed</td>
<td>low</td>
<td>high</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>46</td>
<td>female</td>
<td>15-35 (youth)</td>
<td>less than grade 12</td>
<td>unemployed</td>
<td>low</td>
<td>high</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>47</td>
<td>female</td>
<td>15-35 (youth)</td>
<td>less than grade 12</td>
<td>unemployed</td>
<td>low</td>
<td>low</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>48</td>
<td>female</td>
<td>15-35 (youth)</td>
<td>no education</td>
<td>unemployed</td>
<td>low</td>
<td>low</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>49</td>
<td>female</td>
<td>46-60 (senior citizen)</td>
<td>no education</td>
<td>unemployed</td>
<td>low</td>
<td>low</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>50</td>
<td>male</td>
<td>46-60 (senior citizen)</td>
<td>no education</td>
<td>unemployed</td>
<td>low</td>
<td>low</td>
<td>not sure</td>
<td>low</td>
<td>low</td>
</tr>
<tr>
<td>51</td>
<td>male</td>
<td>46-60 (senior citizen)</td>
<td>no education</td>
<td>unemployed</td>
<td>low</td>
<td>low</td>
<td>not sure</td>
<td>low</td>
<td>low</td>
</tr>
<tr>
<td>52</td>
<td>male</td>
<td>46-60 (senior citizen)</td>
<td>no education</td>
<td>unemployed</td>
<td>low</td>
<td>low</td>
<td>high</td>
<td>low</td>
<td>low</td>
</tr>
<tr>
<td>53</td>
<td>male</td>
<td>46-60 (senior citizen)</td>
<td>no education</td>
<td>unemployed</td>
<td>low</td>
<td>low</td>
<td>high</td>
<td>low</td>
<td>low</td>
</tr>
<tr>
<td>54</td>
<td>male</td>
<td>46-60 (senior citizen)</td>
<td>no education</td>
<td>unemployed</td>
<td>low</td>
<td>low</td>
<td>high</td>
<td>low</td>
<td>low</td>
</tr>
<tr>
<td>55</td>
<td>male</td>
<td>46-60 (senior citizen)</td>
<td>no education</td>
<td>unemployed</td>
<td>i dont know</td>
<td>i dont know</td>
<td>high</td>
<td>low</td>
<td>low</td>
</tr>
<tr>
<td>56</td>
<td>female</td>
<td>above 60 (veteran)</td>
<td>no education</td>
<td>unemployed</td>
<td>i dont know</td>
<td>i dont know</td>
<td>high</td>
<td>low</td>
<td>low</td>
</tr>
<tr>
<td>57</td>
<td>male</td>
<td>above 60 (veteran)</td>
<td>no education</td>
<td>unemployed</td>
<td>i dont know</td>
<td>i dont know</td>
<td>high</td>
<td>low</td>
<td>low</td>
</tr>
<tr>
<td>58</td>
<td>female</td>
<td>15-35 (youth)</td>
<td>no education</td>
<td>unemployed</td>
<td>i dont know</td>
<td>i dont know</td>
<td>high</td>
<td>low</td>
<td>low</td>
</tr>
<tr>
<td>59</td>
<td>female</td>
<td>15-35 (youth)</td>
<td>no education</td>
<td>unemployed</td>
<td>i dont know</td>
<td>i dont know</td>
<td>high</td>
<td>low</td>
<td>low</td>
</tr>
<tr>
<td>60</td>
<td>female</td>
<td>36-45 (adult)</td>
<td>no education</td>
<td>unemployed</td>
<td>moderate</td>
<td>moderate</td>
<td>high</td>
<td>high</td>
<td>moderate</td>
</tr>
<tr>
<td>61</td>
<td>female</td>
<td>36-45 (adult)</td>
<td>no education</td>
<td>unemployed</td>
<td>moderate</td>
<td>moderate</td>
<td>high</td>
<td>high</td>
<td>moderate</td>
</tr>
<tr>
<td>62</td>
<td>female</td>
<td>36-45 (adult)</td>
<td>no education</td>
<td>unemployed</td>
<td>high</td>
<td>high</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>63</td>
<td>male</td>
<td>36-45 (adult)</td>
<td>no education</td>
<td>unemployed</td>
<td>high</td>
<td>high</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>64</td>
<td>male</td>
<td>36-45 (adult)</td>
<td>no education</td>
<td>unemployed</td>
<td>low</td>
<td>low</td>
<td>high</td>
<td>high</td>
<td>low</td>
</tr>
<tr>
<td>65</td>
<td>male</td>
<td>36-45 (adult)</td>
<td>no education</td>
<td>unemployed</td>
<td>low</td>
<td>low</td>
<td>high</td>
<td>high</td>
<td>low</td>
</tr>
<tr>
<td>66</td>
<td>male</td>
<td>36-45 (adult)</td>
<td>no education</td>
<td>unemployed</td>
<td>low</td>
<td>low</td>
<td>high</td>
<td>high</td>
<td>low</td>
</tr>
<tr>
<td>67</td>
<td>female</td>
<td>15-35 (youth)</td>
<td>no education</td>
<td>unemployed</td>
<td>low</td>
<td>low</td>
<td>high</td>
<td>low</td>
<td>low</td>
</tr>
<tr>
<td>68</td>
<td>female</td>
<td>15-35 (youth)</td>
<td>no education</td>
<td>unemployed</td>
<td>low</td>
<td>low</td>
<td>high</td>
<td>low</td>
<td>low</td>
</tr>
<tr>
<td>69</td>
<td>female</td>
<td>15-35 (youth)</td>
<td>no education</td>
<td>unemployed</td>
<td>low</td>
<td>low</td>
<td>high</td>
<td>low</td>
<td>low</td>
</tr>
<tr>
<td>70</td>
<td>female</td>
<td>15-35 (youth)</td>
<td>no education</td>
<td>unemployed</td>
<td>low</td>
<td>low</td>
<td>high</td>
<td>low</td>
<td>low</td>
</tr>
<tr>
<td>71</td>
<td>male</td>
<td>36-45 (adult)</td>
<td>no education</td>
<td>unemployed</td>
<td>low</td>
<td>low</td>
<td>high</td>
<td>low</td>
<td>low</td>
</tr>
<tr>
<td>72</td>
<td>male</td>
<td>36-45 (adult)</td>
<td>no education</td>
<td>unemployed</td>
<td>low</td>
<td>low</td>
<td>high</td>
<td>low</td>
<td>low</td>
</tr>
<tr>
<td>73</td>
<td>male</td>
<td>36-45 (adult)</td>
<td>no education</td>
<td>unemployed</td>
<td>low</td>
<td>low</td>
<td>high</td>
<td>low</td>
<td>low</td>
</tr>
<tr>
<td>74</td>
<td>male</td>
<td>36-45 (adult)</td>
<td>no education</td>
<td>unemployed</td>
<td>low</td>
<td>low</td>
<td>high</td>
<td>low</td>
<td>low</td>
</tr>
<tr>
<td>75</td>
<td>female</td>
<td>36-45 (adult)</td>
<td>no education</td>
<td>unemployed</td>
<td>low</td>
<td>not sure</td>
<td>low</td>
<td>low</td>
<td>low</td>
</tr>
</tbody>
</table>