

**MAXIMISING THE USE OF THERMAL SPRINGS FOR LOCAL
ECONOMIC DEVELOPMENT IN RURAL ZAMBIA: A CASE STUDY OF
CHINYUNYU THERMAL SPRINGS, RUFUNSA DISTRICT**

by
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ABSTRACT

Zambia is rich in natural, environmental, cultural and heritage resources. However, full optimisation of these resources to the benefit of the local communities that host them remains a challenge. A case in point is the thermal springs that are dotted around the country, mostly in rural areas, that have not been fully and sustainably utilised to the benefit of the local communities. Of particular interest is the Chinyunyu thermal springs, a critical resource, but under-utilised. As a result, the locals in Chinyunyu Village have remained unfairly “trapped” in a vicious cycle of high poverty.

The main aim of this study was to explore the use of Chinyunyu thermal springs as an economic input to assist the cause of local economic development. Resting on the pragmatic, interpretivist, and constructivist research paradigms, this study employed a mixed methods convergent research design triangulated with multiple data sources. A sample size of 139 (n=139) individuals was purposively selected from the local authorities and community actors. A survey, key informant interviews, and two focus group discussions were conducted to collect data. Data collected was statistically and thematically analysed.

The study concluded that the local authority in Chinyunyu Village has failed to sustainably exploit the exciting heritage and natural resources within its locality, the Chinyunyu thermal springs. Results from the study revealed that the Chinyunyu thermal springs have remained underdeveloped and underutilised as such, failed to significantly contribute to the well-being of the community members in Chinyunyu Village. Evidence from this study revealed a positive and significant association of local community participation in decision making, decentralisation of power and authority, infrastructure, and exploitation of local natural resources to local economic development of the Chinyunyu Village.

The study proposes to commercialise and develop the Chinyunyu thermal springs into a community-based tourism resort as an ideal local economic development strategy. A sustainable commercial model that could be adopted by the thermal springs was therefore developed. Furthermore, the study proposes to decentralise

the management of the Chinyunyu thermal springs, enhance local participation in decision making, provide basic infrastructure and formulate a local economic development policy framework for the municipal council.

Key words: Chinyunyu thermal springs, Chinyunyu Village, decentralisation, development, local economic development, local participation, poverty, thermal springs, rural area, Zambia.

CHIDULE CHA ZIMENE ZILI MKATI (NYANJA)

Dziko la Zambia lili ndi chuma chambiri cha chilengedwe, cha chikhalidwe ndi cholowa. Komabe, kugwiritsa ntchito mokwanira izi kuti zithandizire madera amene zipezekamo kumakhalabe kovuta. Chitsanzo chabwino ndi akasupe amadzi otentha amene amapezeka kuzungulira dziko lonse makamaka kumidzi amene sanagwiritsidwe ntchito mokwanira kuti athandize anthu am'deralo. Chimene chititsa chidwi kwambiri, ndi akasupe amadzi otentha a Chinyunyu, gwero lalikulu, limene silikugwiritsidwa ntchito. Zotsatira zake, anthu am'mudzi wa Chinyunyu adatsalira "otsekerezedwa" mu umphawi wowopsa.

Cholinga chachikulu cha phunziro ili chinali, kufufuza ndikuwunika mwamene akasupe amadzi otentha a Chinyunyu angagwiritsire ntchito ngati chuma chothandizira pakukweza chuma cha dziko la Zambia mdera la Chinyunyu.

Kutengera mafotokozedwe a zochitika, machitidwe ofufuza za ntchito ndi kufufuza kwa zinthu, fufuzo ili lidagwiritsa ntchito njira zosakanikirana ndi anthu 139 (n=139) amene amasonkhanitsidwa mwadala kuchokera mu anthu ammidzimo, oyang'anira maboma, mabungwe azipembedzo, magulu azaboma ndi mabungwe aboma. Kufufuza, zoyankhulana komanso zokambirana zamagulu awiri (2) zidachitika kuti zisonkhanitse zambiri zokhudza izi. Zambiri zomwe zasonkhanitsidwa zidasanthulidwa mwa ziwerengero ndi m'njira imene imakhudzana mithu ya phunziro ili.

Pafupifupi, kufufuza uku kudatsimikiza kuti oyang'anira dera m'mudzi wa Chinyunyu alephera kugwiritsa ntchito mwayi wawo kugwiritsa ntchito molimbika cholowa ndi zinthu zachilengedwe mdera lawo, akasupe amadzi otentha a Chinyunyu. Zotsatira za kufufuza uku zawonetsa kuti akasupe amadzi otentha a Chinyunyu akhalabe opanda chitukuko komanso osagwiritsidwa ntchito. Kuphatikiza apo, zachilengedwe zam'derali zalephera kuthandiza kwambiri anthu am'mudzi wa Chinyunyu. Umboni wofufuzawu udawulula mgwirizano wabwino komanso wopindulitsa wa anthu am'mudzi pakupanga zisankho, kugawa m'phamvu ndi ulamuliro, zomangamanga ndikugwiritsa ntchito zachilengedwe za m'derali pakukula kwachuma mdera la Chinyunyu.

Fufuzo ili likufuna kutsatsa ndi kupanga akasupe amadzi otentha a Chinyunyu kupita kumalo opitilira zokopa alendo ngati njira yabwino yopititsira patsogolo chuma. Kuphatikiza apo, kufufza uku kuwonetsa kuti kasamalidwe ka akasupe amadzi otentha a Chinyunyu apititsa patsogolo, kulimbikitsanso kutenga nawo mbali kwa amene akugwira tchito popanga zisankho, kupereka zida zoyambira ndikukhazikitsa mfundo zachitukuko chamaboma am'deralo.

Mawu ofunikira: akasupe amadzi otentha a Chinyunyu, mudzi wa Chinyunyu, kugawa mphamvu ndi ulamuliro maderala, chitukuko, olamulira m'deralo, chitukuko cha zachuma, kutenga nawo mbali mderala, umphawi, akasupe amadzi otentha, maderala akumidzi, Zambia.

IFILI MUKATI KA CITABO (BEMBA)

Icalo ca Zambia calikwata sana ubunonshi mu filengwa-na-Lesa, intambi ne fishilano. Nangu cibe ifyo imibomfeshe ya ifi fintu ukufikapo pakuti fingaleta ubunonshi ku bekala muli ishi ncende caliba ubwafya ubwakulisha. Umulandu umo untu twingaloleshapo tumfukumfuku twa menshi ayakaba nangu utupiisha utwashinguluka icalo ca Zambia makamaka muncende shamu mishi uto utushabomfiwa ukufikapo mukuleta ubunonshi ku bekala calo. Akapisha kamo pali utu, ni ako akaku Chinyunyu, akashabomfiwa ukufika ilelo. Napamulandu wa ici, abekala calo baku Chinyunyu bacilli “balikatwa” mubupina ubwabipisha.

Umulimo uukalamba uwa ili isambililo, kufwailisha nokumona ifyo akapisha kaku Chinyunyu kengabomfiwa nge ntuntuko ya bunonshi bwa calo ca Zambia nobuyantanshi ubwingacitika mu mushi wa Chinyunyu.

Ukushintilila pa bulondoloshi bwa ficitwa, imibombe ne mifwilishishe ya fintu, uku kufwailisha kwabomfeshe inshila yamifwilishishe iyakusankanya umwasangilwe abantu abali 139 (n=139) abasalilwe ukufuma mu bekala calo abakuli iyi ncende, intungulushi sha cikaya, ifilonganino fya mapepo, utubungwe twa bekala calo elyo fiputulwa fya buteeko. Ukufwailisha, ukwipushanya pamo na mabumba yakulanshanya yabili yalicitilwe pakukolonganika ifishinka. Ifishinka ifyakolongashiwe fyalipitulwikwemo mu fipendo namu fikomo.

Pali fyonse, uku kufwailisha kwasondolwele ukutila abekala calo bamu mushi wa Chinyunyu balifilwa ukubomfya ubusuma bwa fintu ifisangwa mu ncende yabo, utumfukumfuku twa menshi ayakaba. Ifyasangilwe muli uku kufwailisha fyasokolwele ukutila utumfukumfuku twa menshi twaikalafye ukwabula ubuyantanshi kabili ukwabula ukubomfiwa. Mukulundapo, ici cilengwa-na-Lesa califilwa ukulundako ubunonshi no buyantanshi bwa bekalacalo bamu mushi wa Chinyunyu. Ifishinka ukufuma kuli uku kufwailisha fyalisokolola ukuti paliko ubwampano bumo pakati ka kuibimbamo kwa bekala calo mu kupanga kwa masalo, ukupelwa amaka elyo no butungulushi, ifikulwa nokubomfya kwa filengwa-na-Lesa pakuleta ubuyantanshi bwamu mushi wa Chinyunyu.

Uku kufwailisha kulefwaya ukuti kwingaba ukwalula utumfukumfuku twa menshi ayakaba ayaku Chinyunyu ukuti tube twabunonshi ubwakulaletako abatandashi bakutamba ifilengwa-na-Lesa ico icingawanya ubwikalo bwa iyi ncende. Mukulunapo, uku kufwailisha kuletontokanya ukupeela abekala calo amaka yabutungulushi bwa utu tumfukumfuku twaku Chinyunyu, ukubimbamo abekala calo mukupanga amasalo, ukukulako ifikuulwa elyo nokupanga ifikomo fyabuyantanshi ifya buteeko bwa cikaya.

Amashiwi ayakankala: Utumfukumfuku twa menshi ayakaba utwaku Chinyunyu, umushi wa Chinyunyu, ukupelwa amaka kwa butungulushi, ubuyantanshi, ubuteeko bwa cikaya, ubunonshi no buyantanshi bwa ncende, ukubimbamo abekala calo, ubupiina, utumfukumfuku twa menshi ayakaba, incende yamu mushi, Zambia.

DECLARATION

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Title: Maximising the Use of Thermal Springs for Local Economic
Development in Rural Zambia: A Case Study of Chinyunyu
Thermal Springs, Rufunsa District

I, Chibwe Chisala, do hereby declare that I am the sole author of this research dissertation. This piece of work is my own, to the best of my knowledge. It has never been produced or submitted at this or any institution for the purpose of an academic award. I must hasten to indicate that all work done by other individuals has been duly acknowledged.

I also declare that the thesis was subjected to originality checking software and that it falls within the accepted requirements for originality by the University.



SIGNATURE

02.07.2021

DATE

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It has taken the author over 36 months to put together the information gathered into this piece of work. Let me express my sincere gratitude to the Manager of the Chinyunyu thermal springs, Mr George Phiri, who held my hand to run me through the operations of the thermal springs, accompanied me in the transect walks in Chinyunyu Village, and assisted me in conducting interviews. Indeed, words cannot express my appreciation to this humble man. I remain indebted to you, Sir.

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DEDICATION

I wish to dedicate this piece of work to my parents, Mr Beatwell Sekeleti Chisala and Mrs Phoster Mwansa Chisala, who scarified so much to ensure that I got the best education.

Further, I dedicate this work to my wife, Yande Namwinga Chisala, and my three lovely daughters, Mwansa, Bupe, Chanda, and my son Chibwe Sekeleti Chisala Jr (CJay/Chichi) – much love to you guys! I hope this work will inspire you to achieve all your dreams.

All in all, this work is dedicated to all the hardworking community members of Chinyunyu Village. This work is meant to uplift your plight and it is my hope that the recommendations in this report will fall on the ears of the powers that be and that some of the proposals will be implemented.

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LIST OF ABBREVIATIONS

7NDP	Seventh National Development Plan
AEDC	America Economic Development Council
AfDB	Africa Development Bank
Ar	Argon
BoZ	Bank of Zambia
BSAC	British South Africa Company
CBD	Central Business District
CBT	Community Based Tourism
CDF	Constituency Development Fund
CEEC	Citizens Economic Empowerment Commission
CH ₄	Methane
CO ₂	Carbon dioxide
COVID-19	Coronavirus Disease of 2019
CSO	Central Statistical Office
DDCC	District Development Coordinating Committee
DRC	Democratic Republic of Congo
DSLGL	Decentralisation and Strengthening of Local Government
EAZ	Economic Association of Zambia
EFZ	Evangelical Fellowship of Zambia
FGD	Focus Group Discussion
FISP	Farmer Input Support Programme
FNDP	Fifth National Development Plan
GDP	Gross Domestic Product
GRZ	Government of the Republic of Zambia
GW	Global Wellness Institute
H ₂ S	Hydrogen Sulphide
HIPC	Highly Indebted Poor Countries

ICT	Information and Communications Technology
IDC	Industrial Development Corporation (Zambia) Limited
IDP	Integrated Development Plan
IFAD	International Fund for Agricultural Development
IGC	The International Growth Centre
IKS	Indigenous Knowledge Systems
ILO	International Labour Organisation
IMF	International Monetary Fund
INDECO	Industrial Development Corporation of Zambia Limited
ITC	International Trade Centre
JCTR	Jesuit Centre for Theological Reflection
JICA	Japan International Cooperation Agency
KII	Key Informant Interview
KM	Kilometre
KW	Kilowatt
LED	Local Economic Development
LGAZ	Local Government Association of Zambia
LGEF	Local Government Equalisation Fund
MDG	Millennium Development Goals
MINDECO	Mining Development Corporation
MMD	Movement for Multi-party Democracy
MMR	Mixed Methods Research
MNDP	Ministry of Development Planning
MoF	Ministry of Finance
MP	Member of Parliament
N ₂	Nitrogen
NAMBOARD	National Agricultural Marketing Board
NGO	Non-Governmental Organisation
NHA	National Housing Authority

NHCC	National Heritage Conservation Commission
O ₂	Oxygen
OECD	Organisation for Economic Cooperation and Development
PDCC	Provincial Development Coordinating Committee
PEMFA	Public Expenditure Management and Financial Accountability
PEST	Political, Economic, Social, and Technological
PF	Patriotic Front Party
PPP	Purchasing Power Parity
PRSP	Poverty Reduction Strategy Paper
PSM	Public Sector Management
RDC	Residence Development Committee
ROI	Return on Investment
R-SNDP	Revised Sixth National Development Plan
SADC	Southern Africa Development Community
SALGA	South African Local Government Association
SAP	Structural Adjustment Programmes
SARS	Severe Acute Respiratory Syndrome
SNDP	Sixth National Development Plan
SPA	Salus Per Aquam
SWOT	Strengths, Weaknesses, Opportunities and Threats
TAZAMA	Tanzania Zambia Mafuta
TNDP	Transitional National Development Plan
TV	Television
UDI	Unilateral Declaration of Independence
UNCTAD	United Nations Conference for Trade and Development
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNICEF	United Nations Children's Fund
UNIP	United National Independent Party

UNISA	University of South Africa
UNWTO	United Nations World Development Organisation
USD	United States Dollar
WDC	Ward Development Committee
WHO	World Health Organisation
WPR	World Population Review
WTO	World Trade Organisation
ZCCM	Zambia Consolidated Copper Mines
ZDA	Zambia Development Agency
ZDA	Zambia Development Agency
ZIC	Zambia Investment Centre
ZIMCO	Zambia Industrial and Mining Corporation Limited
ZIPAR	Zambia Institute for Policy Analysis and Research
ZKW	Zambian kwacha
ZTA	Zambia Tourism Agency

CHAPTER 1

INTRODUCTION

1.1. INTRODUCTION AND BACKGROUND

The Republic of Zambia, hereafter referred to as Zambia, is a southern African country rich in natural, environmental, cultural and heritage resources as listed by the United Nations Educational, Scientific and Cultural Organisation (UNESCO). Zambia is blessed with environmental and natural phenomena such as caves, thermal springs, mountains and valleys, numerous waterfalls, and rivers which have received global attention even by international organisations such as UNESCO. The mighty Zambezi River cuts between Zambia and Zimbabwe and is the pride of the people of these two southern African countries, which were referred to as northern Rhodesia (Zambia) and Southern Rhodesia (Zimbabwe) during colonialism (Sardanis, 2014; Whitworth, 2014). Despite these resources, Zambia has not fully optimised the opportunities these resources present to grow her ailing economy which has slowed down since approximately 1973 when the price of copper plummeted around the world. For example, the people of the southern province where the Victoria Falls is situated could benefit more from this immense natural resource if efforts could be made to turn it into a viable economic resource (Bwalya-Umar & Mubanga, 2018; Chomba & Sianjobo, 2014). This assertion is corroborated by Mafukata (2020), who argues that maximisation of the use of environmental and cultural resources – especially among resource-poor rural communities in Africa – could trigger community-led entrepreneurship development which in turn could promote local economic development. Complementing Mafukata (2020) is Monaheng (1995), who contended that local people possessed useful skills and expertise to help themselves into self-development. In the case of Zambia, a case in point is the thermal springs that are dotted around the country, mostly in rural areas, that have not been fully and sustainably utilised to the benefit of the local communities (Bwembya, Chomba & Mainza, 2018; Kapasa, 2014; Niles, 2012). Out of approximately 80 thermal springs in Zambia, a paltry one thermal spring can be said to have been fairly developed, the Kapishya thermal springs (ZTA, 2019). These natural resources have given the

country a comparative advantage over other neighbouring countries, for example, who are not as richly endowed with natural resources as Zambia. It is therefore evident that a crucial opportunity with comparative advantage in this case would mean developing projects and industries based on these natural resources. Currently, Zambia's comparative advantage regarding natural resources such as these thermal springs is of no use for improving the living standards of the local communities that host them. These resources have to be transformed into a competitive advantage (Bwalya-Umar & Mubanga, 2018; Dess, Lumpkin, Eisner, Mc Namara, & Kim, 2012; Porter, 1985; Schwanitz, Muller & Margret, 2002). Competitive advantage is the ability of a country or region to leverage the local resource endowments to outperform other regions or countries and gain a larger domestic and global market share (Schwanitz et al., 2002; Porter, 1985). Zambia should attempt to do this to maximise the ever-growing tourism industry in the developing regions – especially southern Africa. This, therefore, emphasises that the creation of a competitive advantage is through a process of sustainable exploitation or value-addition performed in areas of comparative advantage such as the thermal springs. The concept of comparative advantage is explained in line with Jasen and Zhang (2005), who contended that that tourism flows are also trade flows, but in the form of people travelling to get the goods and services from the tourism destination countries. That in itself entails that tourism destination countries can be considered as exporting countries and that natural resource endowments such as thermal springs can influence the flow of tourists to a destination. In fact, the World Trade Organisation (WTO) classifies tourism as trade in services under what they call mode 2 - consumption abroad, i.e., movement cross-border of consumers (Jasen & Zhang, 2011).

Despite possessing this comparative advantage of natural resources, Zambia has failed to fully utilise them and continues to be among the poorest countries in the world (World Bank, 2018), with most recent statistics by the World Population Review (WPR) (2021) showing the country sitting on position number 15 from the bottom on the global poverty rating. Motsatsi (2018), in his evaluation of the determinants of tourism demand in the SADC region, deduced that low capital investments in the tourism sector were attributable to the failure to develop and

fully utilise these environmental, cultural, and natural resources in Zambia. Local authorities that host these resources are financially constrained to adequately invest in developing the touristic sites such as the thermal springs. Local authorities are not fully decentralised to an extent where they have revenue autonomy and freedom of expenditure to invest in developing local resources (Gumboh, 2012, Mukwena, 2014). Chomba and Sianjobo (2014) proposed that Zambia needed to increase her budgetary allocation for natural resources development. In addition, ZIPAR (2015), EFZ (2013) and EAZ (2011) sited lack of local participation in development design and implementation as a one of the stumbling blocks to local development. Zambian policy documents further cited poor access road infrastructure leading to the tourist sites as the main reason these resources remained untapped for local economic development (GRZ, 2017; 2018b).

South Africa remains a leading example in sub-Saharan Africa that has sustainably exploited its natural resources such as thermal springs (Olivier, Van Niekerk & Van der Walt, 2008). South Africa has over 31 known thermal springs that have been commercialised and developed into family leisure, recreational resorts, and other tourism activities (Boekstein, 1998; 2014; Olivier & Jonker, 2013; Tshibalo, 2011). For example, the Aventura Resorts in Mpulanga; Bela Bela resort, Klein Kariba and Sagole in Limpopo; Cradock Spa in Eastern Cape, Natal spa and Shu-Shu thermal springs in KwaZulu-Natal are some of the well-known thermal springs in South Africa that have been in existence for years, providing notable economic opportunities to the local communities (Diamond & Harris, 2000; Hoole, 2000; Kent, 1946; Olivier et al., 2008; Olivier & Jonker, 2013; Tshibalo, 2011; 2020). Thermal springs have also been used worldwide as resources for sustainable tourism. In Japan, *onsen* bathing at the onsen thermal springs is one of the most famous touristic activities that receives over 151 million people per annum, contributing immensely to the local economy (Erfurt-Cooper, 2010). The largest thermal springs located in Wyoming, United States of America (USA), the Yellowstone thermal springs, receive over four million visitors a year (Olivier & Jonker, 2013). In Turkey and China, thermal springs have been extremely popular in the tourism industry since the 1960s, where they have been used for tourism,

recreational purposes and wellness (Lee & King, 2008; Lund, 2007; Olivier & Jonker, 2013).

Thermal springs are a critical economic input. The Global Wellness Institute (GWI) (2018) estimated that there were 37,057 thermal springs in the world, employing approximately 1.8 million people. These thermal springs earned revenues in excess of USD56 billion per year (GWI, 2018). The thermal spring sector accounted for seven million visitors to sub-Saharan Africa who spent approximately USD800 million per year (GWI, 2018). This thesis argues that these resources could be used to benefit the local communities that host them.

The thermal spring sector, therefore, has the potential to contribute to Zambia's local economic development. This study focused on one of the potential natural heritage resources that could transform the locality, the Chinyunyu thermal springs located in Chinyunyu Village of Rufunsa District. Chinyunyu Village is located in the rural part of the country approximately 80 kilometres from the capital city, Lusaka towards the eastern part of the country. Rufunsa district is home to approximately 100,000 inhabitants who predominantly survive on subsistence farming (Simbao, 2014; WPR, 2021). Chinyunyu Village hosts two thermal springs located about 300 metres apart of each other.

Zambia has numerous thermal water sources in its 10 provinces. According to Kapasa (2014), Legg (1974), Musonda and Sikazwe (2005) and Niles (2012), Zambia's thermal springs are mainly found in northern, eastern, and southern parts of Zambia. These thermal springs have been used by the locals for religious rituals, and spiritual and health benefits (Niles, 2012). The selection of thermal springs at Chinyunyu Village for this study was encouraged by its proximity to the city and the area's endowment with two thermal springs that could improve the quality of life for the local communities. Granted that there are other non-economic benefits accruing from the thermal springs such as religious, traditional and spiritual aspects, this study attempts to compliment these prevailing benefits and utilisation of the thermal springs in order to maximise the benefits to the local people. In other words, the study does not in any way propose disrupting the already existing cultural and traditional benefits of the thermal springs.

Tshibalo (2011), in a study undertaken in a rural-based community in northern South Africa, developed an attractive and persuasive argument demonstrating that thermal springs could be of beneficial returns for resource-poor communities. Tshibalo (2011) would, however, not exhaust some critical economic references which the thermal economy could bring into local political economies, for example, Zambia's Chinyunyu case. Whereas Tshibalo (2011) presented a solid case on the "Strategy for the sustainable development of thermal springs", a case study for Sagole thermal springs in Limpopo Province, South Africa, the current study extends its scope into how Zambia's local economic development (LED) could link up with the thermal springs economy to trigger local development. The current study goes a step further to develop or suggest a model for achieving this initiative.

This study aimed at examining and evaluating possibilities of maximising the use of the thermal springs by suggesting community-based tourism (CBT) projects that would spur LED in the village. In this regard, maximising means making the best use of the thermal springs. Adopting Olivier and Jonker (2013) and Tshibalo and Olivier (2010) definitions, making the best use of thermal springs implies optimising the use of the resource to benefit or further benefit the local community. The idea of the study was to adopt a LED approach, a process where local government authorities work closely with community actors such as community-based groups and the private sector to manage their existing resources for creating new jobs and stimulating economic activities in an economic area (Chitembo & Silumesii, 2011; Hampwaye, 2008; Helmsing, 2005; Nel, 2001; Rogerson, 2015). The LED approach therefore entails that decisions to develop the local areas emanate from the community level and escalate to the top decision makers. The traditional, colonial driven, top-down approaches where decision making and power are centralised have not improved lives at a community level in many developing countries (Helmsing & Egziabher, 2005; Rogerson, 2015; Rodríguez-Pose & Tijmstra, 2007). The LED approach hence tries to correct this centralisation of decision making at the topmost levels to a bottom-up approach. In this study, the focus was on the thermal springs as the existing natural heritage resource that could be sustainably exploited to derive benefits for the local community, an approach also supported by Tshibalo (2011). The socio-economic benefits of Chinyunyu are

expected to spill over to the entire Rufunsa district. The proposed CBT is expected to create increased employment opportunities for the people of Chinyunyu. In addition, the commercialisation of the thermal springs is expected to transform the asset into anchor industry that would in turn provide a readily available market to the farmers, entrepreneurs and the cottage industry within the village thereby, improving the livelihoods of the local citizens who have been hitherto wallowing in poverty and squalor (De la Fuente, Murr & Rascón, 2015).

This study assumes that thermal springs have become major tools of promotion of sustainable rural tourism and are therefore appropriate for leading LED (Chuamuangphan, 2016; Lee & King, 2008; Lund, 2002; 2007; Tshibalo & Olivier, 2010). Evaluating the optimum uses of the Chinyunyu thermal springs into a LED instrument to promote community-based tourism development, therefore, fits very well in this discussion. This study argues that maximising the use of thermal springs for LED projects in resource-poor districts and provinces in Zambia would be beneficial to the hitherto ailing economy (Bwembya et al., 2018; GRZ, 2017; GRZ, 2018a; GRZ, 2020; Kapasa, 2014).

1.2. SELECTION OF THE CHINYUNYU THERMAL SPRINGS FOR THE PURPOSE OF THE STUDY

The Chinyunyu Village was chosen as a case study. The choice of Chinyunyu Village was encouraged by the following:

- (i) Zambia has several thermal springs scattered all over the country's 10 provinces (Bwembya et al., 2018; Legg, 1974; Niles, 2012). The purposive selection of Chinyunyu thermal springs considered the fact that it would have been difficult to reach all the areas where these hot springs were found as most areas in the greater part of Zambia were inaccessible because of poor road infrastructure, for example.
- (ii) The researcher can reach Chinyunyu more easily than all others because of proximity to the central business district (CBD) of Lusaka where the researcher would be based during the study process.

- (iii) The researcher received endorsement to carry out the study from the National Heritage Conservation Commission (NHCC), the institution managing the Chinyunyu hot springs.
- (iv) The perceived potential of the Chinyunyu hot springs to bring about improved livelihoods for the locals if not the entire Zambian economy and population. The existing LED tools such as the Constituency Development Fund (CDF) projects, and the Farm Input Support Programme (FISP) have failed to bring the needed local economic development in the rural areas (EFZ, 2013; ZIPAR, 2015). There is a need therefore to look elsewhere for LED development.
- (v) The proximity of Chinyunyu to Lusaka CBD makes it more appropriate for the relevant stakeholders to implement the findings of the study and transform Chinyunyu into an economic hub for tourism. It is expected that numerous local and international tourists would easily be attracted to Chinyunyu from Lusaka, the metropolitan city, which is expected to feed tourists into the Chinyunyu project.
- (vi) A growing health, wellness and fitness-conscious population coupled with a bulging middle class in Zambia would make thermal springs an ideal recreation activity. In addition, this would be a suitable place for the aged and retirees who would frequent the hot springs for medical treatment (balneotherapy) purposes and longevity as thermal springs are said to treat rheumatism, neuralgia, and gynaecological and digestive disorders (Lee & King, 2008).
- (vii) A shift in the tourism policy by the Zambian government to focus more on domestic tourism as opposed to international tourism provides an opportunity for the hot springs to become sustainable community tourism-based projects. This re-focus of policy direction is consistent with Porter (1990), who argued that domestic demand was more pertinent than foreign demand because it was easier and quicker to observe and adapt to consumer needs and preferences of markets that were nearby.

- (viii) The advent of the coronavirus disease of 2019, otherwise known as COVID-19, an acute, sometimes severe, respiratory illness caused by a novel coronavirus SARS-CoV-2, has pulverised the global economy, mainly crippling the aviation and international tourism sectors. This phenomenon has made it imperative for countries to strengthen domestic markets. The aviation sector, however, is expected to rebound in 2023 to pre-pandemic levels (UNWTO, 2020). Until that time, the international tourism sector will remain subdued.
- (ix) The chemical composition of the Chinyunyu thermal springs' fluid is favourable and safe for bathing, swimming and balneology (Kapasa, 2014; Musonda & Sikazwe, 2005).
- (x) The temperature of the fluid at the thermal springs can be regulated to serve various tourist activities such as sauna, spa and swimming.

1.3. STATEMENT OF THE PROBLEM

The Chinyunyu thermal springs are a critical resource that is under-utilised for LED in the locality of Chinyunyu in particular and in Zambia in general (Kapasa, 2014; Musonda & Sikazwe, 2005; NHCC, 2018 cited in Nawa, 2008; Phiri, 2019). Therefore, an opportunity of maximising the use of this resource for the empowerment of the local communities regarding LED is being missed. The locals remain unfairly “trapped” in a vicious cycle of high poverty despite the presence of this crucial resource. The purpose of this study was to provide an opportunity to explore the use of Chinyunyu thermal springs as a resource for local economic development to benefit the local population. The study explored local people’s participation in finding community-led solutions, using Chinyunyu thermal springs as a case study. The study contributes efforts in response to the concerns which have been raised in a plethora of literature (EAZ, 2011; EFZ, 2013; Gumboh, 2012; Phiri, 2016; Matipa, 2020; Mpundu, 2020; National Assembly of Zambia, 2019; ZIPAR, 2015) that developmental projects identified and implemented in rural localities have often lacked community participation and involvement which have been cornerstones of local economic development in developing regions. Such projects, which could have had an impact on the local livelihoods, have therefore

lacked ownership by the communities who are supposedly the ultimate beneficiaries. This is evident through high rates of vandalism, underutilisation or shunning the use of facilities, and making the projects unsustainable, with little or no impact on poverty alleviation in the local areas (EAZ, 2011; EFZ, 2013; Musenge, 2013; National Assembly of Zambia, 2019).

The commercialisation of the Chinyunyu thermal springs resource into a viable community-based local economic development model would encourage development and growth of domestic and international tourism in Chinyunyu, and beyond. With all the associated benefits of a viable tourism economy within this area, significant efforts would have been made to assist local and neighbouring communities to emancipate themselves from the ravaging poverty in Chinyunyu hovering at 79 percent (De la Fuente et al., 2015). The rural poverty rate of Chinyunyu Village is higher than the national poverty incidences of poorest countries in the world such as Malawi and the DRC (World Bank, 2018). It is equally higher than Zambia's rural average poverty incidence at 76.6 percent. Therefore, maximising the use of this resource through a sustainable commercial model that can be implemented jointly by the local government authorities and the community actors, with the assistance of experts from outside the district, will assist in alleviating this high poverty level in the village. Critically, studies that have made important reference to thermal economy and local economic development such as Tshibalo (2011) have failed to propose a functional model to attain this imperative. This study therefore sought to address this gap by emerging with a model which would provide the way forward.

1.4. RESEARCH OBJECTIVES AND QUESTIONS

This study was guided by a main aim (1.4.1) and a set of specific objectives (1.4.2), and they are both presented below.

1.4.1. Main aim

The main aim of this study was to explore the use of Chinyunyu thermal springs as an economic input to assist the cause of local economic development (LED).

1.4.2. Specific objectives

Specific objectives were to:

- (i) Analyse the socio-economic characteristics of the people in Chinyunyu Village.
- (ii) Evaluate the impact of the existing LED tools in Chinyunyu Village on poverty reduction of local households.
- (iii) Determine the level and nature of community participation in the decision making of LED/community-based programmes and projects.
- (iv) Investigate the current and potential/future uses of the Chinyunyu thermal springs.
- (v) Identify the most perceived ideal type of development that would optimise the use of the thermal springs and offer a strategy for LED in Chinyunyu Village.
- (vi) Investigate the limitations and shortcomings that could hinder the commercialisation of the Chinyunyu thermal springs as an agent for LED/rural development as perceived by the local community in Chinyunyu Village.
- (vii) Propose a commercial/business model for the Chinyunyu thermal springs that would spur LED in Chinyunyu Village without disrupting socio-cultural values.

1.4.3. Research questions

The main question was: *how could the Chinyunyu thermal springs be used as an economic input to assist the cause of local economic development (LED)?* The following specific research questions guided the thesis:

- (i) What are the socio-economic characteristics of the people in Chinyunyu Village?
- (ii) What is the impact of existing LED tools in Chinyunyu on poverty reduction of local households?

- (iii) What is the level and nature of community participation in the identification, development, implementation and monitoring of LED/ community-based programmes and projects?
- (iv) What are the current and potential/future uses of the Chinyunyu thermal springs?
- (v) What is the most perceived ideal type of development that would optimise the use of the thermal springs and offer a strategy for LED in Chinyunyu Village?
- (vi) What are the limitations and shortcomings that could hinder the commercialisation of the Chinyunyu thermal springs as an agent for LED/ rural development?
- (vii) What model can be developed to assist the community in Chinyunyu to conceptualise and commercialise the maximum use of the Chinyunyu thermal springs without disrupting its socio-cultural values?

1.5. PURPOSE AND SIGNIFICANCE OF THE STUDY

The purpose of this study was to contribute a model which could be used to turn the Chinyunyu thermal springs into a viable economic tool with regard to local economic development (LED). The challenge was that Chinyunyu thermal springs, which could be used to assist the community to lift itself from poverty, lay fallow and unutilised. This study aimed to correct this, and also to provide the way forward.

So far, studies on the thermal springs in Zambia have focused on determining the chemical composition of the thermal springs' fluid and the feasibilities of geothermal energy generation (Bwembya et al., 2018; Ferguson, 1902; Kapasa, 2014; Legg, 1974; Musonda & Sikazwe, 2005; Nawa, 2018; Niles, 2012; Wilmarth, Haizlip, Prina & Vivian-Neal, 2018). Results of these studies were mixed, while some studies deduced that geothermal energy generation were not technically feasible due to unsuitable physical and chemical properties of the thermal spring fluid (Bwembya et al., 2018), Kapasa (2014) found the Chinyunyu thermal spring to be feasible for generation of electricity using the binary cycle system. Kapasa's study was based on the water samples collected from the thermal spring without

taking into consideration of the views of the local people in Chinyunyu Village. The community members of Chinyunyu Village were unequivocal on the perceived ideal type of development that would optimise the use of the Chinyunyu thermal springs to fully benefit the local community. A community-based tourism resort was selected to be an ideal type of development owing to its potential trickle-down effects such creation of employment, a market for other auxiliary enterprises and reduction of poverty levels in the community.

As far as this study is concerned, none of the studies have been undertaken to analyse and develop a tourism-based commercial model of the Chinyunyu thermal springs that would spur local economic development in Chinyunyu Village. There is no empirical evidence to assess the extent to which the thermal springs can assist in improving the livelihood of the local communities in Zambia. The current study aimed to redress this critical omission. Effective LED strategies have been a missing link in Zambia's quest for economic emancipation (LGAZ, 2018). Identifying a niche industry in Chinyunyu by working with the local citizens would possibly contribute to addressing the high poverty levels in the village. In other words, apart from making a new knowledge contribution in terms of content about thermal springs in Zambia and beyond, this study further delves into making a significant contribution in the developmental disciplines through methodological input. The use of statistical models will go a long way towards improving how the thermal spring economy literature approaches its future endeavours in research. Other studies that used statistical models such as Matipa (2020), who employed an estimation model to assess the extent of community participation in LED projects, provided a good reference for the estimation model. However, Matipa's study was limited to community participation only. This thesis goes beyond community participation and estimates the significance of thermal springs in Zambia's LED. De Bruyn (2018) also applied regression models to estimate the impact of tourism on the local economies of South Africa. De Bruyn (2018) relied on correlation analysis to estimate his model. This study went beyond the correlation model and employed ordered probit and ordered logit estimation models to confirm the association of each identified variable to LED.

In addition, the information gathered from this study has critical implications for the relevant policy makers regarding designing national development planning documents. The thesis builds on the existing theories and literature pertaining to LED, decentralisation, and community participation, therefore contributing to the body of scientific knowledge.

1.6. CONTRIBUTIONS OF THE STUDY

This study contributes to the general discourse on maximising the use of thermal springs for local economic development in rural areas. These contributions include the following:

- (i) The study enhances the understanding of the concept of local economic development and how local heritage resources and endowments can be utilised to develop rural areas with a view to motivating and stimulating local government authorities' interest in adopting the LED approach.
- (ii) The study underscores the existing socio-economic challenges currently faced in Chinyunyu Village.
- (iii) The study provides evidence-based justification for the development of the Chinyunyu thermal springs as a community-based tourism resort. This has provided an opportunity for Zambia to have the first ever health tourism centre in the country. Thermal springs are valuable heritage resources with potential environmental, social, and economic benefits that are feasible once optimal uses are identified.
- (iv) The study empirically demonstrates that effective involvement of community actors, decentralisation, exploitation of local resources and infrastructural development can significantly contribute to local economic development.
- (v) The study presents an ideal commercial model for maximising the use of the Chinyunyu thermal springs that could be considered by the relevant developers.

- (vi) The study provides a development framework upon which the relevant stakeholders can leverage in their quest to develop other resource-rich rural areas.

1.7. LIMITATIONS OF THE STUDY

The study faced the following limitations:

- (i) The non-availability of a list of housing units (households) for the Chinyunyu Village was one of the major limitations. Therefore, the judgemental sampling method was used in the selection of respondents and participants.
- (ii) There is paucity of specific theories that comprehensively discuss the thermal springs in Zambia and the concept of local economic development. The author heavily relied on a series of relevant theories and literature of thermal springs in other countries that were deemed relevant.
- (iii) The study was limited to the thermal springs in one district as a case study. In addition, the study had a limited sample size due to limited financial resources. Chinyunyu Village is vast and sparsely populated. Huge sums of money may be required to cover the entire area and also spread the research to other parts of the country.
- (iv) Some key informants still felt uncomfortable to disclose what they termed confidential information despite assurance of the confidentiality and anonymity ethics that this study adopted.
- (v) Some key informants were elusive and kept postponing the interviews. This meant that the timeframe for data collection had to be extended on several occasions – extending the contract for the research assistant, which had cost implications.
- (vi) The study was undertaken close to an election period; hence it was challenging to get hold of the political leadership as they were mostly in the field campaigning.
- (vii) The COVID-19 pandemic limited the access to other potential participants and respondents who could have provided additional information on the topic of study. Some individuals were not comfortable to physically meet with the researcher to avoid the chances of contracting the coronavirus despite

implementing health protocols as recommended by the country's Ministry of Health.

- (viii) The poor road network within the Chinyunyu Village was challenging as it affected the pace of distributing and collecting questionnaires. In addition, data collection was done in the rainy season, so some inner roads proved to be impassable.

1.8. STRUCTURE OF THE DISSERTATION

This thesis is discussed in six clearly demarcated chapters which have been structured as follows:

Chapter 1: Introduction and background to the study

Chapter 1 provides the introduction and background of the study; a statement of the problem; the purpose of the study; research questions, the objectives of the study and definitions of the key concepts.

Chapter 2: Literature review

Chapter 2 reviews literature germane to the study: the theoretical review of the subject matter, historical economic development background of Zambia, history of poverty structures and their evolution in Zambia; the local government structure in Zambia, the decentralisation process in Zambia; history on the thermal springs; a review of different uses of thermal springs; the evolution of the LED concept; the LED attempts in Zambia; the tourism industry in Zambia; a review of the commercial models; and clarification of concepts related to LED.

Chapter 3: Research methodology

This chapter outlines the adopted research paradigm; the study design, the sampling methodology, justification of the chosen sampling method, data collection instruments used, limitations of the study, and assumptions.

Chapter 4: Data analysis, findings, and discussion

Chapter 4 is dedicated to the presentation of detailed data analysis, results, and findings. Quantitative data from the survey was analysed using ordered probit as the main estimation model for the qualitative part of this research study. The choice

of this model was informed by ordinal variables with categories that are ranked from low to high and vice-versa, which might not meet some standard assumptions of linear regression models (Long & Freese, 2014; Verbeek, 2004). Qualitative data from the semi-structured interviews, focus group discussions (FGDs), and secondary sources was thematically analysed.

Chapter 5: The proposed commercial model for the Chinyunyu thermal springs

Chapter 5 presents a comprehensive commercial model for the Chinyunyu thermal springs that could be adopted by the Republic of Zambia to maximise the use of heritage resources such as the thermal springs. The model employed in this study is based on the Osterwalder and Pigneur (2010) commercial canvas model.

Chapter 6: Conclusion and recommendations

Chapter 6 concludes the discussion and provides policy implications of the study. The commercial model of the Chinyunyu thermal springs is presented in this chapter and recommendations offered.

CHAPTER 2

LITERATURE REVIEW

2.1. INTRODUCTION

This chapter reviews the literature spread over the targeted themes and sub-themes meant to guide the discourse of this study. The literature review is guided by the main aim and specific objectives of the study. In other words, the review comprehensively covers such areas as the history of poverty structures and their evolution in Zambia prior to independence in 1964 and in the post-liberation period. This review also presents a comprehensive characterisation of the socio-economic profiles of the population in Zambia followed by literature on the efforts of the government to revitalise the Zambian economy in the post-liberation period. In essence, this chapter covers a broad review of Zambia's economic policy in relation to poverty reduction and alleviation amongst the poorest of the poor. The chapter focuses on the issues of local economic development (LED) in Zambia with special emphasis on the impact of LED/community-based projects in poverty reduction and alleviation. This literature review has substantial interest in the improvement of the welfare of the people of Zambia. Specific literature targeting rural economic development was preferred in relation to the case study which had a rural focus. In addition, the study reviewed literature on the level of participation of the local people in LED/community-based projects in Zambia with special focus on successes and complexities. The chapter further reviews the concept of commercial models and the constraints which could hinder the commercialisation of LED projects such as the one that the case study addressed at the Chinyunyu thermal springs. The chapter begins by outlining different theories that underpin the study.

2.2. THEORETICAL UNDERPINNINGS

This section presents and discusses the major theories which underpinned this study. The theoretical underpinnings are critical in any study as they assist researchers to connect to the existing knowledge for an in-depth understanding of the phenomena being studied and assist in the selection of an appropriate research method (Mkhomazi & Iyamu, 2013). The theoretical underpinning encompasses

both technical and social contexts involved in a research study (Gregor, 2002). They are generated from existing, already tested and validated theories in the literature and are considered as generally acceptable theories in scholarly literature (Grant & Osanloo, 2014). Theoretical underpinnings provide support for the rationale and purpose for the study, the significance of the study, and the research questions (Anderson, Day & McLaughlin, 2006). Lysaght (2011) argued that theoretical underpinnings provide a clear structure and vision for the study. The underpinnings serve as a foundation, a ground base, or an anchor of the study from which knowledge is derived (Grant & Osanloo, 2014). Lysaght (2011) likens theoretical underpinnings to the blueprint of a house, asserting that studies without theoretical underpinnings are like a house built without a blueprint. It can therefore be interpreted and justified those studies underpinned by appropriate theories are strong and better structured from the first to the last chapter (Grant & Osanloo, 2014; Sarter, 2006; Torraco, 1997).

Whereas studies of this nature have used a broad range of theories, this study has selected, among others, the growth-pole theory of Francois Perroux, the regional and local economic theory of Walter Isard, the diamond theory of Michael Porter, the decentralisation theory of Wallace E. Oates, the bricolage theory of Claude Levis-Strauss, a ladder of citizen participation of Sherry R. Arnstein and the big push theory of Paul Rosenstein-Rodan.

2.2.1. Growth-pole theory

The growth-pole theory was developed by the French economist Francois Perroux in 1950 as an economic planning model for France (Perroux, 1955; Vlado & Chatzinikolaou, 2020). The growth-pole theory became more prominent in regional development policy in the post-World War 2 era (Leigh & Blakely, 2017). The theory aimed at bringing about local economic development in disadvantaged regions. Perroux's theory critiques the claim by classical theorists that growth tends to follow the low cost of factors of production. He based his theory heavily on the Schumpeterian theory of the role of innovators and large firms (Vlado & Chatzinikolaou, 2020). According to Schumpeter, development takes place as a result of discontinuous spurts that are created by the innovative entrepreneur

operating in large-scale firms (Schumpeter, 1934). Similarly, Perroux argued that for a country to develop to higher levels of growth, a precursor was to develop one or more regional centres to stimulate economic strength within itself, i.e., cutting-edge/ propulsive industries (the pole), firms or other designated actors in their field (Leigh & Blakely, 2017). Perroux (1955) postulated that growth appears in points or development poles, not everywhere and not all at once. This characterisation is very much the belief of the Zambian government, which has sought to build its economy in the regions from regional centres called districts. During the time of Zambia's fifth republican president, Michael Sata, the country adopted the Revised Sixth National Development Plan which promoted and upheld a regional growth strategy for the economy.

Ever since 1955, the growth-pole theory has been adopted by scholars such as Myrdal (1957); Hirschman (1958); and Friedmann and Weaver (1979) in the discipline of development studies underpinning analyses of resource-based economic development and growth across the world (Vlados & Chatzinikolaou, 2020). The popularity of this theory has since increased – especially in the 1990s during which period numerous researchers (Konsolas, Papadaskalopoulos & Plaskovitis, 2001; Krugman, 1999) used it with success.

The commercialisation of the Chinyunyu thermal springs into a community-based tourism enterprise can be justified by the growth-pole theory. This study argues that the Chinyunyu thermal springs can be transformed into a growth pole that can spur LED in Chinyunyu Village. The growth-pole theory clearly outlines how the *spread effects* of growth poles help to develop lagging regions such as Chinyunyu Village. This occurs when the *spread effects* become stronger than the backwash effects, as elaborated in Myrdal's (1957) *cumulative causation* theory. However, the limitation of the growth theory is that, for instance, tourism is not necessarily concentrated in poles like a propulsive manufacturing company but spread out in a city. Therefore, application of this theory to work for the tourism sector was tweaked to consider a "growth pole" as the entire city centre. Perroux's theory is usually used to explain a development pattern of a single company or an industry and not an economic centre that consists of different types of companies – engines of diffusion. Chinyunyu Village offers this opportunity.

2.2.2. The regional and local economic theory

The regional and local economic theory was derived from a field of regional science originally founded by an American economist, Walter Isard, in 1940s (Jackson, 2004). By 1956, Isard had published numerous publications on location and the space economy (Isard, 1971; Jackson, 2004). Isard worked closely with another American economist, Wassily Leontief, to develop the regional input-output model (Isard, 1971), which examines the interdependence of industries in a local economy and demonstrates that spending in one sector influences each of the other sectors in a locality (Isard, 1971; Miller & Blair, 2012). For example, what happens when a cultural and heritage resource such as the Chinyunyu thermal springs is commercialised? To commercialise the thermal springs, it would mean more workers would have to be hired, which directly increases total employment in Chinyunyu Village. However, the commercialised thermal springs would also need to purchase more products for use. Suppliers to the Chinyunyu thermal springs would respond to the increased demand by hiring more workers. Overall, the commercialisation of the thermal springs would result in a direct increase in total employment created by the thermal springs, as well as indirect increases in total employment created by the suppliers/ancillary firms. Therefore, the input-output model demonstrates that expanding the operations of Chinyunyu thermal springs through commercialisation would improve the quality of life in Chinyunyu Village.

Walter Isard inspired other social scientists to study the economics of geography, migration, and the use of land in local or regional areas. Smith (1972) applied the regional theory in his theory of industrial location, postulating that producers were in business to make profits and that the most profitable locations were where revenues exceeded costs. This theory supports Rawstron's (1958) assertion that industries are located in a place where cost was minimum. Regional and location economics was further popularised by Krugman (1999) in his *Trade and Geography* publication where he interrogated why spatial imbalances in the distribution of economic activities arose. Krugman (1999) discussed the input demand externality brought about by the expansion in aggregate output of one firm or several firms in a region. Krugman (1999), like Walter Isard, argued that such an expansion had the potential to attract input suppliers into the region who would in turn increase

economic activities, create additional jobs, and reduce the poverty levels in the region. The input-output model has been criticised for being severely simplified and restricted as it exclusively analyses the production side of the economy (Miller & Blair, 2012). It assumes a linear equation, that is, outputs of one industry are related to inputs of others. It also ignores the fact that industries can invest in technology to increase output, the so-called total factor productivity, without necessarily hiring additional workers. While the critique is valid, this study focused on the tourism industry of the thermal springs, which is a labour-intensive industry (Rogerson, 2006; 2015). The input-output model would therefore be realistic and applicable in this case study.

Leigh and Blakely (2017), the neoclassical theorists, argued that there were two major concepts of regional and local theories. They described them as equilibrium of economies systems and the mobility of capital. They argued that under the equilibrium of economies theory, the economic systems would attain natural equilibrium if there were no restrictions or regulations to discourage movement of capital. The logic behind this theory was that capital follows where there is a higher return on investment (ROI). Therefore, capital will flow from high-cost areas to low-cost areas. This assertion corroborated Rawstron's (1958) findings. Assuming this model was optimal, it would mean that economic development would be spread equally throughout the country. This study argues that commercialising Chinyunyu thermal springs into an attractive tourism enterprise would create a centre of higher returns that is expected to draw additional capital into the area from other investors. For example, the thermal springs in Bela-Bela, Limpopo, South Africa, have transformed the spatial and economic situation of the local municipality in Bela-Bela into a popular tourism hub in the country (Heetderks, 2013).

Deregulation on the movement of businesses was popularised by economic theorists like the Nobel Prize winner Milton Friedman (Leigh & Blakely, 2017). They posited that regulations were bound to disrupt free movement of capital. They called for full deregulation of the movement of capital. Friedman postulated that regulations protected uncompetitive companies (Friedmann & Weaver, 1979). He argued that in situations where firms collapsed due to their lack of competitiveness, workers who lost their jobs in these firms should be able to move to new areas of

employment as a stimulus to local development in these areas. While the author supports the need for capital to be mobile, this study emphasises that human capital needs to be acquired from within Chinyunyu Village and not from neighbouring regions or villages.

2.2.3. Diamond theory

The diamond theory of national advantage was originated by Michael E. Porter, an American theorist, in 1990 (Vlados, 2019). The aim of the diamond theory, also called Porter's diamond, was to explain how a nation can achieve competitive advantage because of certain factors available to them and how governments can play a role in facilitating a country's improvement on the global competitive economic environment (Porter, 1990). Porter (1990) proposed factor conditions that would make a nation more competitive, one of which was "related and supporting industries". Here Porter argued that firms that were co-located together (agglomerated) with related suppliers were more competitive than those located as stand-alone. The diamond theory has been useful and adopted by multilateral and regional organisations such as the Organisation for Economic Cooperation and Development (OECD), the World Bank, and the European Commission in developing their regional community models (Voinescu & Moisoiu, 2015). Other development economist scholars (Chobanyan & Leigh, 2006; Huggins & Izushi, 2015; Sonobe & Otsuka, 2014; Stiglitz, 1996; Vlados, 2019) have adopted this approach in developing their regional development models. The diamond theory was applicable in modelling the Chinyunyu Village into a competitive region where the Chinyunyu thermal springs would be an anchor industry. The Chinyunyu thermal springs would then attract other tourism-based enterprises/suppliers in the locality that would create clusters of activities within Chinyunyu Village. This would ultimately contribute to the overall LED of the Chinyunyu Village. Although the theory suggests that a country can create new factor advantages that would propel its economy (Porter, 1990), it omits elements of comparative advantage, that is, factors that a country or region is inherently endowed with such as natural heritage, land, labour, or its people. Since the study focused on the natural heritage resources, the thermal springs, as a comparative advantage for Chinyunyu Village, the diamond theory provided a valuable model in analysing how the district's

comparative advantage could be transformed into a village's competitive advantage through commercialisation.

2.2.4. Decentralisation theory

The decentralisation theory was developed in 1972 by Wallace E. Oates, an American economist (Bloch & Zenginobuz, 2012; Oates, 2006). The theory asserts that central governments are not capable of effectively implementing public policy on a regional basis, and advocates for devolution of power and authority to the lower levels of governance (Oates, 2006). The decentralisation theory built on the academic discourse of early scholars (Tiebout, 1956; Musgrave, 1959; Olson, 1969) on fiscal federalism/ fiscal decentralisation that provided guidance on addressing challenges of sharing responsibilities and fiscal power within the public sector. The theory assumes that decentralisation would ensure that uniform central policies across the country are applied optimally as sub-national governments consider the preferences of the local communities (Oates, 1972; 2006). It advocates for optimal allocation of resources and economic responsibilities between different government hierarchies, i.e., devolution of power and responsibilities from higher levels of government to lower levels to equally develop local regions in the economy (Gedvilaite, Novotny & Slavinskaite, 2020). The concept of fiscal decentralisation has been accepted by the OECD; the International Monetary Fund (IMF) and the World Bank in their studies of regional economic development (Gedvilaite et al., 2020). Numerous researchers (Kyriacou, Muinelo-Gallo & Roca-Sagalés, 2017; Rodríguez-Pose, 2009; Sacchi & Salotti, 2014; Song, 2013) have also recently used the theory to analyse and evaluate regional inequalities or regional discrepancies in income. The theory relates well to this study of developing the Chinyunyu Village through fiscal and power decentralisation to ensure efficient and adequate public resources are made available to the local authority overseeing the Chinyunyu Village. The theory assumes fair competition in the local government ecosystem that would mitigate rent seeking and corruption and incentivise them to deliver the pareto-efficient levels of output to their respective local economies (Oates, 1972; 2006). However, the validity of the theory is highly questionable as it focuses on the preferences of the local people. Instead of preferences in resolving poverty and regional inequalities, the theory could focus on satisfying the needs of people as the

needs do not significantly differ across regions; they are universal. Furthermore, the theory does not consider capacity issues at local authorities, which are considered to be weak and lacking in the technical skills for implementing the desired poverty reduction policies and programmes in developing countries (Yasmin & Shahzad, 2016). The LED approach advocates for the locals to define their own livelihood or rather pioneer their own development and calls for some external expertise to assist in designing and implementing policies while the locals still lead them. This study argues that the process of commercialisation of the Chinyunyu Village would require some external assistance to bridge any unforeseeable gaps in skills and capacity.

2.2.5. The bricolage theory

The bricolage theory was originally developed by Claude Levis-Strauss, a French anthropologist, in 1962 in his book titled *La Pensée Sauvage* (The Savage Mind) (Johnson, 2021). The bricolage theory was originally presented as analogy for how mythical thoughts work, selecting the fragments or left-overs of previous cultural formations and re-deploying them into new formations (Johnson, 2012). The concept was coined from a French metaphor, “*bricoleur*”, which means a craftsman who will utilise any tool at his disposal (available resource) to get the job done or create something (Mafukata, 2020). Therefore, the bricolage theory propagates creativity, that is, applying skills to create something valuable by utilising the available resources (Gbadegeshin, 2018). Recent researchers and scholars (Chinyoka, 2017; Gbadegeshin, 2018; Johnson, 2012; Kincheloe, McLaren, & Steinberg, 2011; Mafukata, 2020) have successfully adopted this concept in explaining rural development and LED initiatives. The commercialisation of the Chinyunyu thermal springs as a LED economic input would follow the bricolage approach to entrepreneurship, more of a “do it yourself approach”. The local people of Chinyunyu Village have a resource/tool that would need to be creatively and innovatively developed for their own benefit and hence facilitated for the bricolage rural development. The theory, however, limits the *bricoleur* to work within his parameters or use only the tools at his disposal to realise his project, hence constrained by his means of production that could compromise his outcome. The theory was tweaked to bring in the expert assistance

from outside, although letting the locals lead the process, for creating a more sustainable LED approach to developing the local resource, the thermal springs.

2.2.6. A ladder of citizen participation theory

A ladder of citizen participation theory was developed by Sherry Phyllis Arnstein, an American public policy analyst in 1969 (Arnstein, 1969; Cornwall, 2008). The theory suggests different levels of citizen participation with their corresponding impact on the final decision making. Arnstein's work was motivated by the belief that powerholders had on citizen participation which in many cases wasn't actually citizen non-participation. She believed that citizen participation was a categorical term for citizen power, meaning the redistribution of power that enables the underprivileged citizens or the have-nots that were excluded from the political and socio-economic processes, to be deliberately included in the future. The aim of this theory was for the powerholders of the affluent society to share the socio-economic benefits with the have-nots by having real power and not merely the empty ritual of participation (Arnstein, 1969). A ladder of citizen participation is one of the most widely used and influential models in the field of democratic citizen participation (Cornwall, 2008). Scholars such as Elizabeth Roch has used the model in her ladder of empowerment model (Roch, 1997) and Roger Hart, in the ladder of children's participation - participation of children in adult's programmes and activities now used by International Child Development Centre of the United Nations Children's Fund (UNICEF) (Hart, 1992, 2008). The model has further been used by Cornwall and Broke (2005) in investigating the form and function of development buzzwords in the statements of intent of development agencies such as "poverty reduction", "participation", and "empowerment". In addition, Cornwall (2008) used a ladder of citizen participation in exploring some of the meanings and practices associated with participation.

To analyse the participation and non-participation levels of the citizens, Arnstein (1969) developed a typography of eight levels of participation arranged in a ladder pattern. The bottom rungs of the ladder (nonparticipation level) are called (1) *manipulation* and (2) *Therapy* - describing non-participation that have been contrived as genuine participation. Here the have-nots are co-opted in community

development committees simply as rubberstamps and create an illusory form of “participation”. Furthermore, the powerless are normally considered to have mental illnesses as such, health experts and social workers subject them to a clinical group therapy which the experts consider as a form of involving citizens in the planning process. Rungs 3 and 4 are at the levels of “tokenism” that gives an opportunity to the have-nots to have a voice in the decision-making process normally through (3) *Informing* and (4) *Consultation*. The levels of tokenism portray a picture of “participation” by the have-nots however, the have-not citizens do not have the power to ensure that their views are taken into account by the powerholders, as such they do not influence any change in the decisions and the status quo remains unchanged. On the one hand, consultation is basically a window dressing ritual that powerholders subject the have-nots to, and taken as “citizen participation”. Rung (5) *Placation*, is another form of tokenism only at a higher level in which the underprivileged are allowed to advise but the powerhouse retain the powers to make final decisions. At the placation level, the powerhouse can place a few have-not citizens into the development committees however, the have-nots do not have the majority in these committees to veto on the decision outcomes. The decision-making clout of the have-not citizens increases at the higher level of the ladder, at (6) *Partnership*, which now gives them negotiating powers and are able to discuss trade-offs with the powerholders. They also put in place structures used to jointly plan and share decision-making responsibilities. Rungs, (7) *Delegated Power* and (8) *Citizen Control* are at the top most of the ladder and enables the have-nots to obtain the majority of decision-making seats, or full managerial power. Here, the have-nots have a dominant decision-making authority over the plans and programmes to be implemented in the community. Citizen control is a situation where the community members have control over the assets within the community. The preferred level of participation being debated under this study for the Chinyunyu community members should be at the top most of the ladder i.e., the partnership, delegated power and eventually citizen control. Partnership of the community members with the local authorities to develop the Chinyunyu thermal springs speaks to the proposed LED approach. This type of partnership would

privilege the poor people in Chinyunyu Village and ensure that they have the power to influence socio-economic reforms in the community.

A ladder of citizen participation's critique is that, it is too simplistic and does not take into account the heterogeneity of the powerholders and the have-nots – where either class have its own vested interests. Further, the model considers the lower levels of the ladder as universally negative (or worse than) and higher levels of the ladder as universally positive (or better), when in some instances the lower levels may be positive while the higher levels may be negative in others. For example, informing the community members on the already decided programmes can be seen as appropriate in some situations. Nonetheless, the model was found to be applicable to debate on the citizen participation of the have-not citizens of Chinyunyu Village.

2.2.7. The big push theory

The big push theory was developed by Paul Rosenstein-Rodan, an economist of Jewish origin, in 1943 (Easterly, 2007). The theory was presented in Rosenstein-Rodan's seminal article, *Problems of Industrialisation of Eastern and South-Eastern Europe* (Easterly, 2007). The big push theory was originally conceived as a development tool for the war-torn countries of Eastern and South-Eastern Europe (Kulkarni & Conrad, 2009). The theory aimed at discouraging the urban-rural immigration that was a result of limited economic opportunities and instead called for industrialising rural areas to discourage rural-urban migration (Kulkarni & Conrad, 2009). The theory has since been applied in several economies in Western Europe, South-East Asia, and Sub-Saharan Africa as a development tool. The big push theory now advocates for undeveloped countries to pump in large amounts of investment for these countries to take off economically. Taking off economically means the industrial sector starts overtaking the agricultural sector in terms of contribution to the gross domestic product (GDP) of the country. The big push theory criticises the small bits of investment that underdeveloped countries normally pursue, namely that they tend to be wasteful as they do not impact the process of economic growth (Easterly, 2007). Small bits of investment would be like sprinkling a few drops of water in a desert, which would do nothing but dry off

in the process (Kulkarni & Conrad, 2009). The big push theory was further developed by Murphy, Shleifer and Robert W. Vishny in 1989 and popularised by contemporary scholars such as Jeffrey Sachs, Paul Collier, Paul Krugman and Nicholas Sterns (Kulkarni & Conrad, 2009). These theorists argued that there should be a minimum level of investment that should be devoted to a developmental programme for it to be successful. They likened an economic take-off to getting the airplane off the ground, which requires critical ground speed before it can be airborne. By applying a big initial momentum, a smooth journey of the economy towards higher levels of productivity and income can be ensured. Therefore, in this study, the taking-off of the LED process of Chinyunyu Village would require reasonably large amounts of investment. The development of thermal springs into a community-based tourism attraction, for example, would require huge resources to propel a higher social marginal product. Once the Chinyunyu thermal springs are developed, they will create a spill-over effect on other sectors by demanding products and services from sectors such as agriculture, manufacturing, transport, and the creative industry. It can be asserted that the big push theory, when properly conceived, can successfully stimulate LED in rural Zambia.

Proponents of the big push theory refer to some Asian tigers such as South Korea and Taiwan as great success stories that have implemented the big push approach (Collier, 2000). The theory has worked well in countries with a healthy fiscal space; however, it can be challenging for poor countries like Zambia with a limited fiscal space. It would be imperative to consider other sources of funds, especially from the cooperating partners or the private sector, when applying this theory in a financially constrained country. The big push theory has been criticised for neglecting the agricultural sector, and that it was likely to cause food shortages if the agricultural sector did not develop in tandem with the industrial sector (Collier, 2000). Furthermore, the proponents have cautioned developing countries whose absorption capacity to utilise huge investment funds is limited, as they apply the big push theory. They contend that unused resources in such countries are prone to abuse and misappropriation due to high levels of corruption, bribery and extortion in most developing countries, especially in Africa (Collier, 2000). These criticisms

should be considered when developing the tourism sector for the Chinyunyu Village, for example.

2.3. PRESENTATION OF THE REPUBLIC OF ZAMBIA

This sub-section presents the Republic of Zambia in which the study was conducted.

2.3.1. The geography of the Republic of Zambia

The Republic of Zambia is located in the southern-central part of Africa bordering eight countries, namely Democratic Republic of Congo to the north, Malawi to the east, Tanzania to the northeast, Mozambique, Zimbabwe, Botswana and Namibia to the south, and Angola to the west. Figure 2.1 below shows the geographical location of the Republic of Zambia in the Southern African region.

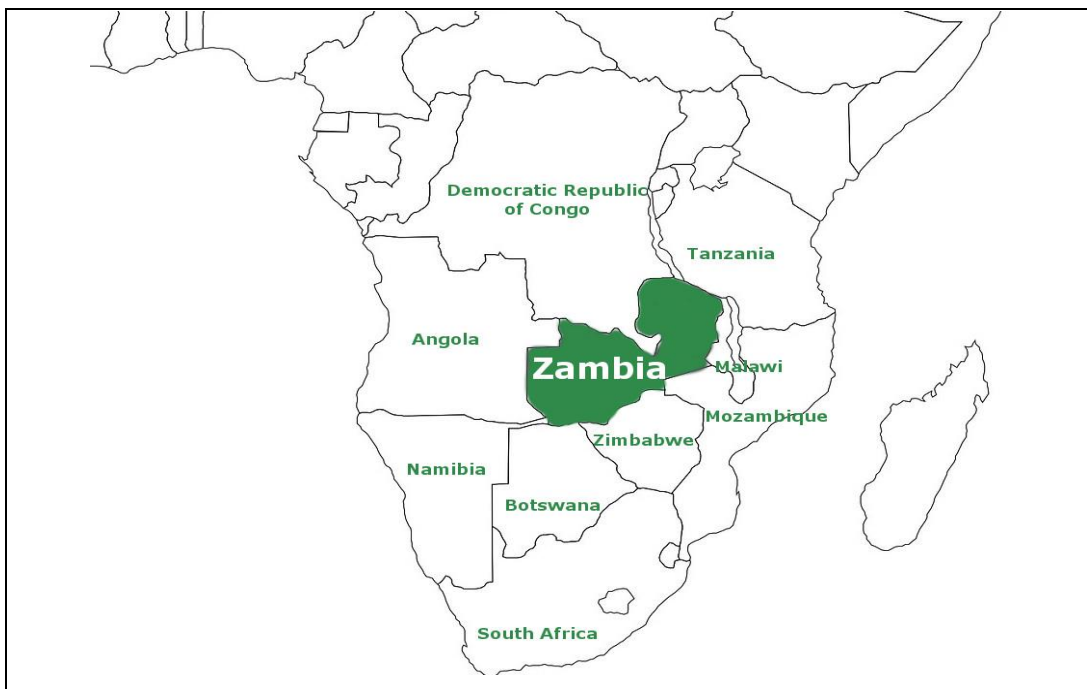


Figure 2.1: Geographical position of the Republic of Zambia in Southern Africa

Source: Victoria Falls Guide, 2020.

The Republic of Zambia emanated from a colonial area formerly known as Northern Rhodesia, which ended on 24 October 1964 when the Republic of Zambia was born under the leadership of its first Republican President Kenneth David Kaunda, popularly known as ‘KK’ (Sardanis, 2014). Zambia as Northern Rhodesia was a

colony of Britain for approximately 75 years (Shurmer-Smith, 2011; UNDP, 2007). There are approximately 18.8 million people in Zambia (World Population Review [WPR], 2021). Of this population, 50.1 percent are females and 49.9 percent are males (WPR, 2021). Zambia has an area of 752,618 km². Since independence, Zambia has been known as a mining country with huge deposits of copper – especially in the northern regions of the Copperbelt Province. Copper mining has contributed approximately 70 percent of the country’s total export revenue, with the balance comprising mainly agricultural and forestry products (UNCTAD, 2018). Administratively, Zambia is divided into 10 regions called provinces, namely, Eastern Province, Central Province, Copperbelt Province, Luapula Province, Lusaka Province, Northern Province, North-Western Province, Muchinga Province, Southern Province and Western Province. These provinces are sub-divided into 116 districts. The Chinyunyu thermal springs being studied are located in a rural part of Lusaka Province in a rural district called Rufunsa.

2.3.2. Economic development in the Republic of Zambia

The oldest economic development professional association, the American Economic Development Council (AEDC), defined economic development as a process of creating wealth through mobilising human, financial, capital, and natural resources to produce marketable goods and services (AEDC, 1984). This definition, however, ignored many important issues, such as the pertinent roles the public and private sectors play in creating wealth and distributing it. Development economics is broader and deals with the economic, social, political, and institutional mechanisms, both public and private, that are necessary to create an improved standard of living (Todaro & Smith, 2015). Todaro and Smith (2015) assert that development economics is about exploiting scarce or idle productive resources to efficiently allocate them for improving the living standards, self-esteem, and freedoms of the people. They add that development economics was a study regarding how nations transform from stagnation to growth and from low-income to high-income status, and address issues of poverty. Rist (2008) posited that development was viewed differently by each individual or group of individuals. He argued that the general expression of development was how each individual or group of individuals wished to live and experience a better life. The concept of

economic development has been evolving over time, although what is common in most definitions is that economic development is a process of emancipating people from poverty through the creation of jobs and wealth. Development should be synonymous with reduced poverty, unemployment, and inequality.

Development became prominent in the period following World War II, in the so-called modern age of development. The global influential countries, otherwise known as Allied Powers, then wanted to resolve the issues that ensued after World War II and prevent another war from occurring (Regan, 2012). These issues included mass unemployment, currency devaluations, and the collapse of commodity prices. The Allies then created the International Bank for Reconstruction and Development (otherwise known as the World Bank) and the IMF to promote economic growth and development (Regan, 2012).

However, development of nations in the first decades of post-World War II and postcolonial development in the 1950s, 1960s, and early 1970s did not change the living conditions of the people despite registering growth targets (Todaro & Smith, 2015). This meant economic growth in most countries failed to trickle down to development and had minimal impact on poor and marginalised people (Turok, 2008 cited in Rivett-Carnac, 2009). Hence, a development paradigm shift calls for change of structural dynamics so that issues of exclusion are addressed. Max-Neef, Elizalde and Hopenhayn (1989), in their people-centred, human scale development approach, criticised conventional economic development models as being inappropriate. This was because the development models did not alleviate poverty in communities. In their development approach, Max-Neef et al. (1989) advocated models that met fundamental human needs and not only economic growth.

Four schools of thought have dominated development economics in the post-World War II era. These are: the linear stages of growth model, theories and patterns of structural change, the international-dependence revolution, and the neoclassical, free market counterrevolution. These are explained below.

- **Linear stages of growth**

Arising from the 1950s and 1960s theorists, the linear stages of growth model viewed different but successive stages of economic growth as a process of

development (Todaro & Smith, 2015). The model, associated with an American historian Walt Rostow, focused on saving, investment and foreign aid as necessary tools for developing economies to attain the economic growth path (Regan, 2012). Rostow's assertion was that advanced countries had to pass through the stages beginning with stage one (a traditional society), via stage two "preconditions for takeoff into self-sustaining growth"; and stage three when society integrates 'growth' as an integral part of the habits and structures of that society; stage four, where society matures by virtue of producing efficiently; and a final stage five, characterised by mass consumption when the society transforms into a developed society (Rostow, 1960; Rist, 2008; Regan, 2012; Plaatjie, 2020). He argued that the underdeveloped countries would need to pass through these stages to take off and begin to be self-sustaining through saving, investment, and foreign aid as a strategy for economic growth (Todaro & Smith, 2015). The model hence considered aggregate economic growth as development. Harrod-Domar's growth model agrees with Rostow's model that more investment would lead to more growth, otherwise known to as the AK model, a linear production function where output is derived by the capital stock K times a constant, A (Rostow, 1960; Todaro & Smith, 2015).

The linear stages of the growth model were criticised because saving and investment were viewed to be inadequate to drive accelerated economic growth for developing nations (Regan, 2012). Further, it was viewed that Rostow's model was based on a few western countries and might not be applicable to other societies. The emphasis on the need for mass consumption was also criticised as not being the fundamental factor to development (Regan, 2012).

- **Theories and patterns of structural change**

Structural-change theory emphasises the change of economic structures of underdeveloped economies. It advocates for a shift of dependency on traditional subsistence agricultural economies to more modern and industrialised manufacturing and service economies. The structural change approach, called the "two-sector surplus labour" theoretical model, was propagated by W. Arthur Lewis in the mid-1950s and the "patterns of development" of Hollis B. Chenery popularised the structural change theory (Holovko, 2015).

The Lewis model asserts that surplus labour from over-populated subsistence traditional agriculture (normally with a zero marginal labour productivity) could be transferred to a more modern industrial sector (with high labour productivity) to promote industrialisation and sustainable development (Holovko, 2015; Schiliro, 2012). This means that few workers can be removed from the agricultural sector without changing its total product. The process would continue until all surplus labour is absorbed in the new industrial sector, hence shifting from traditional agriculture to a modern industrial sector. The Lewis model assumed that the rural agricultural sector had surplus labour while full employment existed in the urban industrial sector. However, contemporary evidence has revealed that there is very little surplus labour in rural areas of least developed countries that are dominated by agricultural activities (Schiliro, 2012). In addition, if indeed labour is moved from the agriculture sector, the rising wages as a result of reduced labour in the sector puts pressure on the sector to introduce technology that is capital intensive. This in itself raises the productivity of the sector. In essence, the commercialisation of the Chinyunyu thermal springs does not envisage transferring labour from another sector but creating new jobs and opportunities for the local people in Chinyunyu Village.

Hollis B. Chenery's patterns of development analysis of structural change focuses on the transformation of the structures of underdeveloped economies from traditional agricultural economies to an industrialised economy as engine of economic growth. Chenery examined patterns of development for several developing economies using both cross-sectional and time series data. His findings were that a development process had ensued in a number of countries and observed a shift from agricultural to industrial production in these countries (Holovko, 2015; Todaro & Smith, 2015).

- **The international-dependence revolution**

The international-dependence theory propagated by North American Marxists and Latin American intellectuals came about following criticisms of modernisation, colonisation, and imperialism (Regan, 2012). The theory represents the voices of Third World people. International-dependence models assert that developing countries were faced with problems of rigidities in their institutions, politics, and

economics (Offiong, 1980; Shaapera & Audu, 2019). Therefore, these countries end up depending and being dominated by rich economies. Johnson (1981) believed that dependency was a form of imperialism seen from the perspective of underdevelopment. Three major streams or schools of thought – the neo-colonial dependence model, the false-paradigm model, and the dualistic-development thesis – have gone into details explaining the international-dependence model. The neo-colonial dependency model entails that countries remain underdeveloped because of perpetual exploitative economic, political, and cultural policies of their former colonial rulers (Offiong, 1980; Shaapera & Audu, 2019; Todaro & Smith, 2015). Underdevelopment in this model is thus seen as driven by external forces and hence calls for revolutionary struggles or major restructuring of the world capitalist system to emancipate developing economies from being oppressed by rich and developed economies. The false-paradigm model claims that development strategies employed by developing countries, normally imposed on them by Western countries, are responsible for their underdevelopment as they tend to be faulty and inappropriate (Shaapera & Audu, 2019). The models assert that the strategies employed are based on incorrect models of development that stress capital accumulation and liberalisation of markets without safeguarding the social and institutional aspects. The dualist-development thesis is based on the coexistence of two situations or phenomena (one desirable and the other not) that are mutually exclusive to different groups of society. For example, superior and inferior, extreme poverty and affluence, educated and illiterate, modern and traditional economic sector, growth and stagnation among others are the situations characterised by the dualist development thesis that may exist in a society. The model claims that the interrelations between the superior and inferior elements in the dualist society are such that the superior elements do little or nothing to pull up the inferior elements; if anything, they do the opposite by “developing their underdevelopment” (Offiong, 1980; Todaro & Smith, 2015). The dependence theorists call for adoption of socialism rather than capitalism.

- **Neo-classical free market counterrevolution**

The neo-classical free market counterrevolution argued that underdevelopment was a consequence of poor allocation of resources due to incorrect pricing policies and

exaggerated state intervention (Skinner, 2007). The writers of this school of thought, the neo-liberals Lord Peter Bauer, Deepak Lal, Ian Little, Harry Johnson, Bela Balassa, Jagdish Bhagwati, and Anne Krueger, were of the view that state intervention in economic activity slows the pace of economic growth (Skinner, 2007; Todaro & Smith, 2015). They contended that promotion of free trade and export expansion, attracting foreign direct investors from developed countries, deregulation of price controls, and liberalisation of financial markets stimulate both economic efficiency and economic growth. Neo-classical theorists opposed the dependency theorists and emphasised that underdevelopment of developing countries was caused mostly by state intervention, corruption, and absence of economic incentives to stimulate economies of developing countries. They proposed reforms of the international economic system, to restructure the dualistic developing economies, increase inflows of foreign aid, population growth controls and a more effective development planning system (Skinner, 2007). Simply put, they promoted free market economic systems to drive economic growth, that is, to follow the free market economic system of the Asian tigers (South Korea, Singapore, Taiwan and Hong Kong).

The three approaches of neo-classical free market counterrevolution include: the free-market analysis that contends that markets alone are efficient; the public choice theory (or new political economy approach) that tries to minimise government interference in economic activities; and the market friendly approach, which requires that governments create an environment in which markets can operate efficiently and only intervene in an event of market failures. Market failures are caused by market imperfections such as monopoly of knowledge and power or lack of factor mobility (Leigh & Blakely, 2017). In addition, the traditional growth theory agrees with the neo-classical free market theories and adds that free markets stimulate domestic and foreign direct investment that improves the rate of capital accumulation in an economy. The Solow neoclassical growth model contributed to the neoclassical theory of growth by adding the factor of labour and later technology as a third independent variable to the growth model (Skinner, 2007). Solow's neoclassical growth model exhibits diminishing returns to labour and capital separately but constant returns to scale (both factors jointly). This model adds that

technological change, which is exogenously determined, generates long-term economic growth.

2.4. RURAL DEVELOPMENT

The concept of rural development emerged in the 1970s when the then World Bank President Robert McNamara exposed the alarming conditions of living in developing countries caused by modernisation (Musitha, 2020). He proposed rural development as a development model to address the devastating impact of modernisation in developing countries. Consequently, the World Bank adopted an integrated development strategy to be implemented in developing countries, especially in Africa (Musitha, 2020). This strategy was meant to transform rural areas into productive areas, where basic social amenities such as clean water, healthcare facilities and education could be enjoyed (Baah-Dwomoh, 2016).

Rurality is believed to be synonymous with poverty (Kapur, 2019), meaning that poverty and lack of social amenities are normally prevalent in rural areas compared to the urban areas, especially in Africa. The Western philosophy considers “rural” as “underdevelopment”, a state of backwardness, primitive, and a place of misfortune (Plaatjie, 2020). Plaatjie (2020) and Ndlovu (2017) have strongly argued against the Western approach to rurality and propose to allow rural people to define “rural” themselves and hence rural development.

The concept of ‘rural development’ is used and understood by different people differently (Mafukata & Tshikolomo, 2020). For this study, this concept was viewed from different perspectives as variously used by different commentators. For example, rural development was defined as a process of improving the standards of living of people living in the rural areas (Adejumo-Ayibiowu, 2020). Rural development is an imperative undertaking, especially in African countries where over two thirds of the population live in rural areas (IFAD, 2016). However, rural areas in Africa are underdeveloped, characterised by high unemployment levels, high poverty levels, poor infrastructure, poor living standards and protracted years of policy neglect (Timbuleng, 2009). These phenomena are no different from Zambia’s situation, where 76.4 percent of its people living in rural areas are poor

(CSO, 2018; World Bank, 2018) compared to sub-Saharan Africa with an average poverty rate of 41 percent (AfDB, 2019).

Subsistence agriculture has been the mainstay of the rural population in Zambia where it supports approximately 85 percent of rural lives (CSO, 2018). The agricultural intervention has had dismal effects regarding improving the living standards of the poor in rural Africa owing to the high number of poor people in rural areas (World Bank, 2018). The area of study for this research was rural-based Chinyunyu Village, where poverty levels are among the highest in the country (De la Fuente et al., 2015). Diversification of rural economies is critical in combating poverty levels; however, the diversification agenda has been missing in development policies of rural areas in Africa (Helmsing, 2003). On the other hand, population pressure on the land is likely to force people to diversify away from agriculture into other activities. In their systematic country diagnostic, the World Bank (2018) asserted that rural development in Zambia has been at a snail's pace (World Bank, 2018). The low levels of development in rural Zambia do not reconcile with the high economic growth rates the country recorded in the past decade. Between 2004 and 2014, Zambia's economy grew by at least 7.4 percent per annum compared to the economic growth of 5.6 percent recorded by Africa as a continent over the same period (World Bank, 2018). Even though Zambia recorded an impressive economic performance, the growth did not cascade down to the local poor to the extent of reducing the poverty levels, especially in rural areas. While poverty levels in the country still remain high despite the registering impressive economic growth, it can be argued that growth alone is not sufficient despite it being often considered as a necessary condition for poverty reduction. Addressing inequality and promoting social inclusion therefore, becomes important prerequisites. However, Zambia remains a highly unequal country (MNDP, 2020). Zambia's inequality levels are among the highest in Africa, with its Gini coefficient of 0.69 compared to the average Gini coefficient of Africa which stands around 0.43 (MNDP, 2020). Lowering inequality levels would be imperative as countries design their economic development programmes. Thus, growth need not to be given priority over distribution when designing economic and social policies. The notion where social policy is developed merely as a corrective intervention for the

undesirable consequences of growth processes need to be corrected. Social policy must be considered as an essential part of a transformative process that contributes to both growth and equity, not merely as a corrective measure, but also as an intervention that can influence the nature of growth.

Kapur (2019) posited that rural societies are mostly faced by poverty. Kapur argued that the high poverty levels in rural communities are attributed to unemployment, underemployment, low wage rate and reductions in the agricultural sector. Development of rural areas would therefore be centred on improving these factors.

Helmsing (2003) identified four factors that would contribute to rural development and hence local economic development as follows:

Creation of local safety nets: reducing insecurity in rural areas through the provision of safety nets is an important condition for LED. Helmsing (2003) suggested that financial safety nets could be created through village banking where savings and credit groups are formed to assist in combating poverty levels in the rural areas.

Improving housing and upgrading their settlement areas: improving the provision of clean water, sanitation, good roads, health facilities and education were important conditions for rural development. Helmsing (2003) proposed community-based programmes developed through a participatory approach as effective tools for stimulating local economies and rural development.

Delivery of basic services: delivery of sanitation services and solid waste management that benefits the local SMEs to participate are important for rural development.

Stimulating local economy: Perhaps the most important aspect of rural development is stimulating the community economy through enhanced participation of the local households at three different levels: as consumers, as micro-entrepreneurs, and as workers. This study focused on this particular tool as an input in enhancing living standards of people in Chinyunyu Village.

In Zambia, several factors that hinder rural development have been identified. The World Bank (2012) named the historical centralisation of industrial, financial, and

administrative activities in urban areas, and the low level of technology and lack of credit.

2.4.1. Conceptualisation of rurality

There are divergent perceptions of rurality, and this has created discord in developmental economies. For example, for someone in Europe, rurality in Africa would mean something different in their context. Even in Africa, rurality means different things for different people. For instance, some areas elsewhere in African countries are called urban areas whereas in the case of larger economies such as South Africa these areas are regarded as rural areas. Some aspects of the definition of rural areas include, generally, an area highly dependent on natural resources for livelihoods, with a low population density; with generally basic structures; with few amenities; with slow life; generally homogenous ethnic groups, with low density of economic activities; and located away from the hustle and bustle of a country's administrative centres (Adejumo-Ayibiowu, 2020; IFAD, 2016; Nthai, 2020; Tshishonga, 2020). Rural areas are characterised by the paradox of being endowed with various cultural, heritage and natural resources but with indigenous community members with limited access to jobs and secure incomes (Tshishonga, 2020). These characteristics of a rural area apply to Chinyunyu Village. This study adopted the following definition of a rural area: it is an area within a country that has limited socio-economic facilities and is characterised by low population density.

2.4.2. Approaches to rural development

Various scholars have developed diverse approaches to rural development. There can never be a one size fits all or universally accepted approach to rural development; however, most of the approaches are clear on the targeted audience and the ultimate objective of improving sustainable livelihoods. This study followed the approaches as espoused by Monaheng (1995 cited in Mafukata, 2020), Kapur (2019) and JICA (n.d.). Monaheng (1995) argued that rural development can be approached from three broad perspectives, namely: the technocratic, the radical, and the reformist approach. Kapur (2019) asserted that approaches to rural development would include: a multi-purpose approach, a sectorial approach, a

target-group approach, and an area-development approach. JICA (n.d.) contended that there are two broad approaches to rural development: endogenous development and a participatory approach.

- **The technocratic approach**

The technocratic approach aims at enhancing agricultural productivity through the provision of basic infrastructure and farmer input support in rural areas (Pachón et al., 2016; Monaheng, 1995). This type of approach has been criticised for ignoring social and environmental consequences of its practices as its preoccupation is profit maximisation (Pachón et al., 2016). This approach considers traditional agriculture practised by smallholder or peasant farmers as non-viable, while the modern agriculture practised by commercial farmers is seen as economically viable with high productivity. In this approach, redistribution of productive resources is often ignored and hence it is said to benefit the rich and the powerful. It is a top-down approach to rural development where decision making is in the hands of the bureaucrats and their projects are planned at a distance by the technocrats. The approach ignores building capacity in the rural poor to enable them to become self-reliant and meet their own needs. The technocratic approach has been practised in Zambia since the 1990s, especially through the so-called farmer input support programme (FISP) that will be discussed later in this report. This approach would not fit the community-based development model for commercialising the Chinyunyu thermal springs. The commercialisation of the Chinyunyu thermal springs encourages skills development of the local people to execute development by themselves.

- **The radical approach**

This approach focuses on empowering the disadvantaged members of the community through social change and redistribution of power and influence (Monaheng, 1995). The approach is premised on equalising access to assets by the members of the community, asserting that unequal power relationships are the root cause of high levels of poverty in societies. The radical approach places the underprivileged at the centre of development and advocates for a bottom-up approach to decision making. The proponents of this approach follow socialist ideas (Monaheng, 1995). This approach would resonate well with the study on the

Chinyunyu thermal springs by ensuring that the underprivileged poor people of Chinyunyu Village benefit from the local resources the village is endowed with. This approach, however, ignores assistance from outside experts, which would be an important factor in the Chinyunyu thermal springs commercialisation model.

- **The reformist approach**

This approach tries to bring harmony between rich and poor in a society by correcting the radical approach. The approach endeavours to seek an amicable solution in conflicts that arise in societies. Its preoccupation is to redistribute wealth and bring down the inequality levels in communities (Monaheng, 1995). The reformist approach respects local indigenous knowledge systems. It believes that local people are an important resource to contribute to local economic development. Furthermore, it acknowledges the need of an outsider or outside help to facilitate rural development. The approach, therefore, provides a conducive platform for ‘cross pollination’ of ideas between the development agencies and the local people towards a sustainable development of local projects. The reformist approach therefore fits the discourse of this study as it recognises local participation and external assistance.

- **The multi-purpose approach**

The multi-purpose approach, according to Kapur (2019), is based on self-help and self-reliance leading to local development of villages. This approach was successful in uplifting millions of lives in India out of poverty in the early 1950s (Kapur, 2019). The approach targets sectors such as agriculture, health care, social welfare, and development of small-scale industries in rural areas. The discourse under this study emphasises local participation or self-help or the *bricolage* model of development where community members get involved in rural development to become self-reliant. This approach resonates with the current study.

- **The sectorial approach**

The sectorial approach aims at promoting intensive development of sectors in areas with comparative advantage. The approach has been used for agricultural development mainly in areas that are productive. Agriculture undoubtedly is the major sector in most rural environments; however, this study argues that the

Chinyunyu Village has a comparative advantage for development of thermal springs.

- **The target group approach**

The target group approach is similar to the radical approach (Monaheng, 1995) as it tries to bring about social justice targeting economically disadvantaged community members. The approach advocates for socio-economic development in lagging sectors or regions (Kapur, 2019). Strictly speaking, the approach targets the smallholder farmers and farm labourers who predominantly live in rural areas. For example, governments can employ extension farmers with greater knowledge and skills in agriculture and send them into rural areas to assist the smallholder farmers to better their agricultural practices. The target group approach is more effective where information about the farmers is readily available. This approach does not fit with this study as it mainly focuses on the agricultural sector.

- **The area development approach**

The area development approach advocates for spatial planning and reduction of imbalances between regions (Kapur, 2019). This approach fits well with the topic of discussion on developing the Chinyunyu thermal springs as it seeks to correct regional imbalances. The Constituency Development Fund (CDF) in Zambia that will be discussed later in this report ought to achieve this objective of reduction or even elimination of regional imbalances.

- **The endogenous development approach**

The endogenous development approach emphasises local development centred on protection of human rights, human development and improvement of sustainable living standards based on conservation of the environment and sustainable social development (JICA, n.d.). This approach, which is territorial rather than sectorial in nature, promotes the sustainable utilisation of local resources, local human resources, culture and industries, and is preoccupied with local needs, capacities and their perspectives (JICA, n.d.). It therefore, facilitates promotion for local participation and decentralisation (JICA, n.d.). Margarian (2011) asserts that the endogenous development approach acknowledges the decision making of local social and economic actors and their capacity to absorb knowledge and information

emanating from external sources. This approach is similar to the reformist approach and resonates well with the development model of the Chinyunyu thermal springs as it is based on realities that exist in the municipalities.

- **The participatory approach**

The participatory approach focuses on placing the local community at the centre of promoting the development of human and physical resources (JICA, n.d.). In this approach, the local community members are the main implementers of local development projects. The gist of this approach is that local people need to be involved from the inception; that is, planning, implementation, and evaluation of local projects in rural areas. JICA (n.d.) asserts that local projects where local people are involved from the planning and implementation stages tend to give priority to local materials and human resources, thereby enhancing sustainability development of project outcomes.

Most African countries have had challenges in integrating local communities in the decision-making process of their national development agenda (Ashraf, Bandiera, & Blum, 2016). The top-down approach that most African countries have adopted has not favoured the local citizenry. Most local projects imposed on the locals without their participation or involvement in the formulation process end up being rejected by the local communities (Plaatjie, 2020). These projects in most instances do not address the local needs and their well-being but those of their political leadership (EAZ, 2011; EFZ, 2013). A case in point was when an Australian company in 2014 was issued with a mining licence to develop a mine in the Lower Zambezi National Park, one of the most visited national parks in Zambia overlooking the Mana Pools UNESCO World Heritage Site, in the far north of Zimbabwe (Steyn, 2014). Mana Pools is one of the finest safari spots and provides one of the best walking safari experiences in the world. The local community in lower Zambezi zestfully opposed the mining project in Lower Zambezi National Park even when they were made to believe that the mine would bring “development” by creating employment for the locals. Their preoccupation was to preserve the ecological value of the area and the ecosystem. Similar to this was the incident in the community of Xolobeni of South Africa where the local community led by Amadiba Crisis Committee opposed the construction of a titanium mine in

their community in 2007 (Plaatjie, 2020). Even after the central government of South Africa had given the investors a go-ahead for the investors to proceed with their project, the project was not welcomed in the community. The local community's argument was that this kind of development would disrupt the agricultural economy in the area that had sustained their lives for more than a century (Plaatjie, 2020). Another example relevant to local participation was an attempt to develop one of Zambia's thermal springs, the Kapishya thermal spring located in northern Zambia. The attempt was to install a geothermal energy project that would provide electricity to the rural people in Mushi village in N'sumbu district, accessible by a 30-minute boat ride to the site. The thermal spring located along the shores of Lake Tanganyika was developed by an Italian firm which partnered with the Geological Survey of Zambia. In 1987, two turbo electricity generators with a total generation capacity of 120 kilowatts (Kw) were installed at Kapishya thermal spring (Kapasa, 2014). This particular geothermal power plant, the only geothermal power plant in Zambia, has been a white elephant since and has never been utilised. Failure to utilise the plant was attributed to failure to construct a power transmission line to connect the local nearby community in Nsumbu district due to poor planning (Kapasa, 2014). A more recent occurrence was when the residents of one of the districts in Zambia, Milenge district, told the Republican President that the school that the government had built in Milenge district was a "missed call" (Smart Eagles, 2021). While the government stressed that building a school in a rural area like Milenge could never be "a missed call" as it was an investment for the future, people of Milenge district were demanding jobs, especially for the youth. According to them, the education system in the district was enough and what they needed was an economic activity in the district that could create the needed employment opportunities. These are typical examples of alienating the local community when making development proposals affecting them. In contrast, this study advocates for full inclusion of the locals in the decision-making process from conception to implementation by applying the LED concept. The participatory approach, like the radical, the reformist and the endogenous development approaches, speaks to the objectives of this study.

2.5. HISTORY OF ZAMBIA'S ECONOMIC DEVELOPMENT REFORMS

For an understanding of the genesis of socio-economic problems Zambia is facing, it is important to go back in time and evaluate the economic development plans the country has endeavoured to implement. Immediately after attaining its independence, Zambia embarked on what it called *Zambianisation* economic reforms (Chisala, 1994). These were aimed at reversing the colonial capitalist economy that was held in a few private hands. Through the *Zambianisation* reforms, the government began to nationalise private business entities in Zambia by transferring them to government (Chisala, 2021; Sardanis, 2014). The initial reforms, contained in the so-called *Mulungushi Declaration*, were launched in April, 1968 by United National Party for Independence (UNIP) government (DiJohn, 2010; Sardanis, 2014). The *Mulungushi* reforms aimed at acquiring the majority shareholding of at least 51 percent in private and foreign owned companies (Mills, 2010). Over 200 foreign owned companies were expropriated and nationalised into government parastatals (Chisala, 1994). The *Zambianisation* agenda also meant these parastatals had to be run by Zambians, whether they were qualified for the job or not, as long as they were loyal to the UNIP party in government. The *Mulungushi* reforms were followed by the *Matero Reforms* that were launched and executed in August, 1969 (DiJohn, 2010; Mills, 2010, Sardanis, 2014). The aim of the *Matero* reforms was to take control of Zambia's precious natural resources, the mines (Chisala, 2021; Mills, 2010; Sardanis, 2014). These reforms were implemented through umbrella institutions that were established to collectively control the nationalised companies in diverse economic fields. For example, the Industrial Development Corporation (INDECO) was created to take charge of all manufacturing industries in the country. The Zambia Consolidated Copper Mines (ZCCM) and Mining Development Corporation (MINDECO) were established to control all the mining companies in the country (Chisala, 2021). In addition, the Finance and Development Corporation (FINDECO) was created to manage and control all the finance, insurance companies and building societies (Chisala, 2021). However, in 1971 these three institutions – INDECO, MINDECO and FINDECO – were amalgamated to create what was called the Zambia Industrial

and Mining Corporation (ZIMCO), the largest state holding company (Mills, 2010). The President, Dr Kenneth Kaunda, was the Chairman of the Board of Directors of ZIMCO (Mills, 2010; Sardanis, 2014). These reforms were deliberately embarked on to end the colonial-style dominance of the Zambian economy and to allow the native African citizens to participate in running the affairs of their economy (Sardanis, 2014). These reforms were said to be a disaster as they only promoted the political elites at the expense of most Zambians (Chisala, 1994; Macmillan, 2009). These socialist ideological reforms had good intentions of wealth redistribution but ended up depressing an entrepreneurial spirit of many Zambians and only led to an emergence of the bourgeoisie with the state apparatus (DiJohn, 2010). The Zambian economy was taken over by the state and over 80 percent of economic activities were predominantly run by the state through a socialist command economic system where all economic interventions were centrally planned by the UNIP Central Committee (Chisala, 1994; Chisala, 2021; Hyman, Strauss, & Crayne, 1993). Private sector development was completely discouraged, save for a few private firms that attempted to operate although they could not compete with the heavily subsidised inefficient state-owned enterprises (Chisala, 2021; Hyman et al., 1993). Politically, this period of reforms coincided with the introduction of a one-party governance system that was effected through the Choma Declaration of 1972, commonly called the second Republic (DiJohn, 2010; McCulloch, Baulch & Cherel-Robson, 2000). The Choma Declaration merged two major political parties in Zambia, UNIP and the Africa National Congress (ANC), through the signing of a declaration in the Southern part of Zambia, in a town called Choma (DiJohn, 2010). This declaration abolished the multi-party system that was adopted at independence. The UNIP government was convinced that by limiting competition of political parties it would avoid spiralling ethnic tensions in the country (Chisala, 1994). The UNIP government also feared that the opposition political parties could be used by the apartheid regime in South Africa to destabilise the country as Zambia was in the forefront of fighting for the liberation of South Africa and the neighbouring countries (Chisala, 1994).

The Republic of Zambia endeavoured to promote small and medium-scale industries (SMEs) through the creation of what was called the Village Industry

Services (VIS) in 1976 (Chisala, 1994; Mate, 1999; Sardanis, 2014). The VIS had a specific mandate to promote the creative industry (crafts), and labour intensive agroprocessing industries (agro-based cottages) (Chisala, 2021; Mate, 1999). The VIS was aimed at maximising the usage of local resources in the villages using simple equipment and machinery.

Zambia's heavy mono-dependence on copper mining came with challenges as it began to experience major balance of payment problems following the collapse of copper prices from a peak of US\$3 per pound to less than US\$1 per pound, compounded by the rise in prices of crude oil in the mid-1970s (Mills, 2010; OECD, 2012). The reduced revenue collection from the copper mining industry left Zambia with no choice but to borrow heavily from the external markets to meet social expenses such as free health care and education, therefore making its debt position unsustainable. Zambia's per capita foreign debt became among the highest in the world (Chisala, 2021; DiJohn, 2010; Mills, 2010) and ultimately the country fell into a debt crisis. The external debt stock doubled from US\$800 million in 1970 to US\$1.6 billion in 1975, then again spiked to US\$3.3 billion (over 100 percent of GDP) in 1980 (Whitworth, 2014). The debt continued growing, hitting US\$7.2 billion or 200 percent of GDP in 1990 (Whitworth, 2014). The mining sector did not recover until the 2000s, which further exacerbated Zambia's balance of payments and fiscal deficits. This situation forced Zambia to continue borrowing from the IMF with conditions (Simatele, 2007). The IMF decided to impose austerity measures under the SAP as part of the condition for additional loans to Zambia. This process effectively birthed the Structural Adjustment Programmes (SAP). The SAP or the Washington Consensus propagated by the Bretton Wood Institutions – the World Bank and the IMF – were introduced in Zambia in 1981 (Chisala, 2021; Simatele, 2007). However, the SAP were only implemented fully in 1991. The SAPs aimed at promoting a free market system, private sector promotion through privatisation of state-owned companies, deregulating exchange controls, and total removal of subsidies by the government. The implementation of the SAP was piecemeal and hence failed to bring about the desired results to tackle the high unemployment and poverty levels in the country (Simatele, 2007). Following the SAPs, Zambia experienced astronomical increases in the prices of

commodities that led to food riots on the Copperbelt and Lusaka Provinces of Zambia over the increase in the price of maize meal (Sardanis, 2014). Consumer prices of maize meal increased by 275 percent (Baylies & Szeftel, 1992). Between 1986 and 1989, Zambia experienced the worst shortages of essential consumer goods such as washing soap, sugar, and cooking oil (Chisala, 1994). In addition, hospitals and clinics ran out of drugs and the people of Zambia revolted against the UNIP government, which led to its ejection in 1991 through a democratic election (DiJohn, 2010; Chisala, 1994). The UNIP government lost to the Movement for Multiparty Democracy (MMD) in 1991, garnering only 25 percent of the votes compared to the MMD's 75 percent (Chisala, 1994). This effectively formed the third Republic of Zambia. The SAP were adopted and energised by the MMD government in the 1990s. The Republic of Zambia began implementing aggressive liberalisation and privatisation policies in the 1990s that saw several state-owned companies either closed down or privatised (Chisala, 2021; Simatele, 2007). Price controls were lifted, agricultural inputs and outputs were liberalised, the foreign exchange was equally liberalised, and all capital and import controls were abolished (Adejumo-Ayibiowu, 2020; Chisala, 2021).

The SAP, as was also observed in many African sub-Saharan countries that implemented them, failed to produce the desired results (Adejumo-Ayibiowu, 2020). Following the implementation of the SAP, poverty levels in these countries did not substantially reduce and remained high while the countries remained trapped in heavy debts and high budget deficits (Adejumo-Ayibiowu, 2020; Loxley, 2007; Simatele, 2007). In fact, Rogerson (2003, 2015) argued that the SAP led to catastrophic outcomes exacerbated by skyrocketing poverty levels of the countries that implemented them.

The SAP completely changed the role of government in the economic affairs of the country to merely play a facilitator role and let the private sector drive the economy. The privatisation of SOEs, especially the mines, was without challenges. The privatisation process led to thousands of job losses through retrenchments effected by the new owners (Mubita, Libati & Mulonda, 2017). The retrenched workers were forced into the informal sector while others ended up as paupers.

The unsuccessful SAP was succeeded by a post-Washington Consensus, a broader agenda based on neo-liberalisation. The IMF then placed Zambia on a strict economic recovery programme through the implementation of their poverty reduction strategy paper (PRSP) in 2002 (OECD, 2012). The PRSPs were a condition to qualify for debt relief for heavily indebted poor countries (HIPC). The Republic of Zambia attained the HIPC completion point status (reaching the decision point) in 2005 and had its debt of approximately USD 3.8 billion relieved by the Group of 20 countries (G20) and the Paris Club of creditors (Chisala, 2021). Zambia's economic growth remained elusive for some time. For example, between 1980 and 1990, the country's economic growth lagged behind all the SADC countries except Mozambique (GRZ, 2002b). During 1990 to 1999, Zambia's economy grew at one percent, the lowest GDP growth in the SADC region and also below the sub-Saharan African GDP growth rate of 2.4 percent at that time (GRZ, 2002b).

2.6. HISTORY OF NATIONAL DEVELOPMENT PLANS IN ZAMBIA

Since independence, Zambia has produced six (6) national development plans, five (5) interim and transitional development plans, and one revised national development plan. These development plans aimed at achieving the country's Vision 2030 of becoming a prosperous middle-income country by 2030. The term 'prosperous middle-income country' would translate into alleviating the poverty levels in the country and bringing down the inequalities where Zambian citizens have access to the country's wealth without leaving anyone behind. The national development plans have however had little impact on rural development and reducing Zambia's poverty levels (CSO, 2018; World Bank, 2018). Furthermore, the traditional, colonial influenced, centralised top-down decision-making approach that Zambia adopted in the last decades focused more on developing the towns and cities along the Line of Rail (Hampwaye, 2008). The approach did not bring desired results in terms of reducing poverty in rural areas.

2.6.1. The Transitional Development Plan (1964–1965)

The Transitional Development Plan was a gap-bridging plan in the transition period from colonial and federal planning to the post-colonial planning period (GRZ,

1964). Zambia's economic sectors during this period were backward and limited to the needs of an external economy. The economy was left drained of all resources that could have been utilised to lift many Zambians out of poverty.

The Transitional Development Plan focused on developing three sectors, namely defence/security, education, and agriculture. The defence and security were the most important at that time as the country had just emerged from an independence struggle although was still surrounded by unfriendly countries that were ruled by colonial white minorities. In addition, Zambia's borders were vulnerable and needed protection from acts of aggression from its neighbours that were still struggling for liberation and experienced raging civil strife.

The security was also imperative as the country had to begin registering its citizens following the attainment of independence. The emphasis on education by the maiden national development plan was premised on the backward and disgraceful education status bequeathed by the departed British colonial and white settler federal governments (GRZ, 1964). At independence, 70 years after the advent of British rule, Zambia had only 1,200 citizens with a Cambridge certificate, 100 university graduates and three medical doctors (GRZ, 1964; Mills, 2010; Sardanis, 2014). The education system in rural areas went as far as standard II or standard IV (grade 2 or grade 4). The agricultural sector was included in the transitional development plan to provide a platform where bigger agricultural projects could be planned and implemented in the first national development plan. The Transitional Development Plan also provided a budget for developing the rural areas by establishing provincial centres away from railway line. However, lack of construction capacity to implement rural development projects impaired the development plan from opening up the rural areas (GRZ, 2006).

The Transition Development Plan was developed against the backdrop of the first United National Independence Party (UNIP) manifesto that aimed at eliminating income inequalities and utilisation of idle resources in the economy to increase gainful employment and initiate and establish industries in rural and urban areas (UNIP, 1964). The UNIP manifesto placed a premium on agricultural development as over 70 percent of the population depended on agriculture. It further sought to

support African traders previously marginalised during colonial rule by giving them soft loans. The UNIP manifesto further pledged to build the first ever public university and ensure that every child in Zambia had some form of education. The UNIP manifesto, implemented through the first national development plan, eliminated the obnoxious school fees that were introduced by the colonial rule to alienate African children. The manifesto pledged to build more and better hospitals, better houses for families and to crack down on corruption in government and the private sector (UNIP, 1964).

2.6.2. The First National Development Plan (1966–1971)

The First National Development Plan was preceded by the Transitional Development Plan. The focus of the First National Development Plan was to build massive infrastructure for future development and manufacturing industries. The major economic reform undertaken during this period were the Mulungushi and Matero reforms as the country began to transform from a free enterprise economy to more socialist command economy. The First National Development Plan's objective was to diversify the economy from dependence on copper mining to create more employment in non-traditional sectors (GRZ, 1966). The plan also leveraged the Transitional Development Plan to continue uplifting the citizens' education, technical, and scientific skills coupled with the provision of other social services such as housing and health facilities (GRZ, 1966). In addition, the plan aimed at developing the transport and the energy sectors.

2.6.3. The Second National Development Plan (1972–1976)

The Second National Development Plan's preoccupations were food self-sufficiency and ensuring food security, and import substitution coupled with the continued diversification of the economy. The plan also aimed to reduce the level of income disparity between urban and rural areas. It further continued developing the technical skills of the citizens. The plan attempted to implement regional decentralisation policies, pronouncing self-reliance as an important principle of the national philosophy of humanism, as espoused by First Republican President Dr Kenneth Kaunda. The Second National Development Plan was extended to 1978 because many projects had not been completed by the end of its period (JICA,

2006). Most projects undertaken in this period were not economically viable as they were mostly executed to respond to UDI (Whitworth, 2014). The industrialisation approach implemented during this period was mostly capital intensive and did not create many jobs for the population (Whitworth, 2014).

2.6.4. The Third National Development Plan (1979-1983)

The Third National Development Plan built on the objectives of the Second National Development Plan. The plan outlined eleven principal objectives that included to: attain socialism; adopt labour-intensive technologies to attain full employment; use local raw materials and establish capital goods industries; create a strong rural economy; explore non-copper minerals; explore export markets; speed up the Zambianisation reforms; maintain price stability and grow the economy at six percent. In addition, the plan called for the need to provide social infrastructure countrywide, i.e., to build more schools, hospitals, and clinics.

However, in 1983, the Third National Development Plan was replaced with the Structural Adjustment Programmes (SAP), following an agreement between the Republic of Zambia and the International Monetary Fund and World Bank (JICA, 2007). The SAP was however cancelled the same year following Zambia's refusal to remove the subsidy on maize, a staple food in Zambia (JICA, 2007).

2.6.5. The Fourth National Development Plan (1989–1993)

Following the cancellation of the SAP, the Fourth National Development Plan was developed in 1989 to reinforce the objectives of the previous development plan and introduced a different aspect of promoting women and youth participation in national affairs. It emphasised facilitating private sector participation. However, the Fourth National Development Plan was never executed as the Republic of Zambia re-introduced the SAP in 1989 (JICA, 2007). Zambia then ceased the approach of producing national development plans. Following the change of government in 1991, the new Movement for Multiparty Democracy (MMD) government developed the New Economic Recovery Programme (1992–1994), which was used to further execute the SAP.

2.6.6. Transitional National Development Plan (2002–2005)/PRSP

The Republic of Zambia reverted back to the national development plan approach when the new deal MMD government of President Levy Mwanawasa was elected into office in 2002. The National Development Plan was designed as the Poverty Reduction Strategy Paper (PRSP) and later the same year was incorporated into the Transitional National Development Plan (TNDP). The United Nations Millennium Development Goals (MDGs) provided the central theme for the PRSP, focusing on reducing extreme poverty by half by 2015 through sustained economic growth and employment creation. The emergence of PRSP was seen as a recognition of the failures of previous SAP that was imposed by the Bretton Wood Institutions on poor countries (Imboela, 2005). The PRSP was also a pre-condition by Bretton Woods Institutions to access concessional loans. The implementation of the PRSP was urgent, since the Republic of Zambia was placed among the highly indebted poor countries (HIPC) and qualified for substantial debt relief that were due in the following year. The PRSP objectives included: enhanced investment and export promotion; local industrialisation; enhanced public sector management; decentralisation; good governance; prudent resource management; and improved security and justice. Enhancement of agriculture productivity was given the highest priority in the PRSP. In addition, the PRSP placed a high premium on infrastructure development, especially the development of rural roads.

The PRSP targeted growing the economy at four percent from 2.2 percent and reducing the poverty headcount from 73 percent in 1998 to 65 percent by 2004. The performance of the Zambian economy did improve during PRSP and TNDP during the 2002 to 2005 implementation period. Its real GDP grew on average 4.8 percent per year (GRZ, 2006). However, the poverty incidence increased to 68 percent (CSO, 2018). PRSP had good intentions of reducing poverty levels in Zambia; however, it failed to meet its principal objective of reducing poverty levels in the country. Nevertheless, Zambia was able to meet the HIPC completion point in 2005, and thus qualified for the multilateral and bilateral debt relief.

2.6.7. The Fifth National Development Plan (2006–2010)

The Fifth National Development Plan (FNDP) was launched in January 2007 by Zambia's third President, Mr Levy Patrick Mwanawasa. The FNDP was themed around "broad-based wealth and job creation through citizenry participation and technological advancement" (GRZ, 2006, p. 2). The plan focused on development of the agricultural sector with matching resources to stimulate income generation in the economy and improve the livelihood of the Zambian citizenry. Other sectors such as infrastructure, tourism, manufacturing, mining, and energy complemented the policy focus of the FNDP. The plan aimed to target both wealth creation and poverty reduction.

The FNDP built upon the successes of the PRSP/TNDP. The plan's goals included to: accelerate the pro-poor economic growth; achieve a single digit inflation; stabilise the exchange rate; and reduce domestic debt. Ultimately, the main goal of the plan was to ensure that the growth translated into poverty reduction.

During the FNDP period, Zambia registered an economic growth, at an average of 6.1 percent per annum compared to an average of 4.8 percent attained under the PRSP/TNDP. This growth was, however, below the FNDP average growth target of 7.0 percent (GRZ, 2011). The FNDP managed to bring down the levels of inflation from 20 percent during the PRSP/TNDP to 11.3 percent on average (GRZ, 2011). However, poverty reduction was not commensurate with the growth of the economy and only reduced from 64 percent to 60.5 percent (CSO, 2018). Rural poverty incidence remained high at 77.9 percent (CSO, 2018).

2.6.8. Sixth National Development Plan (2011–2015)

The Sixth National Development Plan (SNDP) was launched by Zambia's fourth President, Mr Rupiah Bwezani Banda, in February 2011. The SNDP built on the gains of the FNDP in as far as attaining Zambia's Vision 2030 was concerned. It was themed "sustained economic growth and poverty reduction". The objectives of the plan included to accelerate development of infrastructure; the growth of the economy and diversification; rural investment and poverty reduction; and human development enhancement. The SNDP outlined sector programmes deemed critical in achieving its overall objective.

It included sectors such as economic and social development, human development, infrastructure, and regional development. Cross-cutting issues were mainstreamed in the SNDP, such as governance issues, the human immunodeficiency virus (HIV) and the acquired immunodeficiency syndrome (AIDS), gender issues, and disability. The social development programmes in the SNDP were motivated by the need for the country to achieve most of the United Nations MDGs. The SNDP tried to focus on development strategies that address poverty and ensure that provision of health and education facilities, water and sanitation and access to motorable roads were prioritised.

The SNDP targeted growing the economy by six to seven percent and bringing down the inflation rate to a single digit. It also targeted reducing people living in extreme poverty to about 29 percent in 2015 and aimed to reduce rural poverty from 77.9 percent to 50.0 percent. These targets were missed as rural poverty remained over 74 percent in 2015 (CSO, 2018).

2.6.9. Revised Sixth National Development Plan (2013–2016)

Following the change of government in September 2011 from the MMD to the Patriotic Front Government, led by Mr Michael Chilufya Sata, the fifth President of Zambia, a need arose to revise the Sixth National Development Plan to align it to the PF party manifesto and policies. It was called a revised Sixth National Development Plan (R-SNDP). The R-SNDP therefore took on board the priorities and the development paradigm of the PF Government towards the achievement of the country's Vision 2030. The R-SNDP was released belatedly in October 2013 by the Ministry of Finance and was themed "People-Centered Economic Growth and Development" (pg. ii). The R-SNDP did not cancel the SNDP but was designed to complement it. The R-SNDP focused on public capital investments with a bias to rural development – by promoting agricultural development, developing rural infrastructure, enhancing human development, and investing in the social sector and job creation to achieve inclusive growth.

The R-SNDP pledged to continue investing in the skills development, decentralisation, infrastructure development, education, and health sectors. The R-SNDP was motivated by the fact that the robust private sector, although important,

was not efficient and sufficient in allocating resources to alleviate the high poverty levels in Zambia (GRZ, 2013). The new government therefore planned to participate fully in economic development, mostly through public investments. The ultimate goal for the R-SNDP was to improve the quality of life for all Zambians.

The SNDP/R-SNDP registered an economic growth of 6.5 percent on average and reduced the inflation rate to single digits. Massive infrastructural works were launched during the SNDP/R-SNDP and the social sector was given premium attention through the construction of new universities, new schools, new hospitals, and health centres. However, these massive works came at a cost to government, as government reverted to borrowing extensively through the issuance of commercial euro bonds in 2012, 2014 and 2015 to fulfil this imperative. At the end of the R-SNDP, external debt stock stood at US\$4.81 billion, representing 24.0 percent of GDP, compared to US\$3.18 billion, which was 17.2 percent of GDP in 2012 (GRZ, 2017).

Overall poverty declined to 54.4 percent from 60.5 percent in the FNDP. Rural poverty marginally declined to 76.6 percent (26.6 percentage points above the planned target) from 77.9 percent in the previous development plan.

During the SNDP/R-SNDP, implementation of the decentralisation policies was attempted by way of creating more districts from 73 to 106. Implementation of the SNDP/R-SNDP was hampered by inadequate funding of programmes (GRZ, 2017). The plans were criticised for failing to implement the National Decentralisation Policy, especially the fiscal decentralisation aspect, even when both the policy and its implementation plan were approved by the government (GRZ, 2017). The failure of the full implementation of the plans was also attributed to poor implementation coordination by the relevant stakeholders and limited capacity to assimilate and implement the policy strategies (GRZ, 2017).

2.6.10. Seventh National Development Plan (2017–2021)

The Seventh National Development Plan (7NDP) was launched by Zambia's sixth President, Mr Edgar Chagwa Lungu, in July 2017. The 7NDP's theme is "accelerating development efforts towards vision 2030 without leaving anyone behind" (pg. i). Unlike the previous plans, the 7NDP departed from sectoral-based

planning and took an integrated multi-sectorial development approach to planning in order to tackle the development interventions simultaneously. By employing this approach, the 7NDP tried to domesticate and respond to the UN 2030 Agenda for Sustainable Development, the Africa Union Agenda 2063, and the SADC Regional Indicative Strategic Development Plan (RISDP). The 7NDP aims are discussed next.

The goal of the 7NDP was to create a diversified and resilient economy that would transform the socio-economic status of Zambia. The transformation would be driven by mainly the agricultural, tourism, manufacturing, and mining sectors. The outcomes of 7NDP would be diversification of the economy; reduction of poverty and vulnerability; reduction of developmental inequalities; enhancing human development; and enhancing the governance environment. The 7NDP aimed to grow the economy at 5.5 percent on average by 2021; contain inflation to around seven percent per annum on average; reduce domestic borrowing by less than two percent; reduce poverty to less than 50 percent and rural poverty to 70 percent.

Implementation of the 7NDP has been met with various unforeseen challenges. For example, during the 7NDP, Zambia experienced erratic rainfalls and droughts that impacted negatively on the energy generation, agricultural productivity, mineral production, the small and medium-sized entrepreneurs' productivity, and ultimately the gross national product. These challenges have been compounded by the novel coronavirus disease of 2019, an acute, sometimes severe, respiratory illness caused by a novel coronavirus SARS-CoV-2. The virus originated from Wuhan city of Hubei Province in the Peoples Republic of China and was first reported in December 2019. Following the surge in the numbers of infections and the spread to other countries around the globe, the World Health Organisation (WHO) declared the disease a pandemic on 12 March 2020. The COVID-19 had killed over 2.1 million people around the globe by December 2020 (WHO, 2020). Zambia was equally affected by COVID-19 and more than 300 people lost their lives during the same period. To prevent the spread of the virus, Zambia, like many other countries, implemented lockdown measures that closed almost the entire economic activities in the country. These measures had an adverse effect on the economy as they disrupted supply chains, reduced revenue performance, and reduced consumer and

investment spending (BoZ, 2020). COVID-19 triggered Zambia's first economic recession in 20 years (BoZ, 2020). Zambia's economy was forecast to contract by 4.9 percent in 2020 from a growth of 1.9 percent in 2019 (MoF, 2020). On the other hand, the inflation rate spiked to 19.2 percent, way beyond the 7NDP target (BoZ, 2020). The local currency depreciated over 50 percent from the previous year.

Zambia's external debt was at US\$3.18 billion at the end of R-SNDP and has skyrocketed during the 7NDP to US\$11.1 billion or 54 percent of GDP (Fitch Ratings, 2020). In fact, the IMF declared Zambia as a country at high risk of debt distress in 2018 following a spike in debt levels (CUTS, 2019). The escalated debt position for Zambia has worsened the economic position of the country as debt service obligations gobbled up 76 percent of Zambia's annual revenues (MoF, 2020).

2.7. THEORIES OF POVERTY

There exist classical and neo-classical theories on poverty. It is important to look at the poverty theories that would relate to the evolution of poverty levels in Zambia.

2.7.1. Behavioural/Decision-based theory

Esping-Andersen (1990), in his behavioural/decision-based theory, attributes the outcomes of individuals' welfare to their own economic and social decisions. He asserts that people should be held responsible for their well-being due to their deficiencies such as lack of industrious work ethic, low levels of education, or uncompetitive market skills. The behavioural-based theory completely excludes the role of the state since the individual traits could be given or driven by market forces. Understanding this poverty theory is important; however, it may not directly explain the existing poverty levels in Chinyunyu Village.

2.7.2. Marxian theory of poverty

The Marxian theory of Karl Marx believes that society is categorised into those who have the means of producing wealth and those who do not (Manjoro, 2017). Karl Marx posited that the entrepreneurial practices of the owners of means of production, which he called the capitalists, were to move away from labour intensive to capital intensive activities as a way of enhancing productivity and

profitability, which in turn increased the levels of unemployment. Those that were retrenched because of this transformation may move to urban areas or change their professions while those who fail to do so end up being paupers and form what Karl Marx referred to as a reserve army of labourers (Harvey & Reed, 1996; Manjoro, 2017). These paupers eventually end up being poor. As retrenchments persists, more paupers are churned out of the labour force. This situation eventually increases poverty levels in society. Capitalism and the bourgeoisie, therefore, begin to benefit from the existence of poverty as this arm of reserve labourers will be willing to work at any given wage rate (Cunningham, 2007). Karl Marx was of the view that until the bourgeoisie are overthrown by the proletariat, the working class, and the capitalist system is replaced by a more egalitarian socialist system, poverty will always persist (Cunningham, 2007). The Marxist theory further called for improved structures of production and increased education and training to the “army of labourers” for them to professionally re-orient themselves and adapt to the change of environment. The theory also advocates for an effective government social welfare programme to aid those who fail to adjust to the new environment (Harvey & Reed, 1996). While Chinyunyu Village has an “army of labourers” willing to be employed at much lower rates than in the urban areas, this theory falls short in explaining the poverty dimension in Chinyunyu as there are no capital-intensive industries that could be attributed to the creation of the army of labourers or the proletarians.

2.7.3. Cultural theory of poverty

The Marxian theory was further developed by Oscar Lewis (1966) through his cultural theory of poverty. Lewis argued that the “army of labourers” collectively group up in a specific geographic area. This relocation could be driven by government welfare programmes or by demarcating the areas where paupers reside as a district or province. The cultural theory of poverty argues that people are poor because of their way of life embedded in their predetermined cultural beliefs. The cultural theorists refer to this type of predetermined beliefs as defective culture (Manjoro, 2017). The defective culture aspect includes the impulsive need for gratification, psychological self-doubt, and low aspirations that collectively change the perspective of poor people and leads to pervasive hopelessness, despair, and a

state of poverty (Manjoro, 2017). These values and norms are then passed on to the next generation. The “sub-cultural” theory of poverty entails that poverty is intergenerational (Blank, 2010). Therefore, poverty begets poverty, meaning children growing up in a dysfunctional family get inspiration from the behaviour of their progenitors, who act as role models (Blank, 2010). These theories believe that the poor are responsible for their social status, and it is not because of other causes. This theory blames the victims for their poverty; however, poverty is multidimensional and could be caused not only by endogenous factors but also factors that are beyond the control of a poor person such as economic fundamentals and market failures.

The neoclassical theory builds on the classical tradition and stresses the impact of the different initial endowments of talents, skills and capital which is critical in deciding the productivity of a person within a market-based competitive economic system in generating poverty. Market failures such as externalities, moral hazard and adverse selection, as well as incomplete information are viewed as aggravators of poverty (Davis, 2007). This theory could explain the poverty dimension in Chinyunyu Village because the people of Chinyunyu Village have lived in poverty from one generation to the next (De la Fuente et al., 2015).

2.8. POVERTY STRUCTURES AND THEIR EVOLUTION IN ZAMBIA

This sub-section outlines the poverty structures related to Zambia and the evolution of poverty in Zambia going back in time to the pre-independence era.

2.8.1. Poverty structures

Poverty is a multi-dimensional human problem that occurs at an individual or household level by failure to access minimum basic needs – food, shelter and clothing, and social services (Mattson, 2000). The common measure of poverty is by using an individual’s or household’s real income or expenditure. The World Bank normally calculates the poverty line, i.e., living on less than USD1.9 per day (purchasing power parity-PPP) for extreme poverty and US\$3.10 per day (PPP) for moderate poverty. Then poverty can be calculated by using a headcount index by simply adding up the number of persons who fall below the poverty line.

A measure of income distribution gives a picture of the gap between the poor and the rich. The Gini coefficient measures the degree of income inequality. It is a number that varies between 0 and 1. A Gini coefficient of zero is interpreted as absolute equality, where all citizens have the same income, whereas a Gini coefficient of one (1) is interpreted as absolute inequality, where one person has 100% of the total national expenditure and the rest has nothing (Mattson, 2000). Zambia has high levels of poverty and the highest inequality in the region at 0.69 when compared to other countries in the SADC region. The Southern African region – which is commonly known as the Southern Africa Development Community (SADC) – comprises 14 member countries which are Angola, Botswana, DR Congo, Madagascar, Malawi, Mozambique, Namibia, Lesotho, Seychelles, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe (Khan & Moseki, 2020). The interest in and selection of some countries in the SADC in this study was motivated by the fact that Zambia is geographically positioned in this region.

De la Fuente et al. (2013) collaborated with the Central Statistics Office of Zambia to undertake a mapping exercise of subnational poverty levels that disaggregated poverty data into provinces, districts and wards. The aim of this exercise was to establish the specific levels of poverty per district and ward level in Zambia. De la Fuente et al. (2013) found that Rufunsa district, where the Chinyunyu Village is located, was among the poorest districts in Zambia, with its poverty rate hovering at approximately 79 percent. This is approximately 2.4 percentage points above the average rural poverty rate and 24.6 percentage points higher than the national poverty rate. Poverty in Zambia is therefore more concentrated in the rural areas than the urban areas. Figure 2.2 shows the poverty and inequality levels in SADC, where Zambia is showing higher levels of poverty and inequality compared to its peers in the SADC region.

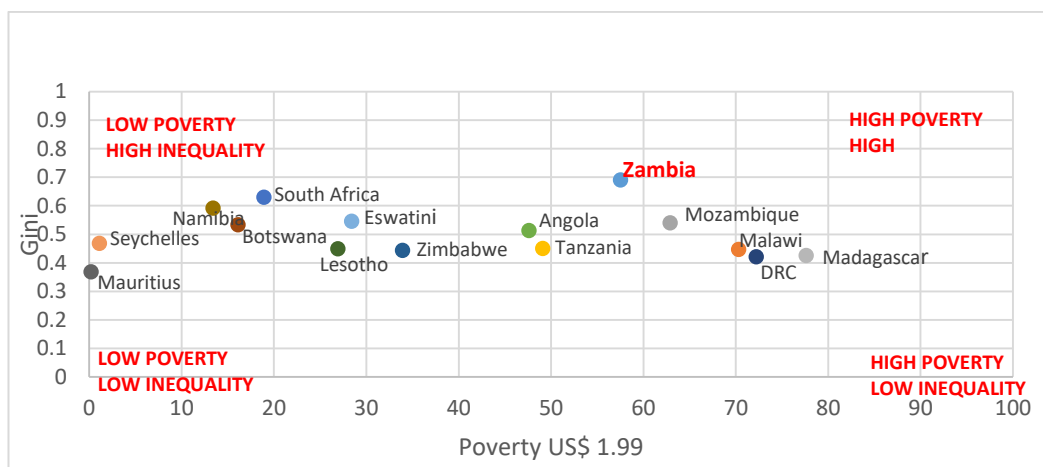


Figure 2.2: Poverty and inequality in the SADC region

Source: World Bank Development Indicators, 2020; GRZ, 2017.

As Figure 2.2 shows, Zambia shows the highest Gini coefficient among the SADC countries at 0.69, meaning that the gap between the rich and the poor remains extremely high in Zambia. The inequality in Zambia is even higher than the average Gini coefficient for Africa as a whole, which stands around 0.43 (MNDP, 2020). The main causes of this high inequality in Zambia are attributed to the privatisation and liberalisation of the economy that was undertaken by the Third Republic of Zambia that caused scanty opportunities for gainful employment (Mwenge, 2016). The agricultural sector, which employs approximately half of the population of Zambia, is the lowest paying sector and this has contributed to increased high levels of inequality (Mwenge, 2016). The high inequality in Zambia tends to perpetuate itself, i.e., inequality begets more inequality as it transmits poverty from one generation to the next. Financial inclusion is another factor contributing to high inequality (Mwenge, 2016). More than 60 percent of Zambians do not have a bank account (Mwenge, 2016). Access to credit has been a challenge for the poor owing to lack of collateral, whereas the rich have easy access to credit; therefore, the rich are able to accumulate more wealth over and above their already substantial wealth, causing high inequality. In addition, an unequal society favours the elites who find it easier to capture governments and institutions and use them for their own benefit and not for the overall benefit of the country's economy (Regan, 2012).

Regan (2012) deduced that a one percentage point increase in the growth of the economy would benefit poor people more in an equal economy than in an unequal

economy. Therefore, high levels of inequality stymie the prospects for growth and subsequently poverty reduction.

Regarding poverty levels, only Mozambique, Malawi, Democratic Republic of Congo (DRC) and Madagascar show higher levels of poverty incidence than Zambia as depicted in Figure 2.2 above. Zambia's high poverty levels might be attributed to multi-faceted factors but mainly the mono dependency on the extractive industry (World Bank, 2018). The extractive industry, i.e., the mining industry, has been Zambia's economic mainstay since the pre-independence era. In 2012, the mines employed 90,000 people representing 8.3 percent of the total formal labour force in Zambia (ILO, 2020). In 2018, employment in the mines declined to 58,000, representing two percent of the total formal labour force (CSO, 2018). The mining industry has mechanised its operations, making them more capital intensive. Therefore, fewer jobs are being absorbed by the sector.

The high poverty levels of Mozambique and Madagascar could be attributed to political instability that characterised the countries in the past decades. The DRC's high poverty levels could be attributed to the country's fragile environment, which is characterised by internal conflicts. At independence (1960), the DRC's economy had a growth rate of approximately 1.1 percent and a poverty distribution of approximately 14 percent (IMF, 2007). However, a few years into independence, the economy started deteriorating because of internal conflicts and devastating wars. Furthermore, the figure shows that Malawi, one of the poorest countries in the world, according to the World Bank (2020), equally shows a higher poverty rate of approximately 70.3 percent. Malawi is a landlocked country with limited resources to aid the GDP, which stood at 7.6 percent during independence and is currently at 3.5 percent (World Bank, 2020). The country therefore relies on foreign aid and limited international investment in the country's mainly tourism industry.

Poverty exacerbates social problems, which include high mortality rates, starvation, malnutrition and deaths from treatable diseases, crime, and mass migration of the economically active people to urban centres. This phenomenon is not uncommon in Zambia. A closer look at inequality in terms of telling the story of different income distribution, using data from the World Inequality Database (2020)

pioneered by French economist Thomas Picketty, depicts the levels of income of the citizens and shows the share of the total national income that goes to the bottom 50 percent and to the top one and 10 percent of Zambians. Figure 2.3 shows disaggregated income inequality for the period 1990 to 2015.

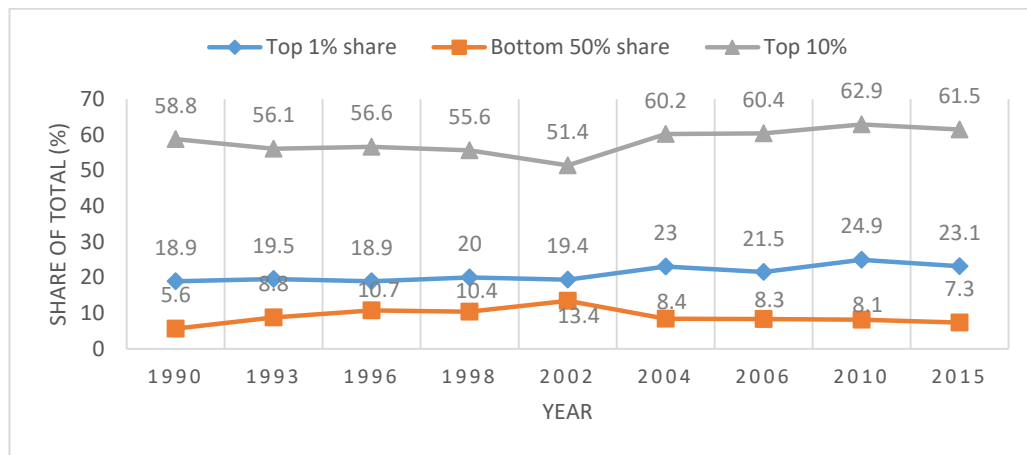


Figure 2.3: Income inequality in Zambia

Source: World Inequality Database, 2020.

Figure 2.3 shows that the top one percent of Zambians have been earning from 19 to 25 percent of the total national income in the last three decades while the bottom 50 percent of Zambian earners have been claiming between five and 10 percent of the total income in the same period. The top 10 percent claimed a lion's share of over 60 percent on average over the same period. As seen from the figure above, from 2002, income levels of the top one percent and the top 10 percent of income earners have been on a growth trajectory while the bottom 50 percent have been on a declining trend. It can be asserted that the gains accruing to the top one percent income earners and the top 10 percent earners have been at the expense of the bottom 50 percent. This explains that inequality levels in Zambia have been getting worse and hence, as Regan (2012) deduced, this phenomenon keeps taking a toll on poverty levels in Zambia. The commission of the World Bank identified unemployment as a major cause of primary (or income) poverty (Saunders, 2002). This assertion was corroborated by Layard, Nickell and Jackman (2005), who contended that lack of money or poverty was a major consequence of unemployment. Similarly, Gallie, Paugam and Jacobs (2003) posited that an unemployed person had a higher risk of experiencing poverty because of being

deprived of materials and income. The International Labour Organisation (ILO) (2021a) argues that full employment and decent work are needed to break the cycle of poverty. To put it simply, the inability to find a job that pays a living wage has put many people's lives in poverty. The World Bank Development Indicators (2019) define unemployment as the share of the labour force that is lacking work although available for and seeking work. The Central Statistical Office (CSO) (2018) also defines unemployment as a condition of complete joblessness where the persons affected are available for work and/or are actively looking for work. Zambia's working-age population (15 years or older) is approximately 9,483,400. Of this, 3,329,147 persons are in the labour force and 6,154,252 are outside the labour force (CSO, 2018; Mulenga, 2020). Figure 2.4 shows the main categories of the labour force framework in Zambia.

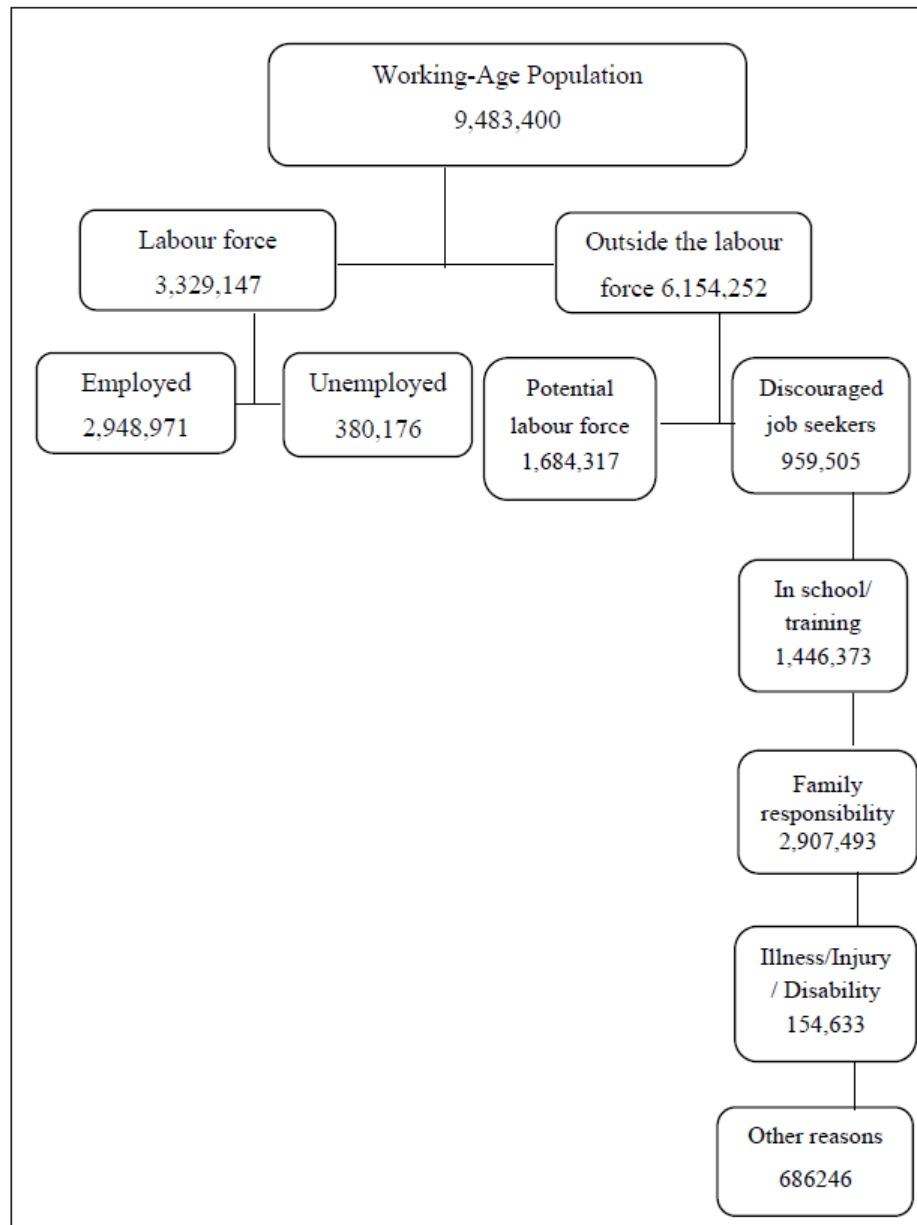


Figure 2.4: Zambia’s labour framework

Source: CSO, 2018; Mulenga, 2020.

Figure 2.4 shows that of the 3,329,147 labour force, 380,176 people are unemployed. This gives an 11.42 percent unemployment rate and an employment rate of 88.58 percent for Zambia. CSO (2018) defined the employed population as the total number of persons with a paid job either in cash or in kind (barter) or family gain. CSO (2018) adopted a rather broader than most people’s concept of employment. The definition also incorporates self-employed people, whether their business is in operation or ceased to operate for various reasons such as lack of

business (Mulenga, 2020). Further, the Zambian national definition of employment counts, for example, a mine retiree and a peasant farmer both working in their vegetable gardens, producing food for their own consumption since they are both working for family gain without earning a wage (Mujenja, 2014). This is a diversion from the internationally agreed definitions, for example by the ILO (2020), who contend that employment needs to be decent with a living wage. Therefore, this study argues, as Mujenja (2014) posited, that the rate of unemployment in Zambia is much higher than 11.42 percent if a “living wage” is taken into consideration as an important factor in determining which people are unemployed. This assertion is supported by the World Bank (2018), who revealed that the majority of the Zambian employed cohort are the working poor people. In the simulation study between unemployment and poverty Gorman (2006) found that increasing the unemployment rate by one percentage point increases the poverty rate up to 0.7 percentage points. This finding corroborates the recent ILO (2021a) findings that the global 75 million jobs losses due to the COVID-19 pandemic has pushed approximately 100 million people into poverty. Therefore, Zambia’s national poverty rate of 54.4 percent and 76.6 percent in rural areas would correspond to much higher unemployment rate than 11.4 percent.

Another important statistic from Figure 2.4 is the 6,154,252 people who are of working age but outside the labour force or not seeking employment for various reasons such as being discouraged to seek an employment, still in school, for family reasons or being disabled to work. The figure shows that 959,505 were discouraged job seekers. These are people who had tried to look for jobs but failed to find them and have given up, no longer searching for employment. This also implies that a housewife who does various household chores is considered as employed and officially not part of the unemployed people (Mujenja, 2014). In other countries’ statistics agencies, e.g., South Africa, unemployed housewives would be part of the unemployed people (Altman, 2013). Similarly, the French statistical agency (INSEE) adopted the ILO definition of unemployment. The unemployment is measured by the people who qualify for unemployment social security benefits, *chômage*, and these are active people but without a job (INSEE, 2017).

2.8.2. Evolution of poverty in Zambia

The British South Africa Company (BSAC), an exploration company chartered in 1889 by the merger of Cecil Rhodes' Central Search Association and the London-based Exploring Company Ltd, acquired Northern Rhodesia (present-day Zambia) in the 1890s for the sole purpose of mineral exploration (Mills, 2010; Sardanis, 2014; UNDP, 2007). BSAC had obtained land rights over the territory by a series of treaties with local chiefs (UNDP, 2007). To settle the mineral royalties to the chiefs, BSAC imposed a tax on adult males that was to be paid in cash, failure of which could result in forced labour (UNDP, 2007).

Three decades after BSAC rule, the British Colonial Office assumed the administration of Northern Rhodesia in 1924 following the non-renewal of the BSAC's charter and declared itself a British Protectorate. However, it allowed BSAC to retain its mineral rights (Sardanis, 2014; Shurmer-Smith, 2011; UNDP, 2007). Post-1924 saw the commencement of huge investments in development of the mines undertaken mainly by American and South African companies. As a result, this development attracted an influx of white settlers into Zambia while the natives migrated from their villages to provide labour. The white population grew from 3,634 in 1921 to 13,846 in 1931, while the native African population grew from 980,000 to 1,330,000 over the same period (Henry, 1946; Shurmer-Smith, 2011). Development was said to have begun during this era when large deposits of copper, lead and zinc were discovered, and mining proved to be extremely lucrative (Shurmer-Smith, 2011). This was the period when the world demand for copper spiked due to the increased demand from electrical and automobile industries in the United States and Europe (Sardanis, 2014; UNDP, 2007). By 1930, four large mines had been developed on the Copperbelt of Zambia: Nchanga and Rokana (Nkana), owned by the Anglo-American Corporation, a South African conglomerate; and Roan Antelope and Mufulira, owned by the Rhodesian Selection Trust, an American and British group (Sardanis, 2014; UNDP, 2007). However, production at these mines was either halted/reduced or delayed because of the Great Depression of 1929–1935 that was as a result of the collapse of the international market following the crash of the New York Stock Exchange (Kaniki, 1995). Only Rokana and Roan Antelope began production in 1931 while Mufulira started production in

1933 and Nchanga in 1939. The Great Depression affected commodity prices and the copper prices on the world market dropped from £112 per tonne in 1929 to £27 per tonne in 1932 (Kaniki, 1995). As a result of this crisis, the mining companies in Northern Rhodesia laid off approximately 16,000 workers, representing 75 percent of the total labour force employed in the mines in 1930 (Kaniki, 1995). In fact, the crisis caused a drop in the overall employment, including agricultural and railway sectors, from around 70,478 workers in 1930 to 37,492 workers in 1933 (Kaniki, 1995).

Sardanis (2014) argued, however, that the Great Depression was a lesser evil to the copper producing countries such as Northern Rhodesia as high demand for copper was sustained by the impending Second World War. Copper alloys are a vital input for production of ammunitions that were in high demand during the wars. From the figures depicting loss of employment coupled with loss of revenue arising from the collapse in commodity prices, it can be asserted that the Great Depression did have an adverse effect on Northern Rhodesia and contributed to the socio-economic challenges that the country experienced during the pre-independence era.

The problems were exacerbated by the colonial government policies that did not translate into improving the livelihood of Africans as they remained marginalised and exploited through taxation, forced labour, and bad agricultural policies (UNDP, 2007). For example, Africans were deterred from having multiple income streams, i.e., from farming, by restricting the crops they could grow, thus relegating them to only earning their income from the copper mines.

The Federation of Rhodesia and Nyasaland was formed in 1953 by the British Colonial Office by amalgamating Northern Rhodesia (present-day Zambia), Southern Rhodesia (present-day Zimbabwe) and Nyasaland (present-day Malawi). The Federation was presided over by Sir Godfrey Huggins (Lord Malvern), who served as the first Prime Minister from 1953 to 1956 (Gann, 1985). This amalgamation was purely done from economic motives to create a larger market with specific specialisations besides retaining the white minority's dominant power. Rhodesia would focus on mining copper, Southern Rhodesia would become a settler colony and focus on agriculture and manufacturing/ industrial development,

while Nyasaland would be a source of labour (UNDP, 2007). The colonial policies for Northern Rhodesia were designed for profit extraction and did not support economic development, more especially agriculture, which would have uplifted the social welfare of the African natives but was the preserve of a few white settlers. For the few Africans who managed to farm, the price of their products was regulated by the colonial Maize Control Board, which paid African farmers a lower price for their maize than the European farmers (Dodge, 1977). This act, therefore, discouraged Africans from undertaking farming activities and they would rather work in the mines controlled by the colonial masters. Even for those who worked in the mines, the wages were kept artificially low by the colonial rulers as native Africans were considered as “migrant labourers” (Roberts, 1976). In fact, the Africans were restricted to unskilled labour and low-level clerical jobs whereas skilled work was reserved for the Europeans, consistent with the Northern Rhodesia plan as a country for profit extraction (UNDP, 2007). Despite many Africans possessing similar skills as the Europeans, the European workers earned seven times more than what the average native African worker earned (Lanning & Mueller, 1979; Sardanis, 2014). The Europeans also secured closed-shop agreements with the mine owners, where workers were to be sourced from their unions/groups (Sardanis, 2014).

Northern Rhodesia remained underdeveloped as most of the resources, including taxes realised from the mining of copper and cobalt, were invested in Southern Rhodesia to develop the colonial social services and infrastructure and industrialise the economy (UNDP, 2007; Whitworth, 2014). Development in Northern Rhodesia concentrated along the Line of Rail where the colonial settlers lived, whereas the rural areas were grossly neglected (Baldwin, 1966). The colonial administration adopted a policy that focused on developing the most immediate profitable areas of the economy (Kamuwanga, 1995). For example, 45 percent of government expenditure in the 1950s was on power, water and communications along the Line of Rail and less than three (3) percent of government expenditure was on rural development (Baldwin, 1966). The rural areas were home to the black local citizens, who mainly settled in small villages in the countryside, surviving on subsistence farming. However, those recruited to work for the colonial rulers lived in high-

density slums located in urban areas. Development of rural areas was therefore of no economic benefit to the colonial rulers. thus this phenomenon brought about huge development disparity between the urban and rural areas (Kamuwanga, 1995).

The Federation of Rhodesia and Nyasaland was one of the most short-lived states in history and only lasted for 10 years. It collapsed under the leadership of the second Prime Minister, Sir Roland "Roy" Welensky, who served from 1953 to December 1963 (Gann, 1985). A year later, on 24 October 1964, Northern Rhodesia became an independent state and was renamed Zambia, a name derived from the Zambezi River, the fourth longest river in Zambia whose source is from the north-western part of Zambia and also traverses Angola, Mozambique, Namibia and Zimbabwe. The white population at independence had reached 74,640 while the African population had reached 2,490,000 (Shurmer-Smith, 2011).

At independence, Zambia inherited a strong free enterprise economy propelled by its rich mineral and agricultural resources. It was a major player in the world copper industry, contributing over 12 percent of the global output (Sikamo, Mwanza, & Mweemba, 2016). Zambia was among the richest newly independent developing countries, going by its per capita income which was 75 percent above the African average and about four times that of East Asia (Bigsten & Tengstam, 2008). Zambia was classified as a middle-income country at the time of its independence (World Bank, 2012) with a per capita income similar to Malaysia and Singapore in 1964 (McCulloch et al., 2000; Chisala, 2008) and its GDP equal to that of South Korea at US\$3.5 billion (Chikwanda, 2020). Furthermore, compared to one of the Asian tigers, Zambia's income per capita was USD294 at independence to the USD106 of South Korea (Sikamo et al., 2016). In fact, Whitworth (2014) asserted that Zambia's GDP per capita was the fourth highest in Africa, even though it has recorded one of the worst social and poverty indicators fifty years later. Using the constant 2000 USD prices, Zambia registered a per capita income of US\$500 on average during the first 10 years of independence compared to the US\$150 of East Asian countries (Bigsten & Tengstam, 2008). The GDP per capita was used as an indicator of the levels of poverty during this period, which was rather a simplistic way of measuring the citizens' social well-being as it only depicted the average distribution of national income assuming that it was unevenly distributed among

citizens. Therefore, this indicator did not represent the real standards of living of the Zambians. In fact, the World Bank (1994) reported that despite the high per capita income Zambia registered at independence, the country had extremely high levels of poverty and inequality during the post-independence era. Wealth was held in the hands of the few colonial rulers. The Gini coefficient in 1974 when the country started capturing this variable was 0.59 (World Bank, 1994). Therefore, President Dr Kenneth Kaunda inherited a relatively wealthy country with poor indigenous local citizens (Africans).

In November 1965, a year after Zambia's independence, Ian Smith, the white Prime Minister of the colony of Southern Rhodesia (present-day Zimbabwe) unilaterally declared independence (UDI) from Britain – effectively a coup d'état against the British empire under a minority white government (Gann, 1985; Sardanis, 2014; Shurmer-Smith, 2011; Whitworth, 2014). The UDI caused Britain and America to impose sanctions against Rhodesia following the United Nations Security Council resolution to impose an economic embargo on Rhodesia. These sanctions had a direct negative impact on the Zambian economy (Sardanis, 2014; Whitworth, 2014). The embargos included cutting off the supply of fuel. The British used their Navy to enforce this embargo to interrupt fuel tankers destined for the Rhodesian pipeline at Beira (Sardanis, 2014). Zambia depended on this fuel supply and the cut-off entailed that Zambia was equally cut off from fuel supply through the Beira route. Southern Rhodesia was also the main source of manufactured products, hence the subsequent closure of its border with Zambia forced Zambia to find alternative but more expensive routes. Therefore, Zambia began diverting its imports through Dar-es-Salaam at a greater cost. The oil embargo forced Zambia to make urgent alternative arrangements. It then sought the help of the Italian government to construct a 1,700 kilometre oil pipeline from Dar-es-Salaam to Ndola in Zambia (Whitworth, 2014). This project, named the Tanzania Zambia Mafuta (TAZAMA) pipeline, was jointly owned by Zambia with 66.7 percent and Tanzania with 33.3 percent shares. The TAZAMA transported comingled fuel to a refinery that was constructed in Ndola. This pipe averted the impact of the fuel crisis that had befallen Zambia due to the colonial sanctions on Southern Rhodesia.

Further, the UDI resulted in Zambia losing its two transport links for exporting its major export earner, copper, i.e., through the Southern Rhodesia and South Africa (Sardanis, 2014; UNDP, 2007). Zambia's external trade heavily depended on the Rhodesia Railways to the ports of Durban, Port Elizabeth, and Beira. This cut-off took a toll on the Zambian economy as it became very expensive or near impossible to trade until the Chinese government came to the aid of Zambia by constructing a rail line from Zambia (Kapiri Mposhi) to Tanzania (Dar es Salaam). The TAZARA rail line commenced its operations in 1976. The project was built through an interest-free loan advanced to the governments of Zambia and Tanzania amounting to US\$400 million (Whitworth, 2014). The rail link became the most significant trade route for Zambia and transported approximately 81 percent of Zambia's exports and 85 percent of Zambia's imports (Whitworth, 2014). However, with the independence by Southern Rhodesia in 1980, all major links opened up and the TAZARA railway line seemingly became a white elephant as its *raison d'être* was completely removed (Whitworth, 2014).

The rising copper prices during the first ten (years) and high investments in the mining sector in the post-independence period propelled the economy to grow around 2.4 percent per year (World Bank, 1994). Nevertheless, the population growth outpaced the growth of the economy, which resulted in a drastic drop in per capita income of the country.

A boom in the international copper prices created an illusory sense of structural economic growth, but the economy faced deterioration in the mid-1970s following a sharp decline in copper prices from US\$3 to less than US\$1 (Mills, 2010; OECD, 2012; Sardanis, 2014; Simatele, 2007; UNDP, 2007), as already observed. Copper accounted for 90 percent of Zambia's foreign exchange earnings (Mills, 2010). The country's lacklustre approach to devising effective policy measures that could have responded to the falling copper prices to salvage the economy further worsened the situation in the country. Zambia attempted to diversify the economy away from the mono-dependency on mineral exports and introduced import substitution industrialisation (ISI) strategies that encouraged companies to produce for the domestic market (World Bank, 2012). However, these strategies failed to build capacities in the local companies to enable them to export; consequently, Zambia

continued to lack foreign exchange. The failure of the import substitution industrialisation strategies led to increased unemployment levels in Zambia and exacerbated the poverty levels in the country. In addition, as indicated in the preceding paragraphs, the SAP worsened the poverty levels in Zambia. Overall, Zambia’s economic development from independence to 1991, when there was a change of power, was very poor (Bigsten & Tengstam, 2008).

Zambia began accurately capturing the national poverty data from 1991 onwards. The Central Statistics Office (CSO) (present-day Zambia Statistics Agency) has been carrying out living conditions monitoring surveys, using the income approach of measuring poverty levels, a measure that assumes an individual or household is poor if they fall below a certain threshold – the poverty line. A poverty line is calculated based on the minimum basket of essential goods needed for human survival. The head count ratio or poverty incidence is therefore the proportion of the population earning or spending below the poverty line threshold. Figure 2.5 below depicts the poverty headcount ratio at the national poverty lines (percentage of population) from 1991 to 2015 for Zambia. The figure shows the urban and rural poverty levels.

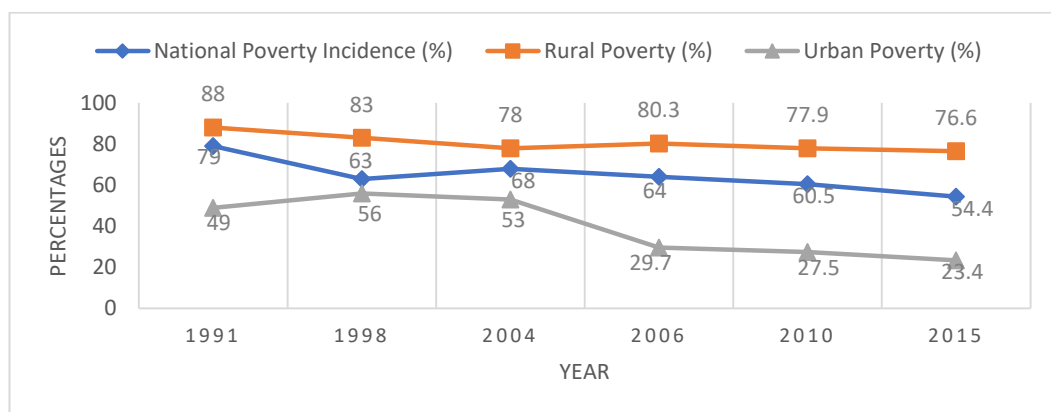


Figure 2.5: Poverty levels in Zambia: Rural vs urban areas (1991–2015)

Source: CSO, 2018; GRZ, 2017.

Figure 2.5 shows that during the period 1991–2015, Zambia’s poverty distribution in the urban areas had a significant reduction compared to the rural areas. This was a decline from 49 percent to 23.4 percent, a reduction of 25.6 percent (CSO, 2018). Rural poverty in Zambia, on the other hand, decreased by 11.4 percent from 88

percent to 76.6 percent over the same period (CSO, 2018) as depicted in Figure 2.4. From Figure 2.5, there is a constant trend of high poverty levels in rural Zambia while the urban areas have revealed a downward trend. Approximately two-thirds of Zambia's population lives in rural areas; the countryside is home to 80 percent of Zambia's poor (World Bank, 2012).

Rapid urbanisation could be attributed to the decrease in urban poverty in Zambia. Urbanisation prompted the Zambian government to put in place better and modern infrastructure and social amenities in the urban areas (World Bank, 2012). In addition, the traditional centralised top-down planning approach that Zambia adopted in the last decade focused more on developing the towns and cities along the Line of Rail (Hampway, 2008). The approach did not bring desired results in terms of poverty reduction in rural areas.

The history of poverty in Zambia is deeply rooted in the pre-independence era when the local natives were denied an opportunity to participate in the economic activities of the country. Poor education, health and agricultural policies by the Colonial Office of the British government were detrimental to the welfare of the local citizens, most of whom survived through subsistence farming. The locals in the pre-independence era were what Karl Marx in his Marxian theory of poverty referred to as an "army of labourers" who were trapped in a vicious cycle of poverty and high inequality.

The post-independence socialist policies characterised by the import substitution industrialisation policies, the structural adjustment programmes, and Zambianisation policies of the first Republic were not effective in uplifting its people from poverty. With a gradual increase in the population, the proportion of people who became poor also increased. The Oscar Lewis cultural theory of poverty illustrates this type of poverty where poverty is transferred from one generation to another.

Zambia remains trapped in abject poverty (World Bank, 2012) following the liberalisation and privatisation of market-oriented policies embarked on by the Movement for Multi-party Government (MMD) in 1991. Zambia remained one of the poorest and most unequal countries in the world (World Bank, 2012; 2018),

with the majority of its people especially in rural areas having a weak purchasing power, lack of basic accommodation, and insufficient access to basic necessities such as education, health, food, and clean water. The HIV/AIDS pandemic and other diseases such as tuberculosis and malaria continue to worsen the poverty situation in the country.

2.9. THE LOCAL GOVERNMENT SYSTEM IN ZAMBIA

Local government is the second level of government that is deliberately created with the specific aim of bringing government closer to the local communities and facilitating the participation of local people in the political processes that control their daily lives (Mukwena, 2014). The Local Government Association of Zambia ([LGAZ], 2018) asserts that local authorities play a major role in socio-economic development of the local economies as their operations are close to the local communities and hence are meant to promote the interests of the locals that should ultimately improve the living standards of the people.

The local government system is enshrined in the Constitution of Zambia, which provides for the establishment of a local government system which is democratically elected based on universal suffrage (Chikulo, 2009). Zambia is divided into 10 provinces with each province headed by a Provincial Minister. The local government system is at three levels of government, i.e., the central, the provincial and the districts. The district is the main level where government services are delivered to the local people. The districts have dual administrations, i.e., the field administration headed by the District Commissioner is represented by respective line ministries such as health, education, agriculture and community development ministries. These field administration officers report to their respective ministry from the central government while the councils headed by the Mayors or the Council Chairpersons report to the Ministry of Local Government.

The local government has a single-tier system comprising three types of councils: city, municipal and district councils making up 116 local authorities countrywide. The councils are composed of the city mayors, council chairpersons, councillors, and members of parliament of respective districts. Two representatives from the

chiefs are also included in the councils. Mayors and councillors are elected every five years. Figure 2.6 shows the local government system in Zambia.

As indicated in Figure 2.6 below, the provincial and district coordinating committees were introduced in 1995 (Mukwena, 2014). These committees coordinate development programmes and activities in provinces and districts. The provincial development coordinating committees (PDCC) are responsible for provincial development plans based on the input from the district development coordinating committees (DDCC) and relay the development plans to the National Development Coordinating Committee in charge of developing national development plans for the country (JICA, 2007). The PDCC are chaired by the permanent secretaries of the respective provinces and the DDCC are chaired by the district commissioners. The fact that DDCCs do not have legal backing in decision making makes them largely ineffective (JICA, 2007). In addition, political conflicts among the District Commissioners and other members sometimes lead to malfunctions in the DDCCs. A case in point can be related to the Paramount Chief of the Bemba-speaking people in Northern Province, Chief Chitimukulu, who complained to the Republican President that because of factions in the Mungwi district council between the district commissioner and other members in the district, the funds meant for development of the district were left lying idle for over 18 months at the expense of local development (Lusaka Times, 2020a). One of the objectives of the National Decentralisation Policy is to legalise the PDCCs and DDCCs to address such problems that may arise.

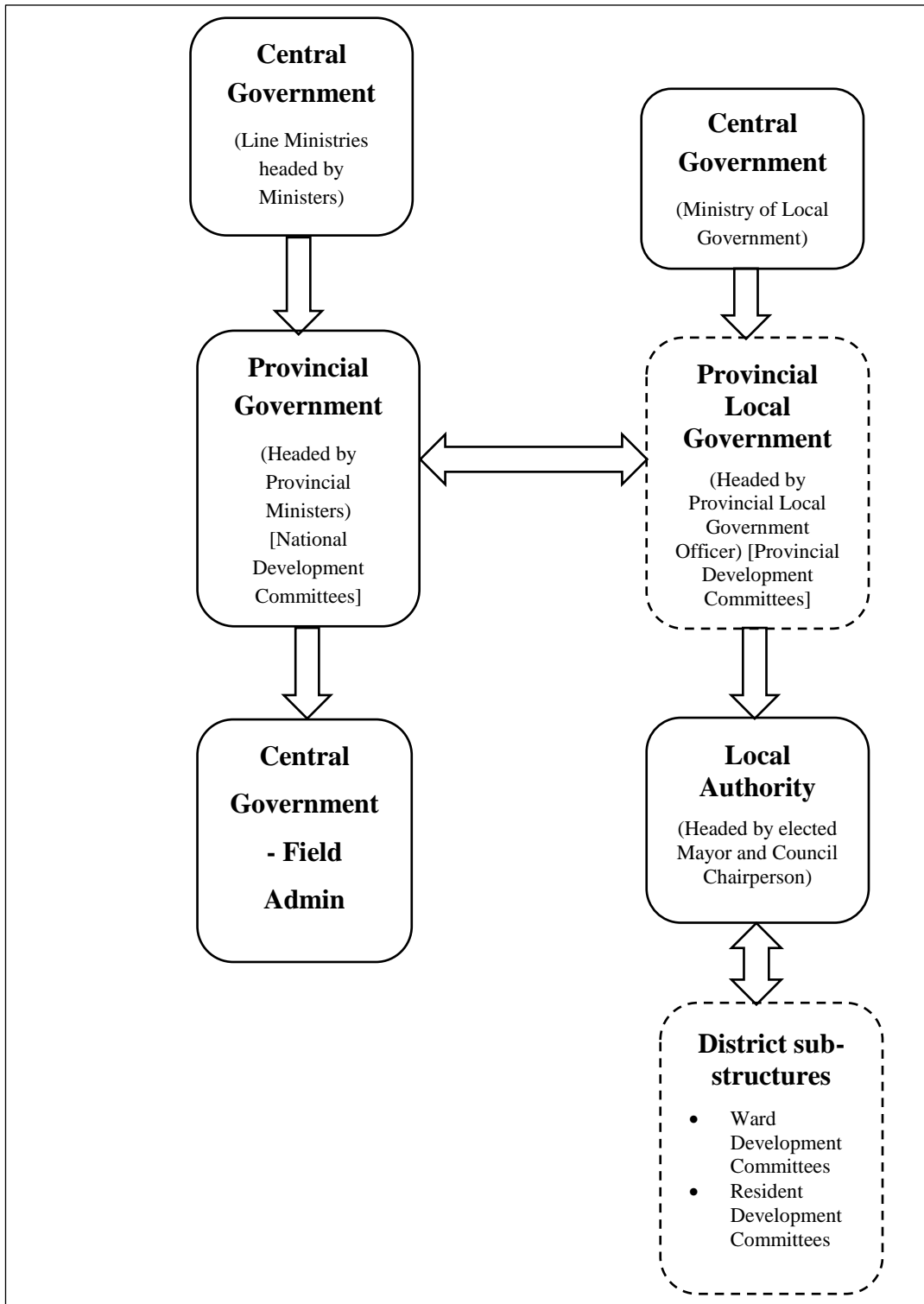


Figure 2.6: Local government system in Zambia

Source: Author's own compilation.

The ward development committees (WDCs) and the resident development committees (RDCs) are at the tail end of the local governance. Their main role is to

bring on board community participation in the local economic development process and to monitor service delivery projects in their communities. The WDCs are formed by the ward councillors while the RDCs are formed by the local residents. These committees have however had challenges in implementing developmental activities in the local areas as they lack control over funds (Mukwena, 2014).

The 116 local authorities in Zambia are represented by an apex body, the Local Government Association of Zambia (LGAZ), an association that was created in 1947 aimed at advocating for legislation and policies that strengthen local authorities. The LGAZ also facilitates exchange of best practice and excellence in local governance and in the delivery of public services. In fact, the LGAZ has been advocating for the local authorities in Zambia to adopt the LED approach in their rural development imperatives (LGAZ, 2018). This recommendation upholds the use of community-based economic development models which would fit the LED concept in the country. This study focused on this particular development tool. The author's aim was to use the Chinyunyu thermal springs case study to complement the LED efforts proposed by the LGAZ. Of particular interest to this research was finding a commercial model for the Chinyunyu thermal springs. This model could be replicated for use elsewhere in Zambia – if not regionally in other countries that have similar economic characteristics. In essence, by adopting the LED approach in the development of poverty alleviation measures to assist the poorest of the poor people in the country, the Zambian government would be on track with global development trends.

2.10. DECENTRALISATION POLICIES AND IMPLEMENTATION

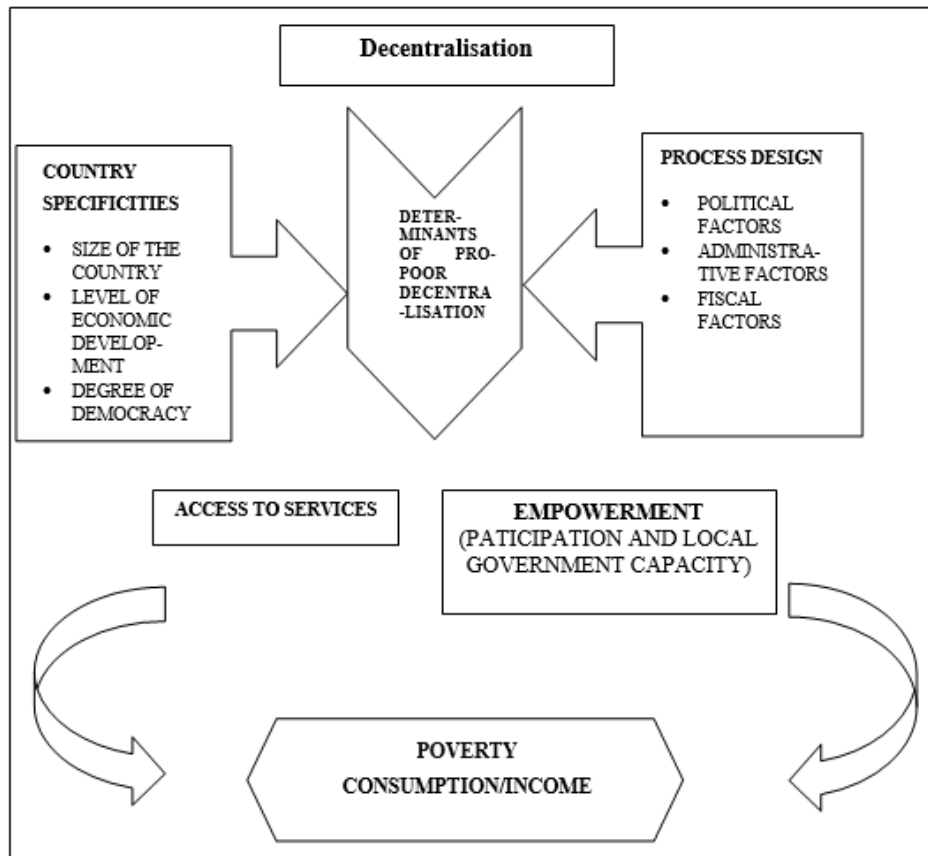
Decentralisation has three categories, namely political, administrative and fiscal decentralisation (Reid, 2019). Smoke (2017) describes political decentralisation as redistribution of powers and responsibilities through devolution or delegation to the lower levels of government. Administrative decentralisation entails local authorities having the authority to take administrative decisions without necessarily seeking approval or permission from the central government (Reid, 2019). Administrative decentralisation empowers local authorities to formulate by-laws, regulating them, and performing the human resource management functions.

Administrative decentralisation should not be interchanged with administrative decongestion, which basically involves shifting of workload from central government ministries headquarters to staff located in offices outside of the capital (Mukwena, 2014). Decongestion is therefore limited, and local authorities may not have decision-making discretion to undertake some of the functions. Fiscal decentralisation is a situation where the local authorities have revenue autonomy, freedom of expenditure, and the autonomy to contract loans without seeking permission from the higher-level authorities (Reid, 2019). To respond to local needs, it is important that the local authorities retain discretion to make independent decisions on expenditure allocations. The Local Government Act No. 2 of 2019 does not give discretion for the Zambian local authorities to make independent decisions on fiscal matters without the approval of the Minister in charge of local government (GRZ, 2019a). All matters relating to the loan acquisition or grants need to be approved from the central government.

Empirical studies (Reid, 2019) show that countries with fiscally decentralised governance system have higher GDP, especially those in OECD countries. The World Bank in its studies of fiscal decentralisation confirms this assertion that economic activity is stronger in countries where governance systems are decentralised (Reid, 2019). Blöchliger (2013), in his study to test the correlation between GDP of different OECD countries and decentralisation, found that a 10 percent increase in the level of decentralisation was significantly associated with an increase of the GDP per capita by 0.3 percent, on average. In this study, decentralisation was calculated by the share of total public expenditure allocated by subnational government (i.e., spending decentralisation), as a proxy. While the author agrees with this finding, it should be noted that some results can be mixed, depending on the proxy used for decentralisation. For example, Baskaran and Feld (2009) and Thornton (2007) used “tax discretion” as an indicator for fiscal decentralisation and found no relationship between fiscal decentralisation and growth. The more appropriate proxy used by many scholars is the expenditure share. The local authority expenditure share would also be the appropriate signal for decentralisation for developing countries such as Zambia.

Furthermore, Reid (2019) found a positive correlation between decentralisation and voter apathy in local government elections. He asserted that countries with local authorities that had less fiscal and power autonomy attracted fewer voters during the local government elections because they had less interest in local governance (Reid, 2019).

Decentralisation is also related to poverty reduction (Jutting et al., 2005). Decentralised government systems are more responsive to the needs of the poor than centralised government systems, and are more likely to conceive and implement pro-poor policies (Adejumo-Ayibiowu, 2020). Poverty reduction focuses on empowering and facilitating access to social services, both of which aspects are influenced directly by decentralisation (Jutting et al., 2005). The participation of the poor in decision making of local programmes and policies, however, does not guarantee that the local authorities will take on board their inputs or will implement the pro-poor policies. The implementation of pro-poor policies would depend on the design of the decentralisation programme. Figure 2.7 below depicts the impact decentralisation would have on local poverty.



**Figure 2.7: Decentralisation and poverty:
Background and process conditions**

Source: Adopted from Jutting et al., 2005.

As shown in Figure 2.7, two sets of conditions are critical determinants in realising effective pro-poor decentralisation policies, namely the country specificities and the design of the process of decentralisation. Process design is about political factors (political will and policy coherence), administrative factors such as measures on anti-corruption, capacity building, and fiscal factors concerning devolution of fiscal resources. The political factor interacts with the country specificities to create full empowerment of the local people and facilitates access to services that in turn reduce poverty levels in the community through increased consumption and income levels of the local citizens. Enhanced efficiency in service delivery could have a direct impact on poor people’s welfare and improve their access to education, health, water, sewage, and electricity (Jutting et al., 2005). These are important poverty-related concerns that ought to be addressed. What Jutting and many pro-decentralisation scholars ignore are the challenges that sometimes come with

decentralisation. For example, redistribution of income could be affected if the central government is left out in handling public finances at a local level. There could be some regions that are more well-off than other regions within the country; therefore, careful implementation of decentralisation policies that ensure equitable distribution of resources in the regions ought to be propagated. Furthermore, decentralisation should not lead to a few elites who may capture local power and use it to their own benefit, thus denying the poor locals the much-needed development. Many countries have however considered these issues and decentralisation policies have been seen to be bearing fruit.

In Africa, for example, South Africa and Ghana have been identified as countries where successful decentralisation programmes have had a visible impact on poverty (Jutting et al., 2005). In South Africa, the decentralisation process has devolved decision making power to two different sub-national layers of government, the provincial governments and the district councils (Ashraf et al., 2016). The provincial government administers major social services such as education and health whilst the district councils facilitate the provision of infrastructural related services such as water, sewerage and electricity. In Ghana, the local areas have experienced construction of new roads, and increased social welfare funds for the poor (Asante & Ayee, 2004). Political participation of the poor has equally increased in Ghana and the local authorities are seen to respond more to the local needs (Asante & Ayee, 2004).

Most African countries embarked on decentralisation policies following the failure of the SAP to reduce poverty levels. In these decentralisation policies and programmes, LED was placed at the centre of the activities (Ashraf et al., 2016, Berhanu, 2005; Helmsing, 2005).

When effectively implemented, decentralisation can have a positive impact on local communities (Helmsing, 2005; Rodríguez-Pose & Gill, 2004). Decentralisation should theoretically enhance local participation and respond to local community needs. It should also eliminate barriers in decision making that come about when the governance system is centrally planned. Adejumo-Ayibiowu (2020) asserts, however, that the implementation of decentralisation in African countries, i.e.,

Ethiopia, Guinea, Mozambique, Zambia, and Zimbabwe, have had challenges. He argued that decentralisation in these countries was top-down, highly political, alienated locals, and was constrained by financial resources. Several studies (Gumboh, 2012; ZIPAR, 2015) have astutely corroborated this assertion by Adejumo-Ayibiowu of the failure by the Republic of Zambia to effectively implement the decentralisation policy. This phenomenon has in turn affected the effectiveness of the previous national development plans by having a dismal impact on delivering better quality of life for local communities (Gumboh, 2012), especially in rural areas such as in Chinyunyu Village. The failure in producing tangible progress in implementing the decentralisation policy in Zambia has left the local authorities with little capacity to drive local economic development, thus failing to meet local community needs. The exploitation of local environmental resources such as thermal springs by local authorities has therefore remained suboptimal.

At independence, Zambia faced the challenge of transforming a disjointed administrative structure that was inherited from the colonial government into a structure that would incorporate a dynamic local government framework that could allow local participation (Phiri, 2016). From the post-independence era, although Zambia had made various pronouncements to begin implementing decentralisation policies, it continued to implement a centralised governance system where most of its policy decisions were made in the capital city (Mpundu, 2020). Attempts to implement the decentralisation in Zambia had been a thorny issue and heavily politicised and it remained but a shell (Mpundu, 2020). Gumboh (2012) asserted that there was a lack of political will to concede political power to lower levels of governance. Consequently, implementation of the decentralisation policy remained more rhetorical than real. As the decentralised system involves a shift of political power coupled with a shift in resource allocation and control, the political leadership in Zambia has been reluctant to move the decentralisation agenda, especially since most councils fall under opposition strongholds (Bertelsmann Stiftung (BTI), 2012; Gumboh, 2012). This would be seen by government as implementing a policy that would concede power to their political rivals, and thus would weaken their political strength. However, Zambia has been seen to undertake

more decongestion measures (Mukwena, 2014). For example, Zambia has delegated specific functions by creating statutory boards such as the National Housing Authority (NHA) that provides housing facilities throughout the country; the marketing and promotion of dairy products was done through the now defunct Dairy Produce Board, while the marketing of agricultural products was done through the now defunct National Agricultural Marketing Board (NAMBOARD) (Chisala, 1994).

The national decentralisation document in Zambia was initiated in 1995 and only presented to cabinet in 1998. The document culminated in a national decentralisation policy, enacted in 2002 but launched in 2004. The vision of the decentralisation policy is to empower people through increased participation in the running of local affairs: “the vision of the government is to achieve a fully decentralised and democratically elected system of governance characterised by open, predictable and transparent policy making and implementation processes at all levels of the public service, effective local community participation in decision making and development and administration of their local affairs while maintaining sufficient linkage between central and local government” (GRZ, 2002a p. 18).

The initiative for decentralisation in Zambia followed the change of government in 1991. The Movement for Multiparty Democracy (MMD) which was ushered into government recognised the need to undertake various public reforms to provide an adequate supportive system for the country’s new democratic dispensation (Gumboh, 2012). Among the reforms was the Public Service Reform Programme (PSRP). The PSRP had three components, namely: Public Sector Management (PSM), Public Expenditure Management and Financial Accountability (PEMFA) and Decentralisation and Strengthening of Local Government (DSLGL). The DSLGL component aimed at addressing the challenges in the local government and empowering them with financial autonomy to improve the service delivery of local authorities at a district level. The councils were to be given power to raise their own revenues and independently make investment decisions. The capacities in councils and communities were also earmarked to be developed. Furthermore, the direct participation of the local people in developmental activities was to be revitalised. However, Chikulo (2009) posited that there was no forum for community

participation in decision-making on local development activities and affairs in Zambia.

The National Decentralisation Policy of Zambia has the following specific objectives:

- (i) to empower the local communities through devolution of decision making, functions and resources from the central government to the local authorities with matching resources to enhance their efficiency and effectiveness in delivering services;
- (ii) to implement a bottom-up mechanism of flow of information for the purpose of planning and budgeting;
- (iii) to strengthen local political and administrative authorities;
- (iv) to promote accountability and transparency in the use of public resources;
- (v) to build capacities of the local authorities and communities in strategic planning and management of service delivery in the local areas;
- (vi) to build capacity in the local authorities to develop and maintain infrastructure at the local level; and
- (vii) to provide a legal and institutional framework to support autonomy regarding decision making.

Since the national decentralisation policy was launched in Zambia, there has been no tangible progress in terms of implementation (Ashraf et al., 2016; Gumboh, 2012; LGAZ, 2017; Mpundu, 2020; Mukwena, 2014). Binwell Mpundu, the former district commissioner for Kitwe, one of the provincial cities in Zambia, who served from 2017 to 2020, corroborated this assertion. He claimed and added that the lack of implementation of the decentralisation policy had made it difficult for local economic development in Zambia (Mpundu, 2020). By implementation, he implied actioning the policy into reality. Otherwise, without any action to the policy, nothing contained therein was achievable. Despite the speed at which most policies were developed in Africa and enacted into law, their implementation remained a challenge in most governments (Gumboh, 2012). The failure to implement the decentralisation policy has been viewed by stakeholders as a great betrayal on the

part of the government that has adversely affected meaningful development in the country (Gumboh, 2012). The stakeholders believed that many parts of the country would have developed, had the power been devolved to the lower organs of governance allowing more citizens to participate in governance issues at the local level. For example, most areas which are mineral rich in Zambia, such as Lufwanyama district, in the rural Copperbelt province, were lagging behind in terms of development because the local leadership in those areas did not have the authority to demand a fair share of their proceeds to develop the local economies for the people operating in those areas (Mpundu, 2020). In fact, the Local Government Act No. 2 of 2019 gives powers to the Minister in charge of local government to approve decisions and proposals such as by-laws to impose a levy on businesses, disposal, letting or buying of property, acquisition of loans, entering into contract with third parties, among others, before the local authorities can pursue them (GRZ, 2019a). Similar Mpundu's assertion is the discourse of His Loyal Highness, Chief Mwata Kazembe of Mwasabombwe District in the Northern part of Zambia. During his meeting with the President of the Economics Association of Zambia, Kazembe (2020) blamed the lack of decentralisation as a cause of hardships for his subjects. He said "people [government] spoke too much about decentralisation but it is just on paper and we have not seen it here [in Mwasabombwe]". The Senior Chief also bemoaned the failure to bring development to his local area and attributed this failure to the central planning approach of the government where all decisions were made in Lusaka, the Capital city of Zambia. Kazembe (2020) posited that although his region was endowed with manganese minerals, no-one in the region (province) benefited from the natural resource apart from the Indians and the Chinese. The Indians and the Chinese were the main investors in the manganese mines in the area.

In trying to bring development to the local people, especially in rural areas, the Republic of Zambia introduced new districts from 72 in 2012 to 116 in 2018 and created one more province from the previous nine (9) to 10 (GRZ, 2017). Nevertheless, despite these efforts, without the full implementation of the decentralisation policy results on improving the local livelihoods have remained futile (LGAZ, 2018). As Jutting et al. (2005) put it, the process of decentralisation

would have a positive impact on poverty if the central government were committed to implement it and the actors involved had both the financial and human capacity to participate in decision making. A study on decentralisation in Uganda by Green (2013) found no correlation between the creation of new districts and improved service delivery of the local authorities in Uganda. He averred that the creation of new districts in Uganda just led to severe funding problems. The Ugandan government created additional districts from 56 in 2000 to 112 in 2010 (Green, 2013). Weighing on the same discourse, Pal (2015) contented that delimitation of boundaries were best executed by an independent body as a way to insulate the restructuring exercise from political interference. This was not the case for Zambia. The creation of districts in Zambia was not backed by scientific reasons but were a mere political undertaking as such, the exercise did not have any significant impact on the local economic development of the municipalities.

2.11. LOCAL ECONOMIC DEVELOPMENT

This sub-section reviews the definition of local economic development (LED), the evolution of LED, and how it emerged in developing countries, especially in Africa. It also reviews some LED strategies and projects that the Republic of Zambia has attempted to implement.

2.11.1. Local economic development defined

Local Economic Development (LED) is about the involvement of locals to shape the future of their own territories (Canzanelli, 2001). Rodríguez-Pose and Tijmstra (2009) and Leigh and Blakely (2017) supported this definition and posited that LED was about strategies and projects targeted at a specific territory where the locals own and manage them and use them to bring better livelihood in the locality through job creation and economic growth. Based on these definitions, the Chinyunyu case study aimed to provide that LED framework to the locals of Chinyunyu Village if not the entire Rufunsa District since the locals are capable of owning and managing the local economic resources (the thermal springs) while improving on their livelihood proficiency. Rodríguez-Pose (2002) argued that other policies, such as the industrial policy, could be part of LED, but should not be taken as LED strategies entirely. He further asserted that LED also considers the threats and

weaknesses within the locality that are confronted to develop local strengths. LED involves a multi-sectorial, multi-level and multi-actor process ranging from the community-based organisations, the private sector, the churches, the non-governmental organisations, business associations and unions (Helmsing, 2005; Rodríguez-Pose & Tijmstra, 2007). Although many African countries, Zambia included, have developed industrial policies hoping to leverage LED to industrialise rural areas, these interventions fall short of the main tenets of LED. Successful LED demands the devolution of fiscal and political responsibilities to the local authorities (Auriacombe & Van der Waldt, 2020). The local authorities, being at the centre of LED, need to involve and cooperate with key stakeholders in the locality to make impactful LED policies that would lift its people out of poverty, improve their quality of life, and create job opportunities for them. LED is therefore an element of decentralisation that is about creating partnerships among the relevant stakeholders. The partnership of different stakeholders ensures that balanced strategies for local development are formulated.

2.11.2. Evolution of the local economic development concept

Local economic development strategies originated and were practised first in the 1960s, mainly in high-income countries with a sole objective of resolving socio-economic problems those countries were facing at that time, especially in relation to cases of economic regeneration (Binns & Nel, 1999; Leigh & Blakely, 2017; Rogerson, 2015; Swinburn, Goga & Murphy, 2006). The LED strategies came into being as a response by the local government authorities to deter mobility of businesses and capital between different locations to gain competitive advantage (Swinburn et al., 2006). The policy approach was increasingly being emphasised in the USA as a means of fighting local poverty, reducing unemployment, reducing inequality, and increasing incomes of the local people in depressed areas (Leigh & Blakely, 2017). Interest in LED first emerged in Western Europe and North America in the 1990s and spread from the global North to the global South (Rodríguez-Pose & Tijmstra, 2007).

Sam Aaronovitch (1986), a British academician, in his journal *Local Economy* popularised the concept of LED that has now been adopted by other contemporary

researchers of development studies. Aaronovitch, also a pioneer of the local economic policy unit of London, summed up the local economic development in a nutshell as “there is no escape from self-help”. This could be interpreted that LED is about local participation in moulding their own future to improve their welfare. The LED approaches have become popular because of what has been perceived as a failure of top-down strategies to address local economic needs, problems and challenges (Rodríguez-Pose & Palavicini-Corona, 2013). Furthermore, the international institutional trend of decentralisation of powers and responsibilities from central governments to local authorities has necessitated a surge of LED approaches around the globe (Rodríguez-Pose & Tijmstra, 2009).

The LED concept has evolved over time. There are three documented major LED evolutions since the 1960s. The period from the mid-1990s to now is undergoing a third wave of the evolution. The period between the 1960s to the early 1980s registered the first wave of LED evolution and between 1980s to the mid-1990s registered a second wave. The first wave was characterised by mainly public sector involvement. It lacked strategies and implemented projects without coordination, it had no or few monitoring and evaluation programmes and a lack of sources of funding (Swinburn & Yatta, 2006). The second wave continued with the sectoral emphasis focusing on the manufacturing sector and targeted inward investment (Swinburn & Yatta, 2006). In the second wave, the public sector began to involve stakeholders such as the private sector and formulation of development strategies ensued (Swinburn & Yatta, 2006). The third shift, which we are currently in, has moved from being public sector centric to a more public–private partnership with the emphasis on improving the business environment (Swinburn & Yatta, 2006). Formulation of LED strategies has been adopted, cluster development and basic measures that have an impact on the local people are being implemented (Swinburn & Yatta, 2006). Sources of funding have been diversified in this wave through the involvement of the private sector and the community-based organisation (Swinburn & Yatta, 2006). Table 2.1. below summarises the evolution of LED over time.

Table 2.1: Evolution of LED

LED STRATEGIES	TOOLS USED
First wave: 1960s to early 1980s (Public sector only)	
<ul style="list-style-type: none"> ▪ Attracting investments in manufacturing from outside local area. ▪ Attracting foreign direct investments. ▪ Investing in physical infrastructure. 	<ul style="list-style-type: none"> ▪ Large grants, tax breaks, subsidised loans for manufacturing companies. ▪ Subsidised hard infrastructure investment. ▪ Promotion of cheap labour and cheap land: lowering the production costs. ▪ Strategies for attracting foreign direct investments
Second wave: 1980s to mid-1990s (Public sector driven)	
<ul style="list-style-type: none"> ▪ Retaining and growing of existing local businesses. ▪ Inward investment attraction continued though with a shift to target specific sectors of the economy or from certain geographic areas. ▪ Area regeneration programmes. 	<ul style="list-style-type: none"> ▪ Direct payment to individual businesses. ▪ More targeted investment methods ▪ Provision of business incubators/workspace. ▪ Provision of industrial space and premises. ▪ Technical advice, support and training for small and medium-scale enterprises (e.g., exports, services, marketing, etc.). ▪ Hard and increased emphasis on soft infrastructure investment.
Third wave: Late 1990s onwards (Public sector-led, usually)	
<ul style="list-style-type: none"> ▪ Improving the business environments favourably. ▪ Soft infrastructure investments (e.g., human resource development, knowledge sharing, regulatory rationalisation). ▪ Public/private partnerships and leveraging the private sector. ▪ Leveraging private sector investments for public good. ▪ Improving quality of life and security for communities and potential investors. 	<ul style="list-style-type: none"> ▪ Integrated local and regional strategies providing a facilitative local business environment. ▪ Stimulating local firm growth. ▪ Focus on territorial instead of sectoral growth. ▪ Cross-community networking and collaboration. ▪ Developing collaborative business relationships. ▪ Development of workforce and soft infrastructure.

LED STRATEGIES	TOOLS USED
<ul style="list-style-type: none"> ▪ Highly targeted inward investment attraction, building both local area and comparative advantages. 	<ul style="list-style-type: none"> ▪ Supporting quality of life improvements. ▪ Focus on service sector as well as manufacturing. ▪ Facilitating economically linked business clusters. ▪ Initiating regional and local economic development programs. ▪ Strategic planning, benchmarking, SWOT. ▪ Facilitative business red-tape reduction. ▪ Provision of grants/loans/venture capital to businesses with potential accompanied by a comprehensive business support and capacity building programme tied to the grants/loan provision.

Source: Adopted from Swinburn and Yatta, 2006.

The first wave in the western world between the 1960s and the 1980s was usually ad hoc and normally project led and crisis led (Swinburn & Yatta, 2006). The planning aspect of LED began in the second and third wave after realising that regional and local economies necessitated a more organised planning process to stimulate growth in the localities (Swinburn & Yatta, 2006). Although local economic development has evolved over time, some elements from each wave are still practised today.

Development theories and strategies have equally evolved with changing times to remain effective and relevant. Table 2.2 below is an attempt to reformulate the concepts emphasised by theorists of local economic development to create a new foundation for LED. Leigh and Blakely (2017) posit that LED practice should bring in the aspect of sustainability. The authors argue that from a development perspective, resources are often underused and that local capacity is required to transform resources into development opportunities.

Table 2.2: A reformulation of components of LED

Component	Old Concept	New Concept
Locality	Physical location (proximity of natural resources, transportation, and markets) stimulates economic options.	The quality of environmental and community capacity multiplies natural advantages for economic growth.
Business and the economic base	Export base industries and firms create jobs and trigger local businesses.	Clusters of competitive industries linked in a regional network of all types of firms create new growth and income.
Employment resources	More firms create more jobs, even if many are paying a minimum wage.	Comprehensive skill development and technological innovation lead to quality jobs and higher wages.
Community resources	Single-purpose organisations can enhance economic opportunities in the community.	Collaborative partnerships of many community groups are needed to establish a broad foundation for competitive industries.

Source: Adopted and modified from Leigh and Blakely, 2017.

- **Locality**

The locality determinant has been overshadowed by technology as firms are no longer driven by specific locational advantages as before (Leigh & Blakely, 2017). However, firms have moved from this motive to locations that offer quality environments where physical, social or organisational factors cooperate. This phenomenon has been the case for rural economic development and LED. Growth in rural areas seems to follow from a pristine natural environment for recreation and ambiance, human resources availability and the quality of social infrastructure. Therefore, location by itself is no longer a determining factor or a pull factor by itself (Leigh & Blakely, 2017).

- **Business and the economic base**

The economic base model follows a sectorial approach to economic development where the local economy must maximise its internal institutional linkages in the public and private sectors (Leigh & Blakely, 2017). The LED theory builds on this assertion and claims that an institutional base forms a major component of both determining the problems in the local economy and changing the arrangements of institutions. The institutional relationship has become a building block of economic development. Communities can dictate their own destiny when and if they mobilise resources and information critical to building their own future (Leigh & Blakely, 2017)

In the New Economy, there is a paradigm shift of development agenda from the emphasis on individual firms to a network of firms or clusters of interdependent firms. Instead of incentivising a single firm, new economic development practice entails that incentives are provided to a cluster of firms (Leigh & Blakely, 2017).

- **Employment resources**

Employment creation has been the preoccupation of community development (Leigh & Blakely, 2017). In the neoclassical model, lower wages and cheaper cost of doing business are sufficient to attract firms that would create employment. However, low wages do not bring the people in communities out of poverty; hence, the standard of living does not improve (Leigh & Blakely, 2017). Therefore, this would not stimulate local economic development. Communities must not only create jobs just to fit their populace but to build institutions that build capacity in the human resources of the community. The rationale here is that highly skilled labour would attract firms that would be willing to pay for the skills. In addition, skilled labour would better maximise the use of existing natural resources in the community.

- **Community resources**

The community has many stakeholders representing diverse interests (Leigh & Blakely, 2017). For example, public institutions, business organisations, community-based organisations must work in tandem to create necessary preconditions for local economic development.

2.11.3. The emergence of LED in developing countries

The LED strategies emerged in the developing world, specifically in Africa, following the failure of the donor-driven structural adjustment programmes (SAP) to reduce poverty levels in the 1990s (Adejumo-Ayibiowu, 2020; Auriacombe & Van der Waladt, 2020; Rogerson, 2006; Rodríguez-Pose & Tijnstra, 2007). SAPs were donor-driven programmes heavily dominated by central government and decisions from the top hierarchies that had little impact on the local communities (Helmsing, 2005). The SAP were structural reforms propagated by the IMF and the World Bank. The SAP called for full liberalisation of economies and privatisation of state-owned companies (Adejumo-Ayibiowu, 2020). Following the failure of the SAPs to reduce poverty levels, many African countries began to develop decentralisation policies meant to devolve decision making and responsibilities to the local authorities (Adejumo-Ayibiowu, 2020; Helmsing, 2005). LED was placed at the centre of many decentralisation policies (Berhanu, 2005; Helmsing, 2005). Decentralisation like LED is meant to bring development closer to the grassroots. The understanding is that a decentralised country would empower its local government authorities to implement efficient policies that target the ideal beneficiaries – the local community (Gumboh, 2012; Helmsing, 2005; Jutting et al., 2005).

Prior to the decentralisation policies, the central government dominance in decision making and about all economic issues contributed to the underdevelopment of local economies (Helmsing, 2005). The traditional central government policies focused on attracting foreign direct investments, while improvement of hard infrastructure was deemed not sufficient to improve the living standards of local people (Rodríguez-Pose & Tijnstra, 2007). Therefore, many African countries later started developing policies that targeted creating jobs and reducing poverty levels of local communities (Helmsing, 2005). The African approach of LED is somewhat different from the developed countries' approach, whose main focus was to deal with cases of economic regeneration and targeted area improvements.

Local communities are now getting involved in creating economic activities within their localities to improve living conditions among their residents (Helmsing, 2003; Rodríguez-Pose & Tijnstra, 2007). The changes in geo-economy and in

development policy have shifted the focus from local development controlled by central governments to locally formulated local economic development (Helmsing, 2003). LED has responded to contemporary forces of globalisation and localism (Nel, 2001; Rodríguez-Pose & Tijmstra, 2005). Therefore, globalisation has been an important driver of change in planning regional and local development (Rodríguez-Pose, 2009). Globalisation has brought about cut-throat competition where even remote areas have been exposed. Consequently, firms, localities and regions have been forced to react and adjust to the new economic dispensation. African countries have therefore begun adopting the LED strategies in their national development plans (Rogerson, 2006). Binns and Nel (1999) posit that for sub-Saharan Africa countries, LED has nothing much to do with participating in the global economy or finding market niches but it is identified with self-reliance, survival, and poverty reduction.

A plethora of works on the LED discourse have been undertaken, advocating for change of policy decisions to adopt the LED approach (i.e. Auriacombe & Van der Waldt, 2020; Binns & Nel, 1999; Canzanelli, 2001; Chitembo & Silumesii, 2011; Helmsing, 2003, 2005; Helmsing & Egziabher, 2005; Rodríguez-Pose, 2001; 2002; 2009; Rodríguez-Pose & Gill, 2004; Rodríguez-Pose & Palavicini-Corona, 2013; Rodríguez-Pose & Tijmstra, 2005; Rogerson, 2003, 2006, 2015; Rogerson & Rogerson, 2010; Nel, 2001; Mafukata, 2020; Monaheng, 1995; Swinburn & Murphy, 2018; Swinburn & Yatta, 2006). Meyer-Stamer (2008) believes that the emergence of LED in some sub-Saharan African countries enjoys a new-found status in the area of international development cooperation.

Table 2.3 provides a comparison of the traditional development policies with the now highly advocated LED approach.

Table 2.3: Traditional top-down development policies vs bottom-up LED approaches

Traditional development policies	Local economic development
Top-down approach in making decisions regarding areas in need of intervention.	Bottom-up approach where development is promoted in all territories.

Traditional development policies	Local economic development
Central government administration and management.	Managed by decentralised administration – different tiers of government vertically cooperate, with horizontal cooperation between public and private bodies.
Sectoral approach to development.	Locality or territorial approach to development.
Focus on developing large-scale industrial projects that in turn stimulate other economic activities.	Maximising the development potential of each area to stimulate local economic development.
Economic activities are mainly attracted by financial support, incentives, and subsidies.	Key conditions for the development of local economic activity are provided.

Source: Rodríguez-Pose, 2001; Rogerson, 2015.

Table 2.3 indicates different approaches to economic development. Both approaches try to achieve the same objective. However, the centralised approach to economic development has hitherto proved to be ineffective (Rodríguez-Pose, 2001; Rogerson, 2015). The traditional approach relies on central government that offers incentives and subsidies to attract investments in various sectors of the economy. The belief is that these investments would in turn bring into the economy new technologies, skills, and job creation. On the other hand, LED tries to do away with such interventions and concentrates on the interventions that directly improve the basic conditions of lives in the locality by embedding economic activities in a territory (Rodríguez-Pose, 2001; Rogerson, 2015). Therefore, the LED approach could assist in alleviating the high poverty incidences in many developing countries, especially in rural areas.

2.11.4. Different approaches to LED

Since the evolution of LED, different approaches have been undertaken for local economic development since the 1960s. The following can be categorised as the main approaches to LED:

- **Traditional approaches/market-led approach**

The market-led approach is a pro-growth strategy that focuses on improving competitiveness mainly through the attraction of foreign direct investments (FDI).

The approach aims to create an entrepreneurial environment within a locality, expand market, reduce unemployment, and spur sustainable economic development (Rogerson, 2006; Rodríguez-Pose & Tijmstra, 2007). The approach was quite common in the first two waves of the LED evolution where FDI was attracted through offering of attractive incentives. This approach would not be appropriate for the Chinyunyu thermal springs, a pro-poor tourism development, as the focus would be community-driven development as opposed to foreign investment.

- **Entrepreneurial/pro-market approach**

The entrepreneurial or pro-market approach is a competitive strategy that exploits the comparative advantage of a locality and creates an enabling environment for the development of the small and medium sized businesses (SMEs) (Helmsing, 2003). SME development is seen as a key intervention to community development due to its propensity to create jobs (Helmsing, 2003). SME development is done through development of industrial clusters, easing the access to credit, provision of technology and business park infrastructure, technical and managerial skills development for the SMEs, facilitation of market access and business retention that focuses on helping the existing local firms be successful (Chisala, 2008; Chisala et al., 2018). Leigh and Blakely (2017) call this approach a business development approach. They advocate for the creation of enough jobs in a locality by encouraging new businesses or attracting existing business to relocate in a particular locality. While this approach would be effective in attracting firms linked to the community-based tourism enterprise of Chinyunyu Village, the strategy would not be to attract firms outside the locality to relocate but to create new business start-ups.

- **Human resource development**

The approach emphasises the forging of close links between the employment needs and the job formation process (Leigh & Blakely, 2017). The approach considers people as the wealth-generating resources. Therefore, people are an important resource in community development. The skills and knowledge development empowers the local people to utilise it in managing their local resources. The methods of implementation of this strategy would include customised training and education, targeted placement (encouraging local firms to hire local personnel),

school-to-work programs (linking education to employer's needs), and job maintenance (Leigh & Blakely, 2017). The human resources development LED approach also focuses on developing the skills for the local authorities as well as the skills of the local communities on LED-related issues.

- **Locality or physical development**

The locality or physical development approach is among the approaches identified by Leigh and Blakely (2017) for LED development. This approach focuses on the development of physical and built environment and infrastructure (Helmsing & Egziabher, 2005). Local authorities will have a positive influence on local businesses if the water reticulation, electricity supply, roads, and drainage are well developed (Leigh & Blakely, 2017). Other facilities such as quality housing, safe neighbourhoods, and good educational facilities would create an enabling environment for businesses (Leigh & Blakely, 2017). Tools for undertaking the LED goals under this strategy would include economic and enterprise zones, transportation and major infrastructure provision, landscaping and streetscaping, and the provision of community services.

- **Community-based/market-critical/pro-poor approach**

Community-based or pro-poor approach strategies target low-income communities and organisations (Rogerson, 2006). The overall aim is to eradicate poverty through the promotion of community empowerment initiatives (Rogerson, 2006; Rodríguez-Pose & Tijmstra, 2007). In this type of approach, the community are the main actors in achieving local economic development (Nel, 2001). A pro-poor approach to LED is a sustainable strategy for community development. Capacity and skills are built in the local community to effectively manage their resources. Leigh and Blakely (2017) call this approach community-based employment development as it focuses on economic development promotion through the creation of employment opportunities in small communities. Critical players in a community that would supplement job creation, according to Leigh and Blakely (2017), are the community-based development organisations – the non-profit organisations that run businesses and at the same time provide community services; the cooperatives – a group of local people with the responsibility of generating wealth and employment; community capital institutions such as the microcredit

institutions, credit unions; and affordable housing corporations that make available housing for workers in the community.

This type of approach blended with other identified approaches would be appropriated for developing the Chinyunyu Village, leveraging the local resources, the Chinyunyu thermal springs. Obviously, different approaches would suit different socio-economic circumstances, i.e., for rural areas and urban areas. Chinyunyu is in a rural area.

2.11.5. The LED strategic planning process

The LED process starts with formulating a strategy within which the LED process is operationalised (Chitembo & Silumesii, 2011). The LED strategy should be a part of a broader community-wide strategic plan. A LED strategy should serve for a duration of three to eight years (Auriacombe & Van der Waldt, 2020). The strategy is implemented through annual action plans. A strategy is a pattern or plan that coherently integrates a community's or organisation's major goals, policies, and actions (Auriacombe & Van der Waldt, 2020). A strategy comprises fundamental issues of well-being, growth, and prosperity – a mix of the social, economic and environmental aspects of the society (Auriacombe & Van der Waldt, 2020). Auriacombe and Van der Waldt (2020) recommended that local authorities should adopt an integrated strategy that responds to the socio-economic needs of the locality. They contended that these strategies should consider an analysis of the internal functioning of the local authority and the environment in which it operates (i.e., SWOT analysis); develop a vision and long-term objectives for the local authorities; design macro and micro strategies to implement or operationalise the local authorities' obligations and functions; monitor and evaluate its impact; and make necessary adjustments where necessary. Figure 2.8 depicts a LED strategic planning process.

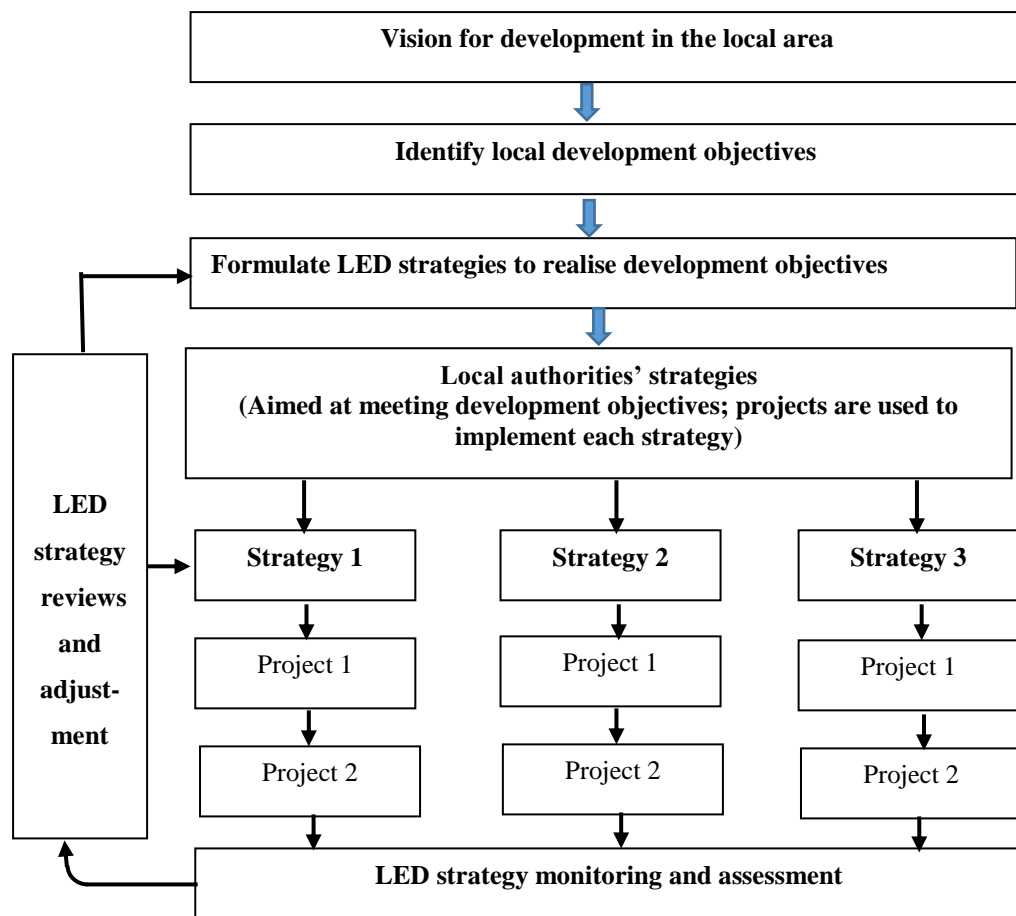


Figure 2.8: LED strategic planning process

Source: Adopted and modified from Auriacombe and Van der Waldt, 2020.

Auriacombe and Van der Waldt (2020) outlined five stages of LED strategy design as: Phase 1: Organising the LED effort; Phase 2: Local economy assessment; Phase 3: LED strategy formulation (design); Phase 4: LED strategy implementation; and Phase 5: LED strategy review. These stages are consistent with those described by other authors (e.g., Swinburn et al., 2006; Chitembo and Silumesii, 2011; Leigh & Blakely, 2017). The stages are briefly explained below:

- **Organising the LED effort**

Successful LED requires efforts of public sector (governmental, statutory boards and parastatals), private sector (business) and civil society (non-governmental organisations (NGOs), trade unions, social, civic and religious groups in a collaborative manner (Chitembo & Silumesii, 2011; Leigh & Blakely, 2017;

Swinburn & Yatta, 2006). Political commitment is also important for the success of a LED strategy (Auriacombe & Van der Waldt, 2020). A dedicated LED team to drive the process is therefore imperative (Chitembo & Silumesii, 2011; Hofisi, 2014).

- **Local economy assessment**

It is important to know the characteristics of the local economy for developing realistic and effective strategies for the locality (Auriacombe & Van der Waldt, 2020). The assessment therefore offers strategic direction to address socio-economic challenges in the community such as poverty, unemployment, skill deficits, and limited business entrepreneurship. The data covers: the demography, economy, business environment, hard infrastructure, and regional and national information (Chitembo & Silumesii, 2011). The data collected can be analysed using various tools such as the political, economic, social, and technological (PEST) analysis; strengths, weaknesses, opportunities and threats (SWOT), and benchmarking (Chitembo & Silumesii, 2011).

- **LED strategy formulation**

According to Auriacombe and Van der Waldt (2020), a LED strategy formulation needs to provide details on programmes and projects that are specific, such as tasks to be undertaken, realistic timeframe for delivery, human resources and finances required, sources of funding, the impact expected, results, how the performance will be measured, and putting in place a system for evaluating progress for each project. To build the stakeholder momentum and confidence apart from medium and long-term aims, there would be a need to identify short-term projects that would bring the results in a short period, the so called “quick wins” (Trousdale, 2005).

- **LED strategy implementation**

The LED strategy should be accompanied by an implementation plan (Auriacombe & Van der Waldt, 2020; Chitembo & Silumesii, 2011). The implementation plan outlines the financial implications of the strategy (budget), human resources required, and institutions responsible for implementing action plans. An implementation plan is a good basis for mobilising funds from external sources such

as the central government, the business community, and the bilateral and multilateral donor agencies (Chitembo & Silumesii, 2011).

- **LED strategy review**

Although the strategy is normally designed for between three to eight years, it should be reviewed annually to make provision for changing local governance circumstances and conditions (Auriacombe & Van der Waldt, 2020; Chitembo & Silumessi, 2011; Leigh & Blakely, 2017). The annual assessments and reviews of the LED strategies should be based on clear monitoring and evaluation indicators (Leigh & Blakely, 2017). The annual assessments and reviews are important in assisting the local authorities to make adjustments to the programmes and projects.

It is important that local authorities have a comprehensive strategy design process so that they develop objectives and set priorities for the locality. This would be accompanied by a detailed budget to operationalise the objectives.

2.11.6. Good practice for strategy success

According to Swinburn and Yatta (2006), good practice in LED requires approaches that are tailored-made and guided by the following principles:

- An integrated approach that takes into consideration the economic, social, and environmental issues of the locality.
- A strategy that was developed by all relevant stakeholders and partners based on a shared vision.
- Assessment and involvement of the informal economy. Normally the informal sector represents a bigger part of the local economy.
- To build stakeholders' confidence and momentum, there is need to develop a range of short, medium, and long-term projects.
- Involvement of influential local leaders to bring commitment and credibility to the strategy and to unite stakeholders.

The above-mentioned practices were relevant for the LED process in Chinyunyu Village.

2.12. LOCAL ECONOMIC DEVELOPMENT ATTEMPTS IN ZAMBIA

There exists a dearth of literature on LED practices in Zambia. Limited documents have information on local LED practices; however, the promotion of economic development at local level has nevertheless been happening. Unlike South Africa that has a clear and concise national framework for LED (Mazibuko, 2020), Zambia does not have a policy framework on LED. However, the planning process of the local authorities is guided by the Urban and Regional Planning Act No. 3 of 2015. The Act under section 35, makes it a requirement for the local authorities to develop an integrated development plan (IDP) (GRZ, 2015). The IDP is one of the key tools used by municipalities to address their developmental challenges (Mazibuko, 2020). It is a framework that guides activities of government agencies, corporate service providers, civil society organisations, and the private sector within a municipal area (SALGA, 2003). Where a local authority does not have a planning department or have some capacity challenges, the Act allows the planning process to be done centrally at the provincial planning authority (GRZ, 2015). The Act demands that the entire planning process should be a consultative one, involving state institutions, local authorities, vulnerable groups and traditional leaders (GRZ, 2015). The Act makes a good basis for developing and implementing LED strategies in the local municipalities.

The first discourse on the LED by the local authorities in Zambia began in 2018 (LGAZ, 2018). The discourse was motivated by the fact that local communities were alienated in the development of some projects and lacked community ownership (LGAZ, 2018). High rates of vandalism, underutilisation or shunning the use of facilities constructed in these communities was the order of the day (LGAZ, 2018). In 2018, the Local Authorities Association of Zambia (LGAZ), working with the Ministry of Local Authority, funded by the international community, launched the very first local economic development guidelines for local authorities in Zambia. The launch of the LED guidelines was followed by LED trainings in the councils that were piloted to develop LED strategies that responded to the socio-economic development needs within their localities (LGAZ, 2018).

However, as Rodríguez-Pose and Tijmstra (2007) observed, like the LED approach in many sub-Saharan Africa, the LED approach in Zambia has mainly focused on the social side of LED rather than on the economic side.

Below are some of the pertinent ostensibly LED programmes and projects implemented in Zambia.

2.12.1. Physical development: infrastructural projects

The central government has also been implementing policies and projects that impact the local communities. For example, the Republic of Zambia has been implementing major infrastructural projects, such as the road projects covering the entire Zambia including the rural areas, dubbed Link Zambia 8000, launched in 2012 (Mutumweno, 2012). The project aims at linking all internal provinces with roads of a total of 8,000 kilometres and transform the country into a totally land-linked country (Mutumweno, 2012). The project has assisted to open up rural areas where better roads have been constructed to ease their movement, especially transportation of agricultural products, the mainstay of people in rural Zambia. However, most locals have not appreciated this development as they see its benefits to be very long-term. Most of the locals have asked government whether they will “eat the roads”, signalling that despite these massive infrastructural works, they were still hungry and unemployed. Other infrastructural projects are the construction of hydroelectric plants to ease the energy deficits of Zambia (Toyana, 2019). The country has experienced energy deficits especially during the drought. For instance, in 2018 the country had a deficit of approximately 800 megawatts that caused a great deal of stress to the economy (Toyana, 2019). Other projects with socio-economic impact on the local communities across the country worth mentioning are the construction of hospitals/health posts, universities, schools and technical colleges.

2.12.2. Promotion of inward investments

Attraction of investments has been identified as one of the approaches to local economic development (Gravingholt et al., 2006; Swinburn & Yatta, 2006). Promotion of mainly foreign direct investment has been one of the approaches Zambia has embarked on to develop localities through creation of jobs and transfer

of skills. Zambia uses various tools to promote investments but mainly marketing of the local areas through distribution of brochures and publications, advertisements in print and electronic media, organising investment promotion missions, and organising investment conferences. Zambia began aggressively promoting investments after the country opened up to foreign investment in the 1990s. This was followed by the establishment of an investment promotion agency called the Zambia Investment Centre (ZIC) through an act of parliament in 1993. ZIC was amalgamated with other trade and investment agencies into the Zambia Development Agency (ZDA) in 2006. It has hitherto been the principal investment promotion agency for Zambia. Zambia recorded increased FDI from USD40 million in 1994 to USD1,108 million in 2018 before dropping to USD753 million in 2019 (UNCTAD, 2020). The total FDI stock in Zambia is approximately at USD19 billion, mainly dominated by large-scale mining and construction sectors (UNCTAD, 2020). FDI is mainly concentrated in the Line of Rail, thus excluding the rural population from benefiting from the jobs created by FDI. The FDI approach has done little in creating the much-needed job opportunities and reducing poverty, as evidenced by the high levels of poverty in the country (GRZ, 2017; Nkonde, 2018). FDI has failed to trickle down to the domestic economy and improve the lives of Zambian citizens (Nkonde, 2018).

2.12.3. Agricultural programmes

Agriculture is one of the pro-poor LED programmes that is widely undertaken by most disadvantaged communities in the developing world (Rogerson, 2003). In the quest for economic development, agriculture plays a passive and supportive role. The sector provides food that is low priced and supports the industrial economy by making available and offloading labour to fuel industrial development. Simon Kuznet, a Nobel Laureate in economic sciences, identified four contributions of agriculture, namely provision of production inputs for use in industries like textiles and agro-processing, a source of foreign exchange through export of agro products, stimulating demand for consumer products by increasing rural incomes, contribution of workers not required at the farms as a result of rising agricultural productivity (Todaro & Smith, 2015). Agriculture was also acknowledged as lifting millions of people out of poverty, especially during the so-called Green Revolution,

following an Asian food crisis in the 1960s (Hazell, 2020). Green Revolution was a boost in the production of grain as a result of the scientific discovery of new hybrid seed varieties (Hazell, 2020, Todaro & Smith, 2015). The Green Revolution resulted in high farm yield in many Asian countries for wheat, rice, and corn. Of late, many African countries have been trying to replicate the Asian Green Revolution. The Bill and Melinda Gates Foundation and the Rockefeller Foundation partnered to introduce what they called the Alliance for a Green Revolution in Africa in 2006 with the sole objective of reducing poverty levels in Africa and helping African farmers, especially smallholder farmers, access finance, markets, and productivity improvement technologies (Aminzade, 2014).

The Alliance for a Green revolution in Africa by the Bill Gates Foundation and the Rockefeller Foundation is seen as a game changer for the agricultural landscape, especially in countries like Zambia whose smallholder farmers are dependent on basic tools such as hand tools and animal tractions. These smallholder farmers can be described as the working poor, i.e., persons engaged in the labour force but who do not earn as much income as to bring them out of poverty. Smallholder farming nonetheless supports approximately 85 percent of the country's total labour (World Bank, 2012). Most of these people, normally living in rural areas, are the poorest of the poor.

To ease the burden on the smallholder farmers, Zambia has been promoting agricultural pro-poor policies such as the provision of price support, especially for the staple food, maize, subsidy on seeds, and fertilizers. The Republic of Zambia in 2003 introduced what was called the Farm Input Support Program (FISP) aimed at improving the supply and delivery of fertilizer and seeds for maize production at subsidised prices to small-scale farmers (GRZ, 2017). To qualify for FISP, smallholder farmers must belong to a cooperative. The FISP programme has been hampered by the late delivery of farming inputs in the past. In addition, cooperatives have been hijacked by large-scale farmers, despite the FISP being designed for vulnerable but viable small-scale farmers (Mason, Jayne & Mofya-Mukuka, 2013). Therefore, FISP has mostly benefited non-poor households (De la Fuente et al., 2015).

The success of the FISP is dependent on good rains. Hence, in times of change in weather patterns such as droughts or floods, the poor are the most hit as this normally affects their crop yield. Granted that agricultural pro-poor policies are important in rural populations, agriculture alone has failed to substantially reduce poverty levels in rural Zambia (World Bank, 2012). In fact, Virtual Events Solutions (2014) argued that FISP has failed to deliver its intended objective and has been a waste of resources on the part of government. They asserted that FISP was meant to be a temporal programme to assist small-scale farmers graduate into medium and large-scale, but the small-scale farmers have perpetually depended on this programme without any significant growth. In addition, Virtual Events Solutions (2014) averred that the beneficiaries of the FISP ended up selling their produce on the open market as opposed to through government's food reserve agency that offered a better and attractive floor price. Therefore, this phenomenon relegated the small-scale farmers to a vicious circle of poverty, continuously dependent on FISP support. Virtual Events Solutions (2014) proposed a total disbandment of FISP and restructuring FISP into a concessional loan to enable small-scale farmers to take a commercial route and become more efficient. It can therefore be asserted that FISP has not been sustainable in improving the living standards of the poor. FISP has become a subsidy that did not actually encourage improvement of agricultural output. Some of the community members in Chinyunyu Village, being dependent on agriculture, are dependent on FISP.

2.12.4. Entrepreneurial development: industrial yards/industrial clusters

Another centrally planned project with notable impact on the local communities is the initiative called Industrial Yards Development by the Citizens Economic Empowerment Commission (CEEC), a public statutory board (Nyati, 2018). Industrial yards are structures housing small and medium-sized firms involved in steel and wood processing, automotive services, and agroprocessing (Nyati, 2018). The pilot of Industrial Yards was located in eight (8) districts, namely: Chipata, Kasama, Kitwe, Lusaka, Mansa, Mongu, Ndola and Solwezi (Nyati, 2018). Industrial Yards were modelled in the way industrial clusters are modelled. Industrial clusters can be used as tools for local economic development (Leigh and Blakely, 2017). An industrial cluster is a geographic concentration of

interconnected companies, specialised suppliers, service providers, and firms in related sectors and related institutions (Getahun, 2015; Porter, 1998; Sonobe & Otsuka, 2014). A cluster goes beyond just one large firm in the locality but a network of interrelated firms that depend on one another (Leigh & Blakely, 2017). The electronics industrial cluster in Silicon Valley in the United States is a typical example of a cluster. In Silicon Valley, there is a network of electronic firms. These firms, because of being in proximity (also known as agglomeration) with other related firms, accrue locational gains known as collective efficiency gains (Getahun, 2015; Nadvi & Barrientos, 2004). The collective efficiency gains mitigate market failures from incomplete contracts, information asymmetry and lack of proper market institutions (Sonobe & Otsuka, 2014). The geographic concentration of competitors, customers and suppliers increases the innovative capacity and competitiveness of the cluster (Porter, 1998). Firms in the clusters are more competitive and have more rapid growth than other firms in the same industry but outside the cluster (Chisala et al., 2018). Furthermore, cluster firms can gain from joint actions such as joint purchasing of raw materials and expanded market share on product markets when they bid jointly for large projects leveraging their complementary skills (Chisala et al., 2018; Van Dijk, 2005). Because many firms in Africa are especially constrained with obstacles arising from inadequate and lack of access to capital, access to markets, poor or lack of infrastructure, low levels of technology which encumber business growth, clustering of enterprises could resolve many of these problems faced by SMEs in Africa (Chisala, 2008; Chisala et al., 2018; Getahun, 2015; Nadvi & Barrientos, 2004).

Clusters such as artisan crafts may be classified as tourism clusters that would be a major economic force in a community (Leigh & Blakely, 2017). The cluster development normally leads to a new phase of local and regional economic development (Helmsing, 2003). Therefore, the Zambian version of industrial clusters is likely to yield local economic development in the selected provinces. Granted that not all clusters are successful, there are a few good examples that have been successful in Africa, including the Suame Magazine, an engineering and metal works in Ghana that hosts up to 10,000 cluster entrepreneurs creating 100,000 jobs in the locality (World Bank, 2012). Others include Nairobi's cut flower cluster

(Kenya); Otigba computer cluster (Nigeria); Lake Victoria fishing cluster (Kenya); Arusha furniture cluster (Tanzania); Footwear and leather cluster (Ethiopia); Tourism cluster (Rwanda); and the Katwe Metal fabricators cluster (Uganda), all contributing to massive job opportunities in their respective localities (World Bank, 2012). These clusters have stimulated innovations and attracted useful human resources, which is critical for absorption of technology and innovation. Engineers, designers, traders, and skilled craftsmen are part of a pool of skilled manpower attracted to these clusters (World Bank, 2012). Sonobe and Otsuka (2014) have argued that most developed countries that were highly industrialised through indigenously developed industries were cluster-based. These clusters have stimulated specialised suppliers that have emerged through spin-offs (spin-offs are people that were previously employed in a particular firm but decided to leave and start their own business activity), that then started to compete extensively with one another. The cluster concept was considered in developing the commercial model for the Chinyunyu thermal springs.

2.12.5. Local Government Equalisation Fund

The Local Government Equalisation Fund (LGEF) is constitutional and was established under the Constitution of Zambia as amended by Act No. 2 of 2016. It was operationalised in 2015 through a subsidiary legislation, the Local Government (amendment) Act, No.12 of 2014, now repealed and replaced by the Local Government Act, No. 2 of 2019 (National Assembly, 2019). The Act outlines the guidance on how the fund is to be apportioned, managed, and utilised. The purpose of the fund is to support local authorities with salaries for the council workers and to fund functions of the council (National Assembly of Zambia, 2019). The fund was designed to provide a minimum of five percent of the national income taxes in a year (National Assembly of Zambia, 2019). Besides this support from the central government, local authorities also collect revenues at local level using by-laws or council resolutions. The LGEF, therefore, provides supplementary funding for them to perform local government functions. The Local Government Act also stipulates that 20 percent of the LGEF should be used for infrastructural projects in the local areas. However, the local authorities have faced challenges in building

infrastructural projects as the LGEF is inadequate and in most cases disbursed late (National Assembly of Zambia, 2019).

2.12.6. The Constituency Development Fund

The Constituency Development Fund (CDF) was established in 1995 with an objective of financing micro community-based projects to contribute to poverty reduction in various constituencies (GRZ, 2018b; National Assembly of Zambia, 2019). Zambia has 156 constituencies covering both urban and rural areas. The CDF is enshrined in the Constitution of Zambia as amended by Act No. 2 of 2016 for the establishment of the CDF. The fund was designed to empower the local communities in constituencies to take part in decision-making processes of local economic development. The specific objectives of the CDF are to bring on board the local community in decision making in project implementation; to support community-based projects; to support project planning and management; and to provide financial resources in line with the local communities' priorities. At the beginning of each year, the Constituency Development Committees (CDCs) call for project proposals for funding from the local communities represented by the Ward Development Committees (WDCs). The CDCs thereafter receive the project list of proposals, deliberates on them, selects the successful ones and transmits them to the planning sub-committee of the District Development Coordinating Committees (DDCCs) for appraisal. The DDCCs then make recommendations of the selected proposals to the council for approval. Once the council approves the proposals, they are submitted to the minister in charge of local government for the final approval. The selected approved projects are then funded by the CDF depending on the availability of resources.

The CDF was designed and meant to support the LED process in the constituencies (Chibomba, 2013). However, empirical studies (EAZ, 2011; EFZ, 2013; LGAZ, 2018; Matipa, 2020; Phiri, 2016; ZIPAR, 2015) that were undertaken to assess the impact of the CDF have indicated that the CDF has had no involvement of the local community in project development and hence it negated the concept of the LED approach. Reasons attributed to these findings were that the CDF was personalised by the area member of parliament who utilised it according to his or her preference

and that in most cases the CDF was misused and misappropriated (EFZ, 2013; Phiri, 2016; ZIPAR, 2015). Infighting between the district commissioners and the members of the community also contributed to poor execution of CDF projects (Lusaka Times, 2020b). Some projects that were implemented lacked community participation and thus they were not fully owned by the communities who were the intended beneficiaries of the CDF (Musenge, 2013; National Assembly of Zambia, 2019; Phiri, 2016). In their research on the CDF, the Evangelical Fellowship of Zambia (EFZ) (2013) found that approximately 70 percent of the respondents did not know who represented them on CDCs, indicating their lack of involvement. Since communities were not consulted, some projects that were implemented in the localities were subjected to vandalism, underutilisation and shunning the use of facilities constructed under the CDF (EAZ, 2011; Phiri, 2016; Musenge, 2013; National Assembly of Zambia, 2019).

In addition, the release of CDF by the central government has been erratic (EFZ, 2013; National Assembly of Zambia, 2019). For example, in 2015, 34.7 percent and in 2016 only 0.7 percent of the budgeted CDF were released, making it impossible for the constituencies to implement local projects earmarked for those years (National Assembly of Zambia, 2019).

2.13. THE TOURISM INDUSTRY IN ZAMBIA

Zambia has prioritised the tourism sector as a sector that could contribute to the diversification of its economy away from mining that has hitherto been the main economic sector (GRZ, 2017). Tourism is considered as one of the most labour-intensive economic sectors with a great potential to create sustainable jobs, contribute to foreign exchange earnings and public revenues and stimulate LED in rural areas (Hall et al., 2005; UNWTO, 2019). The sector equally has strong backward and forward linkages to agriculture, transport, manufacturing, trade, financial services, and information and communications technologies (ICTs). The sector is a demander of goods and services from non-tourism industries and a supplier to downstream buyers of goods and services. Tourism is therefore seen as a linchpin in several rural development strategies and a powerful engine for economic growth (Hall et al., 2005). The sector has a magic potential to transform

areas based on indigenous resources such as the thermal springs. The world has now become a global tourism village and most countries are implementing strategies to claim a bigger share from the global international visitors.

The Zambian government does not want to be left behind as far as developing its tourism sector is concerned. In its tourism master plan (2018–2038), the country envisions to be transformed into a leading wildlife, eco-adventure, and cultural tourism destination and regional conference hub, ranking among the five most visited countries in Africa (GRZ, 2018a). The vision is to be attained through, among others, the development of innovative tourism products and attractions such as eco-tourism (GRZ, 2018a). There is a political will at all levels of government to promote tourism in Zambia. Western countries like France and Spain, who are the world leaders of tourist arrivals attracting approximately 90 million and 84 million visitors per year respectively (UNWTO, 2019), have leveraged the tourism sector to support the growth of other sectors such as the agricultural, construction, retail shopping and transport sectors. In addition, the sector has been used as a development vehicle of other regions in the peripheral areas away from the metropolitan cities. Giaoutzi and Nijkamp (2007) identified the tourism industry as the main instrument for regional development and LED. Numerous scholars have isolated the tourism industry as a major economic input for LED (e.g., Chirikure, 2017; Hall et al., 2005; Helmsing, 2003; Lee & King, 2008; Leigh & Blakely 2017; Lund, 2007; Mafukata, 2020; Mazibuko, 2020; Olivier & Jonker, 2013; Rodríguez-Pose & Palavicini-Corona, 2013; Rodríguez-Pose & Tijnstra, 2005; Tshibalo, 2011; Tshibalo & Olivier, 2010).

The Zambian tourism industry offers are diverse and include features such as the UNESCO world heritage inscribed Victoria Falls, one of the seven natural wonders of the world (Zambia Tourism Agency [ZTA], 2019). Zambia also has vast wildlife resources, varied scenery, wilderness, diverse culture and national heritage sites, very favourable weather, adventure activities, hunting, and warm and friendly people (ILO, 2021b). There are 20 national parks and 36 game management areas in Zambia providing vast touristic opportunities with potential for future tourism development. In fact, several thermal springs in Zambia are located in the national parks. The country has a vast unexploited area such as the rift valleys and their

escarpment that form picturesque scenery ideal for tourism. In addition, the country has 145 geological sites and 70 geomorphological heritage sites, home to more than 5,543 plant, 242 mammal, 757 bird and 490 fish species (GRZ, 2018a, ILO, 2021b; ZTA, 2019). These touristic endowments are found in the country's northern part referred to as the northern circuit and the southern part referred to as the southern circuit. Furthermore, Zambia has 73 tribes with diverse cultural traditions, a potential for cultural tourism. These tribes organise colourful annual traditional ceremonies that attract both domestic and international tourism.

Zambia's international tourism has been on an increasing trajectory albeit at a slow rate. The country's total international tourist arrivals increased from 668,862 in 2005 to 1,072,000 in 2019 (GRZ, 2017; GRZ, 2018a, UNWTO, 2020). These arrivals consisted of business visitors accounting for 53 percent, holiday visitors accounting for 26 percent, visiting friends and relatives accounting for six percent, conferencing accounting for two percent, studying accounting for 1.5 percent, and other purposes accounting for 11.5 percent (GRZ, 2018a). From these arrivals, the country registered annual direct earnings of USD819 million in 2019 employing 57,384 persons (GRZ, 2017; UNWTO, 2020). Compared to its peers within the SADC region, Zambia is among the seven worst performers, of which six received less than a million international tourists. South Africa was the outlier, receiving 10,229,000 international tourist arrivals, a 27.84 percent of the share of the total sub-Saharan Africa's international tourism arrivals, over 41 percent of the SADC arrivals, and earning over USD8 billion (UNWTO, 2020). Figure 2.9 depicts the international tourist arrivals and tourism receipts in the SADC region.

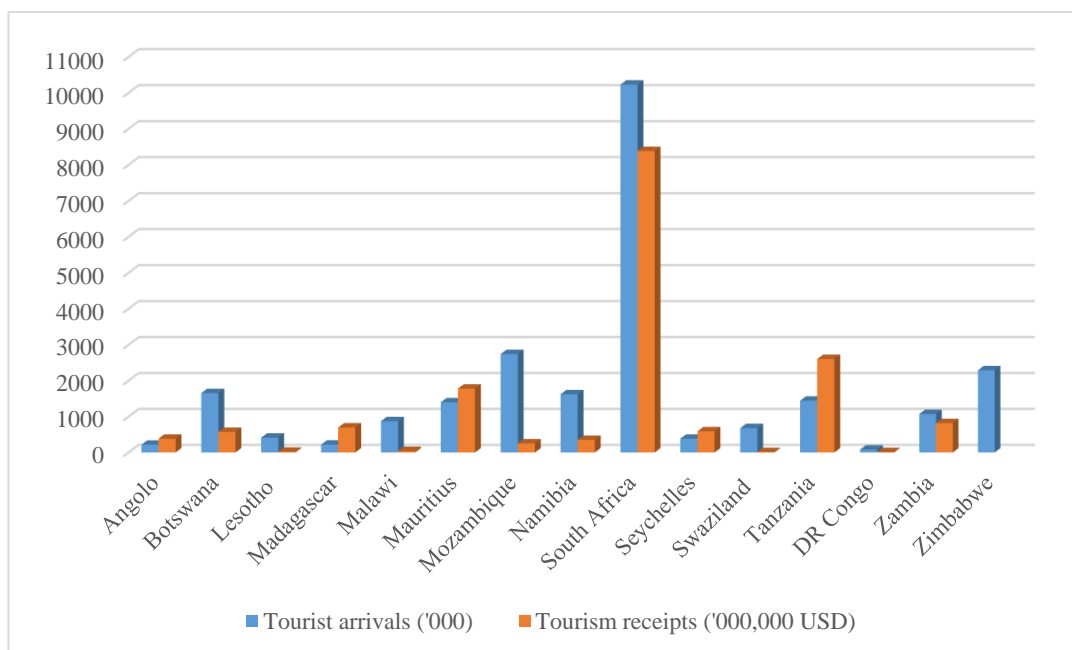


Figure 2.9: International tourist arrivals and tourism receipts in SADC Countries

Source: UNWTO, 2020.

Zambia’s top-20 tourism source markets include Tanzania (24%), Zimbabwe (22%), Democratic Republic of Congo (10%) and South Africa (9%) (IGC, 2020; ZTA, 2019). High-value tourism from the United Kingdom and United States accounted for eight percent of total international arrivals in Zambia (IGC, 2020; ZTA, 2019).

As for contribution to the country’s economy, Zambia recorded on average from 1997 to 2015 a 6.15 percent contribution to its total GDP (World Travel and Tourism Council, 2016). Again, this contribution lagged behind its peers in the SADC region with an outlier being Seychelles recording 58.75 percent of its total GDP. Figure 2.10 gives a picture of the average contribution of the tourism sector to the total GDP of SADC countries.

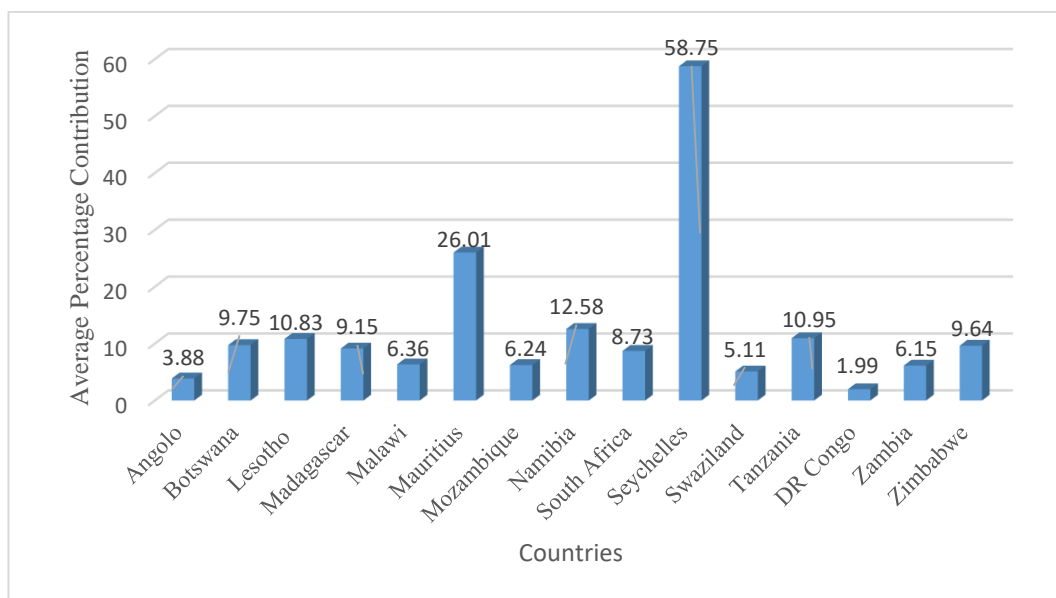


Figure 2.10: Average contribution of tourism GDP as % of total GDP (1997–2015)

Source: World Travel and Tourism Council, 2016.

Tourism development in Zambia has been hampered by poor road connection to the tourism sites (GRZ, 2017). The government of Zambia, in its national development plan (2017–2021), had targeted to increase arrivals of international tourists by 36 percent by 2021 using the 2016 as a base year (GRZ, 2017). However, with the advent of the COVID-19 pandemic, this target is far-fetched. Zambia’s tourism sector was the most affected sector, dropping over 56.3 percent in international tourist arrivals despite the country not shutting its borders to tourists (GRZ, 2020). The hit on the tourism sector resulted in job losses and loss of income. The International Growth Centre (IGC) (2020) projected that over 7000 jobs were lost from the start of the COVID-19 pandemic as 165 tourism businesses faced bankruptcy in Zambia.

The author argues that Zambia’s tourism sector was faced with long-standing challenges even before the COVID-19 pandemic hit. Empirical studies have revealed that the tourism sector was a fragile sector and was easily influenced by income consumer prices, exchange rates, and the cost of transportation and accommodation (Önder et al., 2009). Zambia’s economic fundamentals have been deteriorating in the past four years. COVID-19 only exacerbated the already

struggling economy. For example, the inflation rate in Zambia rose from 6.6 percent in 2017 to 22.7 percent in 2021 (Trading Economics, 2021). The local currency, the kwacha, depreciated over 50 percent in the same period (BoZ, 2020). The size of the Zambian economy has been shrinking from as high as 10.2 percent in 2010 to 4.03 percent in 2018 before the COVID-19 pandemic (World Bank, 2020). The depreciation of the kwacha led to general loss of income for households. In addition, Zambia being a net importer of goods and services, the depreciation of the kwacha led to imported inflation that led to high cost of living. For example, the cost of living for a household of five members measured by the Jesuit Centre for Theological Reflection (JCTR, 2021) Basic Needs and Nutritional Basket stood at K8,394.01 (USD419.70) at the time this study was being undertaken. This could partly explain why Zambia's tourism sector had been struggling. Inadequate diversification of tourism products, undeveloped tourism sites and tour packages are other factors that contributed to the low levels of contributions of the tourism sector to the total GDP (GRZ, 2017). IGC (2020) argued that the limited direct flights to Zambia from Europe and Asia made Zambia an "add on" destination for international travellers visiting neighbouring countries like South Africa and Botswana, thus adversely affecting the international tourism numbers. Motsatsi (2018) in his evaluation of the determinants of tourism demand in the SADC region deduced that low capital investment in tourism by the Zambian government was a major cause of the poor performance of the tourism sector in Zambia.

The commercialisation of Chinyunyu thermal springs offers an opportunity to Zambia to diversify its tourism products in order to contribute to the tourism sector in terms of job creation, revenue collection and foreign exchange earnings. In some countries, tourism is used as a major contributor to conservation of the environment, society, and culture of the local areas (Tshibalo, 2011). In essence, "sustainable tourism" is used as an overarching term for nature tourism, cultural tourism, historical tourism, health and thermal spring tourism (Chuamuangphan, 2016). Sustainable tourism also means that the community is involved and participates in the ownership and management of the tourism assets in the municipality (Chuamuangphan, 2016; Giampiccoli, 2015).

2.14. COMMUNITY-BASED TOURISM

Community-based tourism's (CBT) origins can be traced back to the 1970s when the discourse about alternative development approaches emerged (Giampiccoli, 2015). The CBT model has in the recent past gained popularity and is increasingly being proved by various empirical studies to be very effective in addressing the LED challenges and tackling poverty levels in rural areas (Chuamuangphan, 2016; Giampiccoli & Saayman, 2018; Lee & King, 2008; Lund, 2007; Tshibalo & Olivier, 2010; Runyowa, 2017; Mafukata, 2020; Mazibuko, 2020; Mearns & Lukhele, 2015). CBT has evolved as a way of offsetting the negative impact of conventional or mass tourism (Giampiccoli, 2015). The conventional and mass tourism tends to have a negative impact on the local environment if not controlled, and also fails to conserve heritage resources within localities. CBT is also being advocated as it is believed that mainstream tourism has excluded the marginalised and vulnerable groups in local communities (Giampiccoli & Saayman, 2018).

CBT is a form of tourism in which local people, often in poor rural areas, invite tourists to visit their communities while providing various facilities and recreation activities (Giampiccoli & Saayman, 2018; ITC, 2007). Put differently, the CBT is a self-participatory community development initiative where the locals initiate, control, drive and collectively own the development of local tourism assets. The word "community" in CBT in this context would be understood to mean the disadvantaged or marginalised members of the community in a society (Semrad & Yilmaz, 2013). CBT is meant for the members of the community who are disadvantaged and can be associated with grassroots empowerment, sustainability, social justice, and self-reliance (Giampiccoli, 2015). Therefore, CBT ensures that the local community participates and owns the tourism assets in the local area. The objectives of the CBT are in sync with those of LED with a focus on poverty alleviation and job creation. The asset base of poor rural communities can be facilitated through broad pro-poor intervention measures such as favourable regulatory frameworks, incentivising local economic activities, support to the informal sector, i.e., access to credit, and provision of municipal services such as good roads, good communication facilities, provision of proper trading areas, street lighting and effective drainage systems (Rogerson, 2006). These interventions would support

the CBT in the local municipality and alleviate poverty levels. Figure 2.11 shows the nexus between tourism and poverty.

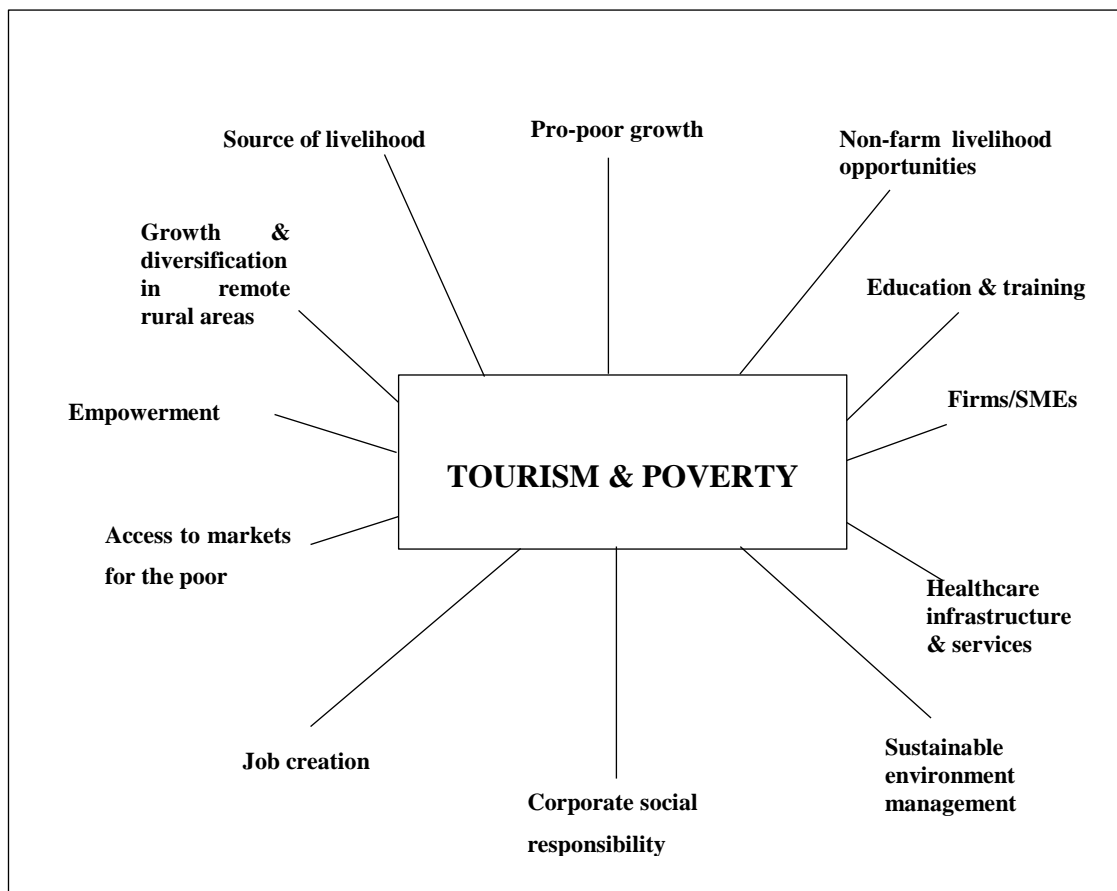


Figure 2.11: The nexus between tourism and poverty

Source: Adopted and modified from Rogerson, 2006.

CBT requires community members who are willing and capable to implement and sustain tourism (Ellis & Sheridan, 2014). According to Giampiccoli (2015), local community members participate in tourism projects at two levels, directly and indirectly. Direct participation is the involvement of indigenous poor people in the community to provide goods and services to the tourists. They could also work in a hotel, lodge or restaurant, sell crafts on the pavement, operate boats for tourists, or even host the tourists in their village. Indirect participation entails that the locals supply goods and services to the tourism enterprises (ITC, 2007). For example, they can cultivate and sell vegetables to the hotels, or work for the companies that provide services to the hotels. This model fits well into the study of Chinyunyu thermal springs.

Some scholars (Mitchell & Muckosy, 2008; Leigh & Blakely, 2017; Suansri, 2003) have, however, outlined some limitations and difficulties of relying on CBT as a panacea for development challenges in the rural areas. These limitations and difficulties include lack of visibility of village-based tourist sites to the international markets and lack of local capacity to effectively implement CBT models. While this study took note of these limitations and difficulties, it argues that implementation of CBT models is still effective and can be assisted by external experts experienced in such models to mitigate the CBT limitations. Despite the critiques of CBT, some CBT project case studies have shown that given certain conditions such as availability of recurrent flow of funds to the project, viable business plans, good technical support and inventive market linkages, CBT can achieve significant results (Mitchell & Ashley, 2010).

It is important that aspects of sustainability are incorporated in development of local resources, especially if they are tourism based. Tourism can generate economic growth and development but if not sustainably implemented, it can also cause damage to the host societies and their environment (Kangnoi, 2009). Therefore, implementation of CBT needs to consider the socio-cultural dimensions and the indigenous knowledge systems (IKS) (Mafukata, 2020; Tshibalo, 2020). Monaheng (1995) argues that local indigenous people possess the appropriate knowledge and skills that are critical to LED. Indigenous knowledge refers to unique knowledge confined to a particular culture or society that has been accumulated over generations of living in an exact environment (Berkes, 2009). Gamman (1995) asserted that indigenous communities place non-economic value on local natural resources tied to cultural and traditional beliefs. It is important, therefore, not to advance economic or commercialisation models without considering the socio-cultural environment of the locality. Gamman (1995) warned of the dangers of ignoring and disrupting the existing socio-cultural values. He proposed an approach that integrates socio-cultural values into development of natural resources.

Rural development models need to incorporate the IKS if the models are to be sustainable. Sustainable development as defined by this study is the development that meets the needs of the present without compromising the ability of the generations in future to meet their own needs (Todaro & Smith, 2015). In an African

context, it is the duty of the present generation to look beyond itself and consider both the future and look back to respect the departed ones, the ancestors (Noyoo, 2007). Bishop Desmond Tutu, a South African cleric and theologian and a Nobel Laureate, has in the past referred to this assertion in his sermons that humanity is about three elements, that is, “those who went before us, those who are still with us and those who are yet to come” (Chikaire et al., 2012, p. 204). This is an important concept which the bishop categorised as components of the human trinity that justifies the importance of IKS such as ancestral spirits associated with thermal springs around the world.

In this study, meeting the needs of the present was interpreted as respect for indigenous knowledge, which was manifested by incorporating the needs of the indigenous local community in the formulation and development of the commercial model for the Chinyunyu thermal springs. These needs included, among others, moral attitudes towards nature, and traditional, spiritual, religious, and ritualistic beliefs that are associated with the thermal springs. Contrary to the modern scientific knowledge systems (MSKS) that were top-down and propagated by the multilateral development agencies such as the IMF and the World Bank, IKS are a hallmark of a bottom-up approach to sustainable LED (Chikaire et al., 2012). The MSKS theories imported from the west have failed to address Africa’s developmental woes (Adejumo-Ayibiowu, 2020). The IKS therefore provide an invaluable alternative to the MSKS. This study endeavoured to give credibility to the local indigenous people of Chinyunyu Village, and therefore the IKS were taken into account from the outset of the study. IKS are a source of valuable input about the local environment and how the natural resources within the locality can be developed and managed effectively. In essence, this study aimed to propose a sustainable tourism development commercial model – a type of tourism model that is developed in the community environment in such a manner and at such a scale that it remains commercially viable but does not degrade or alter the human and physical environment in Chinyunyu Village to such a degree that it prohibits the successful development and well-being of other activities and processes.

2.15. COMMERCIAL MODELS IN TOURISM

Numerous scholars have argued that local resource endowments need to be commercialised to bring about maximum benefits to the community members that host such resources (Binns & Nel, 1999; Chuamuangphan, 2016; Davis & Rylance, 2005; Hall, 2005; Lund, 2007; Mafukata, 2020; Olivier & Jonker, 2013; Rodríguez-Pose, 2002; Tomlinson, 2003). The Chinyunyu thermal springs represent such a resource that can be commercialised into a community-based tourism enterprise. Commercialising the thermal springs means that the operators of the thermal springs could be the community, a public entity, or the private sector, which would need to develop a viable commercial or business model that should be implemented. Simply put, commercial models are “vessels” to commercialise new tourism products and services.

There is no universal definition of the commercial model concept. Various scholars define the concept in different ways. It serves as a blueprint outlining how a firm functions (Günzel & Holm, 2013). Magretta (2002) defines commercial models as stories that explain how a firm works. Johnson, Christensen and Kagerman (2008) describe it as interrelated elements that show the proposed value, the formula for profit, the main processes of the firm and resources needed to create and deliver the value. Similar to this definition is Zott, Amit and Massa (2010), who define a commercial model as an interdependent system of activities explaining how an individual or collective actor creates and captures value. Osterwalder and Pigneur (2010) defined a commercial model as the rationale of how a firm creates, delivers, and captures value. Dess et al. (2012) agree with these definitions, but they introduce the aspect of competition. Dess et al. (2012) believe that a commercial model should include assumptions to explain how a business will be creating value and making profits in a competitive environment. The commercial model hence tries to draw out the competitive advantage of a firm (Casadesus-Masanell & Ricart, 2015; Porter, 1990). Zott et al. (2010), however, found some common ground in these definitions of a commercial model. They identified four common factors in the definitions: a commercial model is a significant unit of any firm; commercial models assist firms to operate in an integrated approach; firm activities are captured

in commercial models; and commercial models are a good framework to explain how value in the firm is created.

Overall, a commercial model is about explaining the firm's ability value. Clients pay for services and products if a firm delivers value at competitive prices. The commercial model is the business logic of any company that brings out the strategic position of the firm on the market for sustained growth (Yip, 2004). The model must clearly show your partners, customers, and resources how revenues will be generated (Ambrož & Omerze, 2018).

Szromek and Naramski (2019) found that most tourism business entities worldwide rarely made use of commercial models. Ambrož and Omerze (2018) in their study of business model innovation in the tourism sector deduced that many firms in the sector were not aware of their commercial models and never articulated them, even if they were implicitly possessed. Chisala (2018), in the study of small and medium enterprises (SMEs) in Zambia, found that SME's owners did not use or apply a commercial model concept in any way. While a few SMEs had an idea of what a commercial model was about, Chisala (2018) revealed that most of them were unaware of it.

In the past decade, tourism firms that continued to do business in their own traditional ways faced various challenges, including unexpected competition from their rivals, technological advancement, change in consumer behaviours (tourist habits), government regulations, and sustainable ways of serving their clients (Reinhold, Zach, & Krizaj, 2017). The need for the tourism sector to adopt modern practices of creating, capturing, and disseminating value of the offered goods and services can therefore not be overemphasised. Teece (2010) believes that each firm explicitly or implicitly possesses a commercial model that outlines how the firm creates value for its clients, how this value is delivered to the clients, and how profits can be made. Chesbrough (2007) corroborated this assertion and argued that commercial models were always present in a firm regardless of whether the model was articulated or not. While the author of this report agrees with the assertions of Teece (2010) and Chesbrough (2007), he argues that commercial models have to be articulated explicitly to allow all the workers to buy in and implement them

collectively. All elements of the commercial model need to be known and understood. Only then can it be successfully changed to adopt changes in the business eco-system (Chesbrough, 2007). Business functions in most commercial models are mutually interdependent, hence any change in one element of the model changes the other elements.

Commercial models are important for tourism entities to remain afloat even in a cutthroat competitive environment. The tourism market is dynamic, and the external environment very often changes rapidly, which calls for adjustments in the way tourism firms conduct their businesses (Ambrož & Omerze, 2018). Tourism firms need to innovate and articulate their commercial models to survive. As the competitive environment changes rapidly, so should commercial models.

The field of commercial models in tourism is still unexplored in the literature. The few existing studies on this topic are fragmented and provide very little insights on developing tourism commercial models (Szromek, & Naramski, 2019). These works address only particular elements of the commercial model rather than giving a full picture, i.e., focusing on activities such as spas as a value proposition but ignoring other elements of tourism. The term “spa” is an acronym from a Latin word *salus per aquam*, meaning health through water (Frost, 2004).

From a practical perspective, companies have implicitly articulated their commercial models from time immemorial. For example, Gassmann, Frankenberger and Csik (2013) analysed the evolution of the concept as far back as the end of the nineteenth century and argued that firms such as the Standard Oil Firm (Rockefeller) used commercial model thinking to develop their businesses. Standard Oil created a value proposition by offering free oil lamps to its clients, which subsequently increased oil sales in their “razor blade model” (Osterwalder & Pigneur, 2010). This model was later replicated by other companies such as Hewlett Packard and Gillette (Osterwalder & Pigneur, 2010). The model was made popular with the rise of Nasdaq stocks and became even more pronounced in the internet bubble era of 1990s (DaSilva & Trkman, 2014). The evolution of e-business and the “new economy/ digital economy” has further contributed to the proliferation of the commercial model concept (Zott et al., 2010; Osterwalder, Pigneur, Bernarda,

& Smith, 2015). This is because in the digital world, businesses change constantly and rapidly and thus firms' traditional ways of doing business often become obsolete. The model was later popularised by Peter Drucker, an Austrian management consultant, in 1994 (Daly & Walsh, 2010; Drucker, 1994). In his "theory of the business" article in the Harvard Business Review, Drucker spoke about how firms fail to survive with a changing market environment, and fail to read changing customer behaviours (Drucker, 1994). Drucker asserted that the current malaise of so many organisations in the world was that their theory of the business no longer worked. The "theory of the business" proposed a new business paradigm developed around organisation assumptions. It sought to be a blueprint for management and a framework for executive action and development of businesses in the ever-changing business climate (Daly & Walsh, 2010). Later, Joan Magretta, an American management consultant and writer, built on Drucker's work in 2002. Magretta (2002) explained that commercial models were at the heart of stories that explain how a firm works. Most recently, in 2005, proponents of commercial models Alexander Osterwalder, a Swiss business theorist, Yves Pigneur, a Belgian computer scientist, and Christopher Tucci, an American professor of digital strategy and innovation, developed one of the most often adopted commercial models where they categorised nine components of a commercial model (Osterwalder, Pigneur, & Tucci, 2005). This was the first ever visual business/ commercial tool of its kind.

Hamel and Trudel (2001) argued that commercial models have become extremely critical, especially in the current business environments that are not stable and often affected by complex unforeseen changes that can disrupt business. This assertion can be related to the COVID-19 pandemic that has disrupted business activities and forced businesses to innovate and change their commercial models. For example, the tourism sector has experienced a change in the consumer behaviour where the tourists wanted to visit places where they could easily physically distance to avoid contracting the coronavirus (UNWTO, 2020). Activities like bird viewing, bike riding and eco-tourism have become more pronounced (UNWTO, 2020). This has called for businesses in the tourism sector to quickly change their value propositions to align themselves with what the customers prefer. Notwithstanding the fact that

COVID-19 affected the entire global economic sector, it can be argued that firms that did not have a commercial model were affected more than firms with a commercial model as they were able to abruptly adjust. In their study, Zott et al. (2010) suggested to firm managers to have clear answers to the key issues before implementing an innovation. They posited that firm managers should know which of the customers' problems would be resolved with a new commercial model and what it would take to resolve those problems, i.e., does it require new activities, the inter-relationship of these activities, the designated person to carry out each activity, and how the new value propositions and revenues for the shareholders will be created through the new commercial model. This suggestion emphasises the importance of commercial models in a business firm.

There are various commercial models applied in different business entities. This study, however, considered the two most popular models in the contemporary business environment, namely Porter's value chain model and the Osterwalder canvas model (Ambrož & Omerze, 2018; Stalder, 2018).

2.15.1. Porter's value chain model

The value chain model views firms as "a sequential process of value-creating activities" (Dess et al., 2012, p. 121). Value is measured by the total revenue arising from what the customer is willing to pay for what the firm offers them (Dess et al., 2012). Therefore, any firm in business must strive to create value that exceeds the cost of production in order to generate a margin. A margin is what gives the firm a competitive advantage.

In the value chain model, the tasks for production of goods and services are arranged in a linear sequence. These are the tasks that create value and as such they require resources to go through the entire process. Michael Porter first introduced the value chain model in his seminal book "Competitive Advantage" (Dess et al., 2012). The value chain model was not originally designed to be a commercial model; however, organisations such as the Food and Agriculture Organisation, the United States Agency for International Development (USAID), the United Nations Industrial Development Organization (UNIDO) and the World Bank have adopted and popularised it as Porter's value chain analysis as a commercial model to

improve the competitiveness of commodities and the social development in developing countries (Simatupang, Piboonrunroj, & Williams, 2019).

Porter (1985) categorised activities in two groups. The first were five primary activities he named inbound logistics, operations, outbound logistics, marketing and sales, and service. The second group consisted of what he called support activities such as procurement, technological development, human resource management, and general administration. The primary activities are directly involved in the physical creation of the product and service from inception until it is delivered to the customer. The support activities are soft aspects of value addition to the product or service. Figure 2.12 below depicts Porter's value chain model.

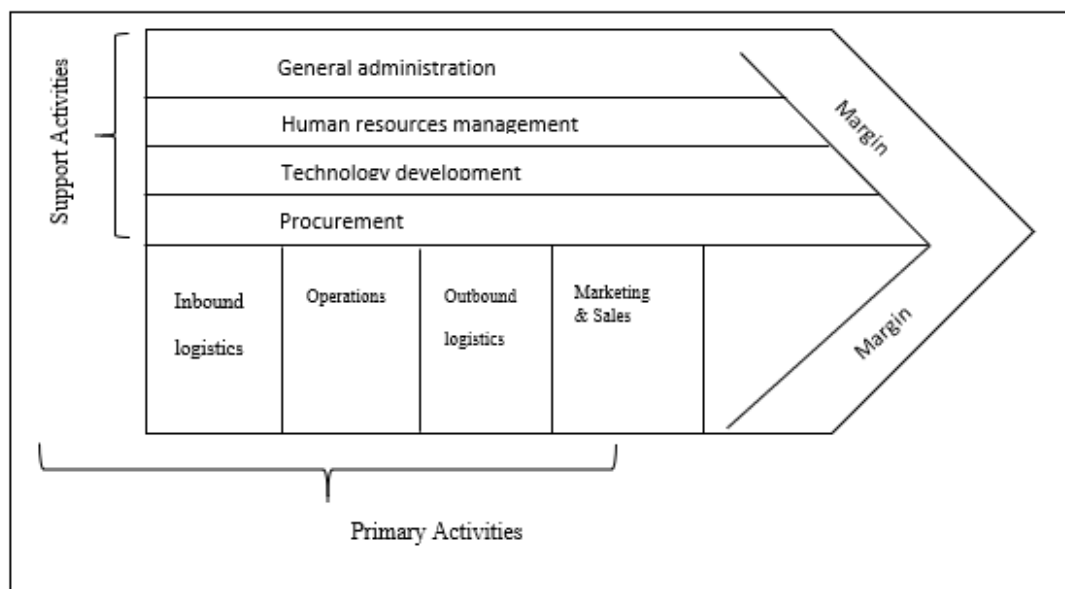


Figure 2.12: Porter's value chain

Source: Porter, 1985.

Figure 2.12 above divides a business into two categories as primary and support activities. Porter's value chain easily identifies activities not adding value to the process which are then improved upon. It is an important tool that focuses on the process as a whole and not in parts. However, the model is more suited to a manufacturing industry and can be limited in application to service sectors like tourism (Prachin, 2019). Porter's value chain model is said not to be viable in the contemporary era of digital economies (Prachin, 2019). The model is nonetheless

important in visualising activities organised in a process that would be important in developing a commercial model that can give Chinyunyu thermal springs a competitive edge over its business rivals.

2.15.2. The Osterwalder canvas commercial model

The Osterwalder canvas commercial model gives a deeper understanding of an ideal commercial model for the tourism sector as it outlines the main building blocks of a business entity (Ambrož & Omerze, 2018; Szromek & Naramski, 2019). A commercial model has a framework called the canvas, containing nine building blocks (Ambrož & Omerze, 2018). The blocks on the left side of the canvas represent 'efficiency', the right side 'value' (Maurya, 2010). The nine building blocks are named as follows: key partners, key activities, key resources and cost structure – on the left side of the canvas (the efficiency side) and value proposition, customer segments, customer relationships, channels and revenue streams on the right side of the canvas (the value side). The efficiency side of the canvas emphasises the feasibility of the projects and how the value can be delivered effectively. The value side is about enticing customers. The firm asks itself whether the value proposition offered to the customers is desirable. Firm managers better understand their business eco-system by analysing these elements and therefore have a better perspective and vision of their business environment. Figure 2.13 illustrates the Osterwalder commercial model.

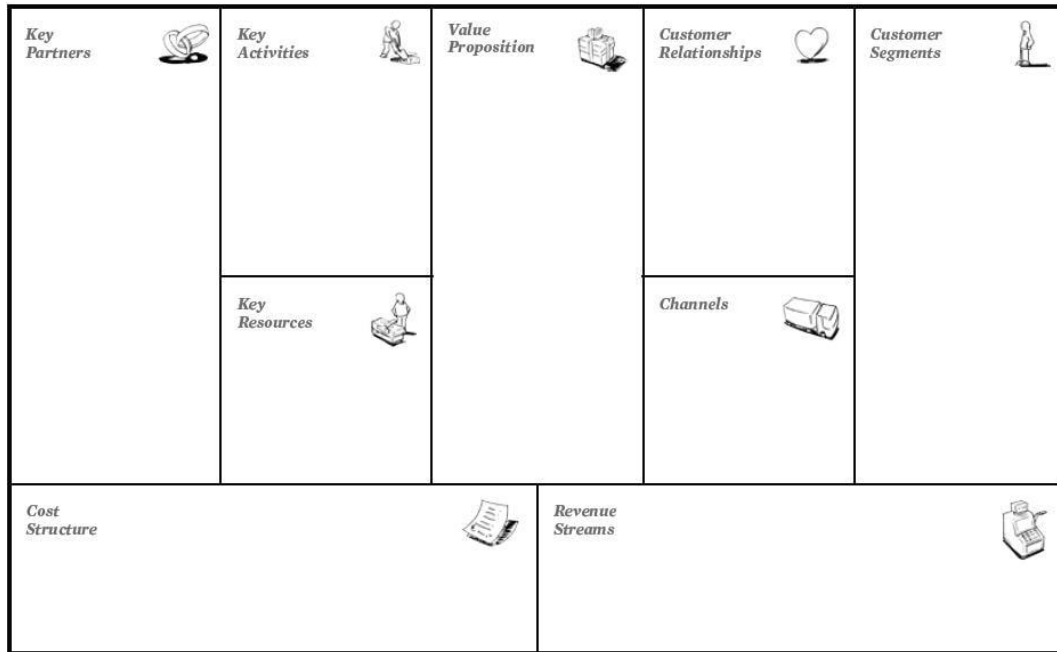


Figure 2.13: Osterwalder commercial model canvas

Source: Osterwalder and Pigneur, 2010.

The nine building blocks according to Osterwalder and Pigneur (2010) and Osterwalder et al. (2015) are explained below.

- **Value proposition**

The value proposition building block is the centre of any firm's activities. It describes a package of products and services that create value for a targeted customer segment. The value proposition is the element that brings customers to a firm despite existing alternatives. It provides a solution and satisfaction to the customer's needs and offers benefits to the customers. This is where a company needs to be innovative to change with the changing business environment. This is where companies ask themselves questions like: what value do we deliver to the customers? and what customer needs are we satisfying?

- **Customer segments**

Customers are the reason any commercial firm exists. Without customers no firm can survive; therefore, this block aims at reaching out and serving different groups of people or organisations. Customers are grouped in segments according to their needs and other common attributes so as to better satisfy them. A commercial model can define several large or small customer segments and prioritise how to serve

them. In this block, a firm asks itself questions like: for whom are we creating value? and who are the most important customers?

- **Key partners**

A business firm needs to know who its key partners are, who are its key suppliers, and what resources can be acquired from the key partners. A business firm will also need to know which specific activities its partners perform to make the commercial model work. Firms can decide to partner for various reasons such as maximising its resources or reducing the risks. Partnerships such as strategic alliance with non-competitors; cooperation, that is, partnerships with the competitors; a joint venture partnership, and a buyer-supplier partnership.

- **Channels**

The channels block defines how a firm communicates and reaches out to its customer segments. The firm ensures that the customers are reached through the channels they want them to be reached. The channels are used to market and advertise the products and services of a firm's value proposition. This is done to make their products and services known to the targeted customers. Firms also offer aftercare or post-purchase support to customers.

- **Customer relationships**

The customer relations outline the types of relationships a firm establishes with specific customer segments. A firm needs to have a clear type of relation it intends to establish with each customer segment. The firm should know what type of relationship each customer segment expects it to establish and maintain. The customer relationship building block is motivated by the need to acquire more customers, the need to retain customers, and the need to boost sales of the products and services being offered by the firm.

- **Key activities**

The key activities building block defines the most critical things a firm should do to create the value proposition and operate successfully. Key activities include key resources needed for: the distribution channels to reach markets, to retain customers and earn revenues. These activities will differ from one commercial model to

another. The key activities for a software business will differ from the key activities for a tourism business.

- **Key resources**

The key resources building block defines critical assets needed to create the value propositions. Every commercial firm requires key resources. Just like key activities, businesses require resources to reach out to various market segments, retain relationships with customer segments, and earn revenues. Key resources include human – for example, knowledge and intensive creative industries may require people; financial – some commercial models require financial resources and/or financial guarantees such as cash, grants, loans, or other lines of credit; intellectual, such as brands, patents and copyright and customer databases; and physical, i.e., physical assets such as factory premises, physical buildings, motor vehicles, equipment and machines, point-of-sales systems, and distribution networks.

- **Revenue streams**

The cash generated by offering the value propositions that customers are willing to pay make up the revenue streams building bloc. A firm must ask itself, for what value are customers willing to pay? For what do they currently pay? How are they currently paying? How do they prefer to pay? Once these questions have been answered, one or more revenue streams can be created from the customer segment. One-off payments and recurring payments are the two main revenue streams of any business.

- **Cost structure**

The cost structure building block describes all costs incurred because of operating a business entity. A firm must be able to ask itself, what are the most important costs inherent to its business model? Which key resources and activities are the most expensive? By knowing its cost structure, a firm is better prepared to adjust its operations when faced with unforeseen eventualities that can impact the business negatively.

The Osterwalder commercial model has been criticised for not following the right sequential order of activities like the Porter's value chain. In the Osterwalder model, reading from the left to right, as most people would do, i.e., starting with key

partners, does not make any logical sense unless one begins with the value proposition building block (Maurya, 2010). Unlike the Porter's value chain, the Osterwalder commercial model does not explicitly describe the starting point. However, the Osterwalder commercial model is flexible, hence business practitioners are able to re-arrange the building blocks to suit their desired innovations. Furthermore, the model was said to be difficult for beginners (Maurya, 2010). A lean canvas model for beginners was therefore proposed. The Osterwalder commercial model was also criticised for not formulating business goals and/or key performance indicators (Ching & Fauvel, 2013). This author, however, strongly feels that the positives outweigh the negatives as the Osterwalder commercial model was designed as a framework to analyse existing businesses and make necessary changes as and when necessary. It is a tool that enables businesses to create innovative ideas to remain afloat and be competitive. The Osterwalder commercial model, therefore, remains important in a business firm.

Ambrož and Omerze (2018) argued that the Osterwalder commercial model should be applied to all tourism enterprises. They claimed to have proved that it was a useful tool for business performance analysis. Wensveen and Leick (2009) posited that the Osterwalder commercial model was ideal for the tourism industry as the industry was confronted with constantly changing global challenges due to internal and external forces forcing companies to innovate and make constant adjustments to their commercial models. Szromek and Naramski (2019) also recommended application of the Osterwalder commercial model by the tourism companies as it was flexible, easy to use, practice-oriented and served as a support in the decision-making process of a firm. The Osterwalder commercial model is the most commonly known and most widely applied business model ideation method (Griol-Barres & Martinez, 2013; Hoffmann, 2013). This research study adopted the Osterwalder canvas commercial model in the commercialisation proposal of the Chinyunyu thermal springs that would guarantee its maximum usage.

2.16. LOCAL ECONOMIC DEVELOPMENT AND NATURAL RESOURCE UTILISATION

Local economic development (LED) has become a vital planning approach for local economies around the globe (Rogerson, 2015). LED strategies can bring local specific alternatives that are more people centred as compared to policy programmes such as the structural adjustment programmes (SAP) that many African countries had been implementing from the 2000s with no significant effect on improving the welfare of the local citizens (Adejumo-Ayibiowu, 2020; Rogerson, 2006; Schuurman, 1993). Globalisation has justified the need for countries to adopt LED strategies, since even the most remote areas now need to take action to respond to the increased competition that globalisation brings (Rogerson, 2015). The LED process offers means to counteract the forces of globalisation by leveraging the cultural and heritage resources a locality is endowed with (Rogerson, 2015). The German International Development Agency (GIZ), which has been actively promoting LED approaches, holds a similar view that LED strategies offer means of tackling market failures, removing bureaucratic obstacles for local entrepreneurs and enhancing competitiveness of local firms (Ruecker & Trah, 2007). Rodríguez-Pose and Tijmstra (2005) alluded to the fact that LED generates efficiency gains in the economy by making the region more competitive and autonomous and thereby motivating governments to be innovative and develop goods and services at a more efficient and lower cost. Therefore, LED departs from the traditional sectoral planning approach to a territorial approach as a way of bringing about economic development (Rogerson, 2015). While traditional approaches rely on central government financial support, incentive packages and subsidies for attracting and maintaining economic activity, the LED approach concentrates on improving the basic conditions in the local areas for development and attracting more economic activities (Rodríguez-Pose, 2007). Meyer-Stamer's (2008) "systemic competitiveness of a territory" enforces Rogerson's assertion on capability for the territory to generate increased income levels for the locals and improve their livelihoods. Furthermore, the ILO (2018) agrees that LED needs to be focused in a defined territory and further adds that creating decent jobs and

stimulating economic activity can be achieved through making use of local resources and competitive advantage in a global context.

An empirical study to evaluate the impact (successes or failures) of LED in Mexico conducted by Rodríguez-Pose and Palavicini-Corona (2013) concluded that implementing LED strategies has paid off for local authorities in Mexico in terms of local development and improvement of human development in the past two decades. The Mexican evidence gives hope to other developing countries such as Zambia that are still grappling with the implementation of LED strategies.

In United States of America (USA), in parts of San Francisco and the city of Azusa of Los Angeles County (California), LED is highly pronounced in developing depressed regions and promoting green economy, inducing entrepreneurship and employment creation (Leigh & Blakely, 2017). An emphasis of LED initiatives to consider benefits that bring about social, economic and environmental development in unison rather than one benefit that compromises the other has ensued. Leigh and Blakely (2017) called this approach sustainable local economic development (SLED), a vehicle that would achieve sustainable improvements of the local people's welfare, quality of life and equality through fostering sustainable use of local resources and production. The SLED approach has taken centre stage in developing local areas in the USA.

The LED approach motivates local authorities to be more receptive to the needs of the locals and hence prioritises the allocation of resources in an efficient manner (Rodríguez-Pose and Tijmstra, 2005). Monaheng (1995 cited in Mafukata, 2020) argues that local people possess the appropriate knowledge and skills that would bring about local development, albeit with some outside assistance as in the case of Nkwichi lodge in Mozambique. Therefore, locals normally utilise their local environment to achieve local development (Mafukata, 2020).

In support of the effectiveness of LED projects, numerous studies have argued that commercialisation of local natural resource endowments brings about sustainable LED (e.g., Binns & Nel, 1999; Chuamuangphan, 2016; Davis & Rylance, 2005; Hall, 2005; Lund, 2007; Mafukata, 2020; Olivier & Jonker, 2013; Rodríguez-Pose, 2002; Tomlinson, 2003). However, this contradicts the assertions by other studies

(Barlett & Steele, 1998; Lee, Lee, & Feiock, 2012; Meyer- Stamer, 2008; Qualmann, 2000) that were of the view that LED projects did not have a significant impact on changing the livelihoods of the local people. They argued that many LED projects did not generate substantial income to release the rural people from the poverty trap. They further argued that LED projects distracted local people from engaging in other income generating activities that could be sustainable. Nonetheless, other empirical studies on LED projects have asserted their effectiveness in alleviating poverty levels in local communities (Chuamuangphan, 2016; Rogerson, 2003, 2015; Rodríguez-Pose, 2009; Tshibalo, 2011; Mafukata, 2020). Chirikure (2017) and Mafukata (2020) have advocated for leveraging natural endowments of the regions to spur economic development in the community. They posited that the commercialisation of local natural and cultural resources stood to benefit poor communities because this model promotes sustainable community-led entrepreneurship and hence local economic development. Commercialisation of natural resources as an economic input for LED has also been of late popularised by Dr Radhika Kapur's theorisation that "the development of the country is synonymous with the development of rural communities" which Dr Kapur has argued for in the work "Concept of Rural Development in India" (Kapur, 2019). The Kapur theory fits well with the issues in broader Zambia, and especially in Chinyunyu, mainly because Chinyunyu is predominantly rural.

2.17. THERMAL SPRINGS AND THEIR SIGNIFICANCE

Tshibalo and Olivier (2010) and Mafukata (2020) argued that natural resources such as thermal springs could be used as economic input for LED. These have been used elsewhere in the world – especially in developing regions (Bojadgieva, Dipchikova, Benderev, & Koseva, 2002; Rodríguez-Pose & Tijmstra, 2005; Lund, 2007; Olivier & Jonker, 2013; Chuamuangphan, 2016).

A thermal spring, hot spring or geothermal spring is heated groundwater that gushes out from the earth's crust to the surface through a crack distinguished by specific properties, for example higher mineralisation, dissolved gas, radioactivity or temperature (Krejchichova, 1999). The thermal springs discharge water with temperatures above the normal local groundwater temperatures. These thermal

springs are classified as either of volcanic or meteoric origin. Some thermal springs occur in volcanic areas where the discharged water is heated by shallow intrusions of molten magma (rock) (volcanic thermal springs) while others are not associated with volcanic activity but are due to the effect of geothermal gradient (Tshibalo, 2011). The meteoric thermal springs occur when water from rain, rivers or lakes percolates along a fault or permeable rocks underground to depths before re-surfacing. The water is then heated to temperatures above boiling point by the hot rock and conveyed through cracks to the surface of the earth in the form of steam or thermal springs to complete the water cycle (Olivier & Jonker, 2013). Figure 2.14 below demonstrates the entire cycle of a typical meteoric thermal spring.

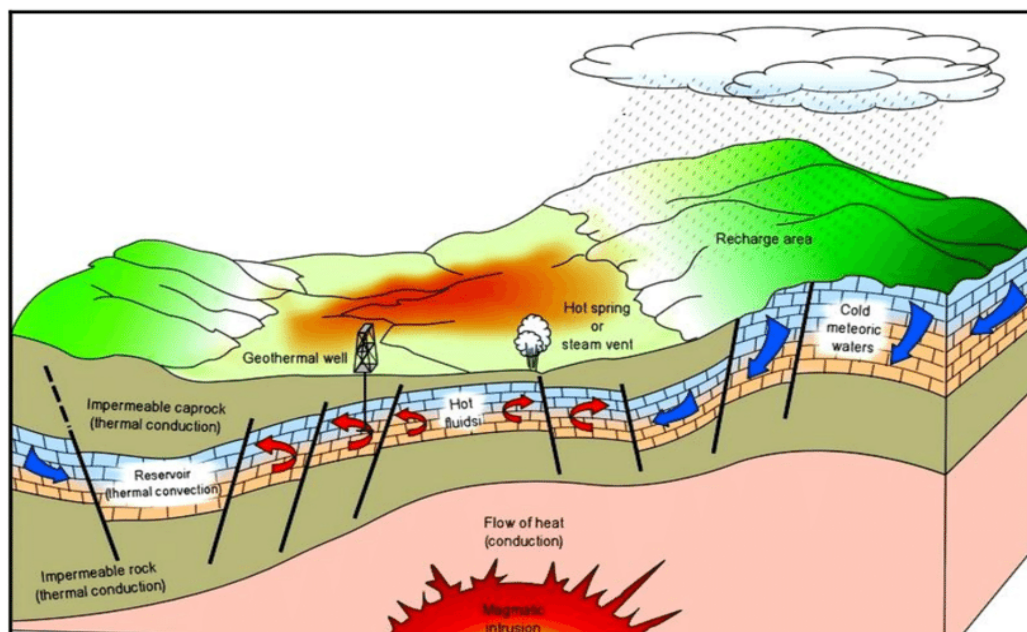


Figure 2.14: Schematic representation of an ideal thermal system

Source: Dickson and Fanelli, 2004.

The above schematic geothermal system, which is meteoric in nature, shows the typical type of thermal springs in Zambia that are a result of convective circulation of ground water heated by reef failure formation (Bwembya et al., 2018). Zambia has no volcanic occurrences and anecdotal evidence points to the fact that all thermal springs in Zambia are meteoric thermal springs – heated by deep circulation (Legg, 1974).

2.17.1. Evolution of thermal springs and early users

Archaeological evidence indicates that thermal springs have been in use since before 1000 BC in countries such as India, while countries such as Greece, Egypt, China, Japan, Turkey, and America have been using thermal springs for hundreds of years, mainly for religious and medicinal purposes (Tshibalo & Olivier, 2010). The thermal springs were considered as sacred places and neutral by the native American Indians where Indian warriors could go to rest and recuperate from battle in safety without worrying about being molested by other tribes (Lund, 2000). These sites later evolved into healing centres where people go for treatment of physical ailments (Olivier & Jonker, 2013). Table 2.4 below shows some of the early users of thermal springs.

Table 2.4: Early users of thermal springs

Period	Users
771 BC – 1050 BC	Huaqing, China
One of the earliest thermal springs is located in the Huaqing in China. The thermal springs are believed to have been used by Emperors of various dynasties for spas between 771 BC and 1050 BC.	
8th Century BC	Italy
Pompeii, a vast archaeological site with a number of thermal springs, was discovered around the 8 th century BC. The people in this area used the thermal springs for heating buildings and bathes.	
700 BC	Japan
The Dōgo Onsen in Ehime Prefecture on the island of Shikoku is among some of the oldest and best known <i>ONSEN</i> thermal springs in Japan found around 700 BC.	
750 to 500 BC	Italy
Thermal springs found in the north of Rome by the Etruscans were utilised for hot bathes and other hydrothermal by-products.	
863 BC	Bath, England
The information of the founding of the Bath thermal springs in England around 863 BC reveal that Bladud, father of King Lear, was cured of disease by immersion in the thermal springs found there.	
1000 BC	Mesoamerica, Mexico/Guatemala/Belize/Honduras
The Maya Empire found in Mexico, Guatemala, Belize and Honduras is said to have been some early users of thermal springs around 1000 BC. These countries host a myriad of thermal springs used for various purposes.	
1430 BC	Lipari – Sicily, Italy
The Lipari were the early users of thermal springs found in Italy. Their stone-lined ponds containing water from the thermal springs were mostly used for therapeutic thermal bathing.	
1680 – 1193 BC	Anatolia, Turkey
The Hittite Empires of Turkey were early users of thermal springs. They used them for recreation and therapeutic treatments in the years between 1680 to 1193 BC.	
3000 BC – 1700 BC	Indus Valley, Pakistan
The Indus Valley of Pakistan were some of the early users of thermal springs between 300 BC and 1700 BC. The Indus Valley is home to various thermal springs that are still in use today for various purposes.	
1000 BC	Western Europe
Western European countries are some of the early users of thermal springs. They traditionally used them for sacred worship and healing purposes.	

Source: Erfurt-Cooper, 2010.

Most recently, thermal springs have been used for other purposes such as electricity generation, heating, agricultural and aquacultural uses, industrial uses and balneological use (healing purposes), recreation and tourism development (Lund, 2000; Olivier & Jonker, 2013). Countries such as Japan, Russia, the USA, Turkey, and China are leading in terms of sustainable exploitation of thermal springs (Olivier & Jonker, 2013). In Africa, the North African countries such as Algeria, Egypt and Morocco have made tremendous progress in developing their thermal springs but South Africa, Tanzania and Kenya have also made headway in exploiting their thermal spring resources (Lund & Freeston, 2001). In fact, South Africa is one of the countries that is well endowed with numerous thermal springs, mostly used for tourism and recreation purposes. These thermal springs are contributing to job creation and improving the livelihoods of the locals, especially in rural areas such as in the Mutale Municipality in Limpopo Province (Tshibalo, 2011). Over 30 out of more than 74 thermal springs in South Africa are used for recreation and tourism purposes such as camping sites, hot and cold swimming pools, bird watching, horse riding, game drives, exercise, restaurants, conference facilities, sites for picnicking, relaxation, recuperation and rehabilitation, sauna, steam and jacuzzi bathes, rheumatism bathes, and golf courses (Tshibalo, 2011).

Thermal springs in rural areas have the potential to generate socio-economic benefits for local people, more especially if they are used sustainably. Countries like Zambia, therefore, need to replicate the initiatives already existing in such countries to fight the high poverty levels in rural areas.

2.17.2. Applications for thermal springs – the classical Lindal diagram

The uses of thermal springs are normally guided by the temperature of the geothermal fluid that gushes out of the thermal springs. The temperature is an important parameter that determines the feasibility of geothermal applications. Lindal (1973) developed what came to be known as the classical Lindal diagram, a sketch depicting possible uses of the thermal springs at different temperatures. According to Lindal (1973), the thermal springs have limited uses depending on the resource temperature. However, the modern designs can modify the thermal springs to make them useful for other applications. Nonetheless, the Lindal diagram is still

widely used and remains valid as a guide of thermal spring utilisation. Figure 2.15 below depicts the Lindal diagram.

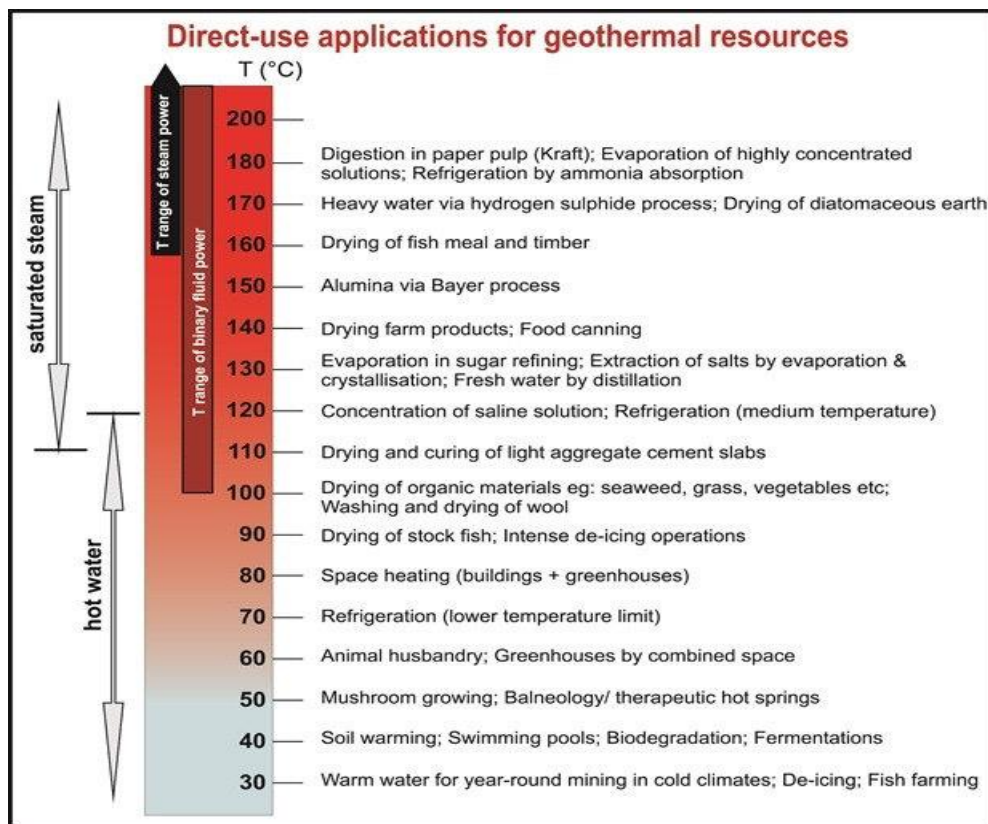


Figure 2.15: The classical Lindal diagram

Source: Lindal, 1973.

The Lindal diagram above shows the cascading and possible uses of thermal springs that would guide the feasibility of specific projects. As seen from the diagram, Lindal did not include other uses such as the geothermal energy which has dominated the thermal spring uses in the last decade. Geothermal energy accounts for over 50 percent of total geothermal direct uses, with over 89 countries using thermal springs for geothermal energy generation (Lund et al., 2015; Lund & Toth, 2020). Generation of electricity remains the most important form of utilisation of high-temperature geothermal resources (> 150°C) while the medium-to-low temperature resources (< 150°C) are ideal for many different types of application (Dickson & Fanelli, 2004). Generation of electricity in binary cycle plants can now be added above 85°C (Dickson & Fanelli, 2004). Binary cycle power plants allow application of cooler thermal reservoirs. Therefore, the classical Lindal diagram can

be improved to include many other uses that were not envisioned at the time the diagram was developed.

Apart from the hot temperatures, the mineral composition in the waters enables the thermal spring to have different applications such as mushroom growing, agriculture, aquaculture, bottled water and balneology, as shown in Figure 2.15 above. The common minerals associated with most thermal springs are calcium bicarbonate, sodium chloride, potassium chloride, granite, diorite, quartz porphyries and quartzite (Olivier & Jonker, 2013). Gases such as nitrogen (N₂), carbon dioxide (CO₂), hydrogen sulphide (H₂S), oxygen (O₂), argon (Ar) and methane (CH₄) are also commonly associated with thermal springs (Olivier & Jonker, 2013). It is therefore imperative to carry out various chemical tests before thermal springs can be used for certain activities such as swimming and bathing to treat any toxic chemicals that might harm the users. Studies on the chemical composition of the Chinyunyu thermal springs have recommended that the chemical composition was suitable for bathing and swimming (Kapasa, 2014; Musonda & Sikazwe, 2005). In addition, the thermal springs have been known for swimming and balneotherapy by the locals since their discovery.

The tourism and recreation category, in particular swimming and bathing, accounts for approximately 21 percent of the total geothermal direct uses (Lund & Toth, 2020). Disassociating the geothermal heat pumps, tourism and recreation account for 44.7 percent (Lund & Toth, 2020), an indication that exploitation of thermal springs into sustainable tourism hubs is being undertaken in different countries. Over 70 countries are known to be utilising their thermal springs for tourism and recreation activities such as spas and resorts, and swimming pools including balneology – the treatment of diseases with water (Lund & Toth, 2020). Murken (2006) outlined some five healing properties that are attributed to thermal spring waters, namely the heat produced by the thermal springs helps relax the body; the hot water also facilitates favourable blood circulation to the skin, muscle joints and internal organs; the heat transmits a calming effect to the central nervous system and thus alleviates pain; the heat stimulates the hormonal system that in turn releases endogenous biochemicals such as endorphins, the steroid hormones cortisone other anti-allergenic hormones that are essential in easing inflammation

and pain. Therefore, bathing and swimming in thermal spring wates does facilitate the rehabilitation process. The thermal springs can therefore serve as tourism hubs in mostly rural areas where they are located.

2.17.3. Thermal springs in Zambia

Thermal springs in Zambia have been known to exist as far as the 19th century and were mostly used for salt production by the villagers (Legg, 1974). This mostly occurred in the northern part of the country. To date, Zambia is known to have approximately 80 thermal springs (Kapasa, 2014; Musonda & Sikazwe, 2005) spread all over the country. Some are in highly isolated areas. Some early studies on thermal springs in Zambia (Ferguson, 1902; Legg, 1974) presented geochemical data that showed the potential of geothermal energy generation, but to date none of the thermal springs have been developed along those lines (Bwembya et al., 2018; Musonda & Sikazwe, 2005). Generally, very little has been done to optimise the use of fluids from the thermal springs in Zambia (Musonda & Sikazwe, 2005). Legg (1974) mainly used a helicopter to reach out and map 55 existing thermal springs. Table 2.5 below shows 55 thermal springs that previous researchers (Legg, 1974; Niles, 2012) managed to locate and document. These studies categorised the thermal springs into seven (7) groups.

Table 2.5: Distribution of thermal springs in Zambia

	Location & names of thermal spring(s)	Frequency
1	Northern Group: there are thermal springs located in the northern part of Zambia close to the shores of lake Tanganika, over 1,000 kms from Lusaka. They include: Kapisya thermal springs, Kalaye group of springs, Kaputa springs, Chiengi springs.	4
2	South-Eastern Group: These thermal springs are situated in the luano valley, between 80 to 140 kms from Lusaka. They include: Mililo thermal spring; Masaka thermal spring; Bwingi River thermal spring; Kalingala River thermal spring; Chinyunyu thermal springs; Mikwa River thermal spring; Unnamed thermal spring; Mafwasa thermal spring; Chitopolo thermal spring; Kampoko River springs.	10
3	The Mansa-Copperbelt Group: These thermal springs are situated in the northern part of Zambia about 700 kms from Lusaka. Mansa thermal springs; Kabunda thermal springs;	6

	Location & names of thermal spring(s)	Frequency
	Luano borehole; Kafue River thermal springs; Chondwe thermal springs; Luano thermal springs.	
4	Western Group: These thermal springs are located in the western and north-western parts of Zambia about 340 kms from Lusaka. They include: Kaimbwe thermal spring; Moshi salt spring; Chibemba thermal spring; Lupiamanzi thermal springs; Kassip thermal spring; Kapiamema thermal spring; Longola thermal spring; Bilili thermal spring; Lubungu thermal spring.	9
5	Eastern Group: These thermal springs are located in the eastern part of Zambia along the Luangwa trough about 700 kms from Lusaka. They include: Sitwe thermal springs; Shiwa Ngandu thermal springs; Kanunshya mineral spring; Kalamulilo thermal spring; Change thermal spring; Nabwalya South thermal spring; Kazakaza thermal spring; Nsefu thermal spring; Manze salt spring; Chilubwe salt spring; Musaope thermal spring; Malanga thermal spring; Chikoa thermal spring; Msoro thermal spring; Mwape thermal spring; Kanzi thermal spring.	16
6	Choma Group: These are also situated in the southern part of Zambia about 300 kms from Lusaka. They include: Semahwa River spring; Sportsman's Lodge; Muckleneuk North springs; Muckleneuk Main springs; Chibimbi springs; Mosali spring.	6
7	Lonchinvar Group: These thermal springs are situated in the Kafue trough, about 235 kms from Lusaka. These include: Gwisho east; Gwisho west; Bwanga west; Bwanga east	4
		55

Source: Legg, 1974; Niles, 2012.

The Chinyunyu thermal springs are categorised in the south-eastern location as shown in Table 2.3. The springs are situated in an area characterised by basement rocks along an extension of faults and cracks which define the margins of the southern side of the Luano Valley (Bwembya et al., 2018). Water from the main thermal spring located on the western side of Chinyunyu valley has artificially been channelled into a dug-out pool/pond being utilised for bathing and other spiritual, religious, and ritualistic activities by the local community and including a few tourists (Kapasa, 2014). The channelled water is then mixed with surface water to lower the temperature and make it bearable for bathing and balneotherapy (Legg, 1974; Kapasa, 2014). The other spring is located on the eastern side of the great

east road, about 300 metres apart of each other (Legg, 1974). Figure 2.16 shows the location of the documented thermal springs in Zambia.

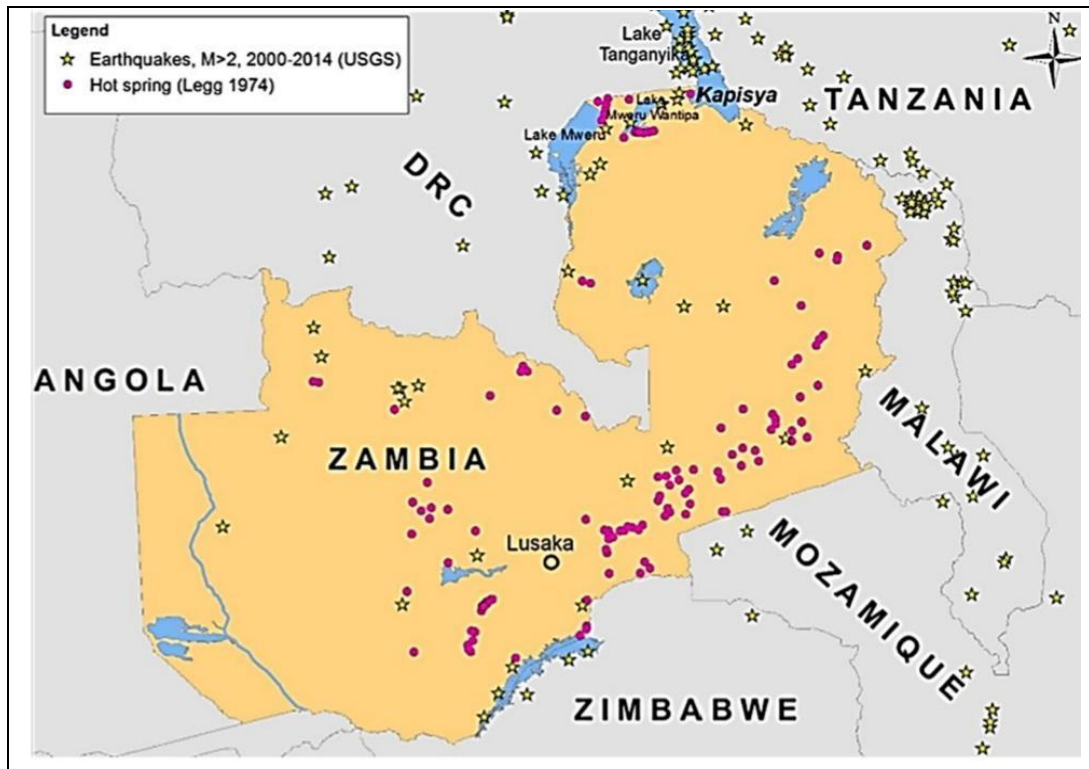


Figure 2.16: Location of thermal springs in Zambia

Source: Kafuwe, 2018.

Studies on exploiting the thermal springs have focused mainly on their potential to generate geothermal energy, which has proved futile and only progressed as far as the planning stage for various reasons (Kafuwe, 2018; Kapasa, 2014; Bwembya et al., 2018; Wilmarth, Haizlip, Prina, & Vivian-Neal, 2018). Reasons included lack of funds and inconclusive mixed results, i.e., not technically feasible due to unsuitable physical and chemical properties of the thermal spring fluid (Bwembya et al., 2018). Although Kapasa's (2014) study was an evaluation of the Chinyuny thermal springs for geothermal energy development, he did argue that the thermal springs were suitable for balneology and swimming/bathing. Kafuwe (2018) carried out an economic and financial assessment for the viability of the Kapishya geothermal power project. He concluded that the Kapishya geothermal plant was feasible for a small binary organic Rankine cycle plant that can generate up to 110 kw of power. These studies, however, could not consider the LED strategies in their

approach. It was intended that this study would thoroughly address the use of a LED approach in sustainably exploiting the Chinyunyu thermal springs to contribute to the development of the rural Chinyunyu Village.

Of the eighty thermal springs in Zambia, only one is fairly developed, the Kapishya thermal spring (ZTA, 2019). The rest are in their natural state utilised variously in the localities. The study has selected a few thermal springs found in Zambia that are accessible and useful. This is done with a view to identify activities undertaken at these thermal springs.

- **Kapishya thermal springs**

The Kapishya thermal springs remain the only fairly developed thermal spring in Zambia. Kapishya thermal springs are located on the shores of Lake Tanganyika in the northern part of Zambia. The thermal springs host the Kapishya Hot Springs Lodge (Chisala, 1994, ZTA, 2019), which is run by a private company, Shiwa Safaris, a British family business that was started in 1980 by John and Lorna Harvey, son-in-law and daughter, respectively, of the legendary Sir Stewart Gore-Browne. Sir Stewart Gore-Browne was an aristocrat white settler who served in the First World War and fell in love with Zambia when he was on a mission of demarcating the boundaries between Rhodesia and Democratic Republic of Congo (DRC) whilst working for the Anglo-Belgium Boundary Commission (ZTA, 2019). Sir Gore-Browne is well known for his masterpiece construction of a mana house (estate) he called the *Shiwa House (also known as the Africa House)*, the property he had built from 1920 to 1950 (Shiwa Safaris, 2019). Following his death in 1967, the estate was inherited by one of his daughters, Lorna, and her husband John Harvey, who built a weekend chalet near the Kapishya thermal springs which they later expanded, whilst maintaining its natural ecosystem, to six (6) chalets, each accommodating up to five family members coupled by a camp site – accommodating tents and camper vans (Shiwa Safaris, 2019). All the chalets here were constructed using local materials made by the local community. The Kapishya Thermal Springs Lodge is currently run by Mark Harvey, son to Lorna and John, and his wife Mell. The lodge receives foreign and domestic tourists benefiting the local community through provision of employment (35 direct local jobs) and ancillary tourism-based enterprises (Shiwa Safaris, 2019). The local villagers are

empowered through the sale of handcrafts to the tourists (Chisala, 1994). The lodge has other touristic activities, but the main attraction is the three thermal springs that have been conserved to facilitate bathing, swimming and a spa. The thermal springs are about 120 degrees Celsius and the water gushing from the thermal springs is channelled to dug-out pools at a distance of seven kilometres (km) away from the source to allow it to cool down. The hot water loses the heat, at around 10 degrees Celsius per km as it flows downstream (Shiwa Safaris, 2019). Although, strictly speaking, this project may not be a result of a LED programme or community-based strategy, it provides ideas to the researcher on some workable commercial models for maximising the use of natural and heritage resources in poverty-stricken rural areas. The model is applicable in developing a commercial model for community-based tourism (CBT).

- **The Gwisho and Bwanga thermal springs**

The Gwisho and Bwanga thermal springs have been in existence and known from very early years. The site has been used as a perennial source of water for cattle (Legg, 1972). It is located on a major fault separating rocks in one of the national parks, the Lochinvar national park in the southern part of Zambia. The thermal springs are readily accessible and provide attractive scenery for visitors. However, water temperatures in these particular springs are among the hottest thermal springs in Zambia at around 90 degrees Celsius (Legg, 1972) and may not be suitable for bathing. In addition, the springs contain dissolved salts in high concentration of sodium, chlorine, calcium and sulphates (ZTA, 2019). These thermal springs remain in their natural state and are undeveloped (Bwembya et al., 2018; Niles, 2012).

- **Mupiamanzi thermal spring**

The Mupiamanzi thermal spring is located in the Kafue National Park about 120 kms from Lusaka, the capital city of Zambia. The spring has a high temperature in excess of 65 degrees Celsius (Legg, 1974). This spring was earmarked for development of geothermal electricity by the Zambian government but it remains idle. The spring is nonetheless a source of water for the Mapiamanzi river which attracts game such as hippopotamus (Bwembya et al., 2018). These springs are normally used by hunters as a camping site.

- **The Lubungu thermal spring**

The Lubungu thermal spring is also located in the Kafue National Park. It provides spectacular scenery although its fluid temperature is exceptionally hot. The thermal spring is normally utilised by the hunters in the national park.

- **The Kaputa thermal springs**

The Kaputa springs are found in dense vegetation about five kilometres from Kaputa (town) in the northern part of Zambia. The thermal spring is used for salt production by the local people (Legg, 1974). This salt is said to be more bitter than the normal table salt due to its high concentration of calcium sulphate (Legg, 1974). Kaputa remains one of the districts in Zambia with a high production of salt (Besa & Habulembe-Mugode, 2001). The Chiengi thermal spring is also located in the northern part of Zambia and is known for salt production.

- **The Mansa thermal springs**

The Mansa thermal springs located in the northern part of Zambia in Luapula province are extremely popular for bathing since the water temperature of the fluid is around 35 degrees Celsius (Legg, 1974).

There is still scanty information on most of the documented thermal springs in Zambia. However, the above thermal springs provide a picture of the current uses surrounding the thermal springs. Most of them are located in national parks, where they are mostly utilised by hunters, for those that are accessible while others are frequented by wildlife. However, Legg (1974) and Kapasa (2014) did recommend for some of the identified thermal springs to be developed into spas. Legg (1974) also recommended for the suitable thermal springs in Zambia to be developed for use of medical balneology. Generally, it is evident that most of the thermal springs in Zambia remain undeveloped and underutilised. Sustainable exploration of these thermal springs, most of which are located in rural areas, would need to be prioritised to stimulate local economic development in the host regions.

2.18. THERMAL SPRINGS TOURISM AS AN ECONOMIC INPUT FOR LED

The LED approach has been successful in Taiwan, Turkey, Thailand, and Japan, among others, where a number of thermal springs have been developed into fully-

fledged tourism resort areas/ spas, benefiting the local communities through jobs and sustainable incomes (Chuamuangphan, 2016; Lee & King, 2008; Lund, 2007; Olivier & Jonker, 2013; Rodríguez-Pose & Tijnstra, 2005, 2007; Sanli & Kara, 2019). LED projects were used to spur community-based tourism development. The LED projects in these local areas did not disrupt the existing socio-cultural values of the locals and the ecological systems.

The use of thermal springs as community-based tourism hubs dates to pre-historic times (Sanli & Kara, 2019). Thermal springs were mainly used for treatment purposes in prehistoric times, and this has continued for most of them in modern times. In Taiwan, for example, Lee and King (2008) assessed the potential of Taiwan's thermal springs tourism sector and found that the Taiwanese were increasingly concerned with good health and longevity. This has provided a huge opportunity for thermal springs tourism in Taiwan. The study also found that the local authorities in Taiwan paid little attention to the development of thermal springs and lacked community participation in decisions about destination planning. The thermal springs development models in Taiwan hence negated LED and sustainable development. The study did not delve deeper into how LED approaches could assist in exploiting the many thermal springs in Taiwan. The thermal springs in Taiwan also lacked regulations on how to use water which is endemic in the thermal springs area. However, the locals benefited from the thermal springs within their locality as they were able to convert part of their homes into aparthotels to provide accommodation to local tourists. Provision of accommodation to local tourists would be a great benefit to the people of Chinyunyu, but there would be a need to upgrade most of their homes to the minimum basic acceptable standards to serve as aparthotels.

Similarly, in Turkey, Sanli and Kara (2019) studied the thermal tourism potential of an area called Karahayit. Thermal tourism in this case means sustainable exploitation of thermal springs as tourism hubs. Sanli and Kara's study found that local tourists flocked to the thermal springs in belief that they were beneficial to their health, i.e., treatment of rheumatism, and joint disorders. The study concluded that the thermal facilities were underutilised as they lacked sufficient infrastructure support.

Japan is another typical example that has utilised its thermal springs to the benefit of the local communities (Lee & King, 2008). Because of the ageing population challenge that normally induces medical needs coupled with their ethos of using natural remedies, thermal springs in Japan have become popular as they are used for medicinal and spiritual purposes (Lee & King, 2008). The most socio-cultural activity such as *Onsen* bathing is quite common in Japan (Erfurt-Cooper, 2010). The Japanese believe that soaking in thermal springs maintains your youth and beauty, especially for females. A bathe in a thermal spring can also be mentally uplifting because the quality time is spent relaxing, normally in a beautiful natural environment. The thermal spring surroundings also provide a photo opportunity to visitors and to entice others to visit them for curiosity and to learn more about the geological information of thermal springs.

Within Africa, the South African case has been highlighted as exceptional and advanced in terms of implementing LED plans due to its extensive devolution and decentralisation of powers to the local authorities (Rodríguez-Pose & Tijmstra, 2007; Rogerson, 2015; Rogerson & Rogerson, 2010). The municipalities in South Africa are constitutionally required to adopt a developmental character and implement LED policies and programmes (Mazibuko, 2020). The country's Local Government Municipality Systems Act (No. 32) of 2000, for example, has put a strong emphasis on community-based development in the municipalities to address inequalities, poverty and unemployment (ibid). Mazibuko (2020) explored the development of community-based tourism initiatives in the rural areas adjacent to conservation areas of South Africa and concluded that the pro-poor tourism initiatives would benefit the locals not only through direct employment but also through spin-offs from the local tourism such as transportation, tour guiding, laundry/cleaning, construction, and waste disposal.

In Mozambique, a community-based tourism project, the Manda Wilderness Community Trust, changed the previously war-distressed poor area in Lago district by building a lodge (Nkwichi Lodge) (ITC, 2007). Nkwichi Lodge used local materials and was modelled as a community conservation project run by the locals, hence creating direct and indirect jobs within the village and improving their livelihoods (ITC, 2007). In this project, the locals themselves decided what they

wanted to do and identified activities they wished to offer while a community trust organisation provided logistical and technical support to ensure success of the project (ITC, 2007).

From the discussions above, it is evident that many countries have succeeded in utilising their thermal springs for tourism. Mi, Chen, Cheng, Uwanyirigira and Lin (2019) enunciated that thermal spring tourism was among the popular types of tourism. Thermal springs add value to the destinations of tourism, thereby attracting more visitors to the locality. Thermal springs for tourism are used for spa and wellness; leisure and recreation; spiritual, health and medical tourism – thermalism, balneology, hydrotherapy and ecotourism. Figure 2.17 below summarises various uses of thermal springs for tourism.

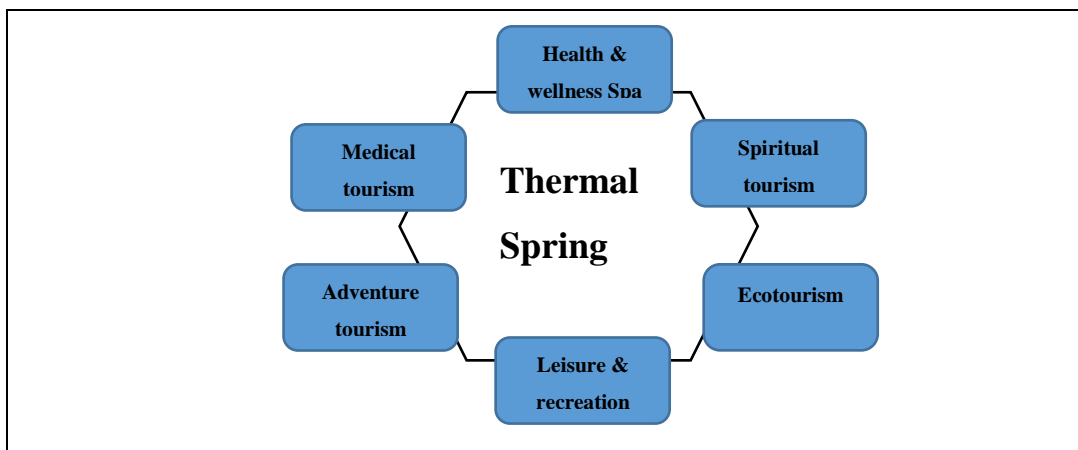


Figure 2.17: Uses of thermal springs for tourism

Source: Author's own compilation.

Figure 2.17 shows that thermal springs can be used in various tourism activities as well as other social and cultural settings that benefit local economies. However, in most developing countries, this resource is left idle, therefore missing the opportunity and its potential impact on the local economy. It must also be emphasised that not all thermal springs are safe for tourism. Countries have reported thermal burns from extremely hot thermal springs which can be very serious and even deadly (Erfurt-Cooper, 2010). It is therefore imperative to regulate the temperatures of very hot thermal springs to make them comfortable for bathing. The Chinyuny thermal springs, with a water temperature of around 70 degrees Celsius, can be manipulated to reduce the temperatures and make them more useful for tourism.

Some thermal springs can be vigorous and can erupt, ejecting a cloud of vapour, mud or even blocks that can be ballistic, for example the thermal springs in the Kuirau Park in New Zealand (Erfurt-Cooper, 2010). Zambia has never experienced such vigorous thermal springs.

A distinction has to be made between developing thermals springs and commercialising them. This study makes an assumption that the process of commercialising a thermal spring encompasses the development part i.e., improving or building of infrastructural facilities around the thermal spring. Commercialising natural resources such thermal springs do come with their own challenges. Mariki (2018) described some negative impacts of commercialisation of natural resources to lead to primitive accumulation. Primitive accumulation is the act of dispossessing the wealth and power (i.e., thermal springs, land) that is in the hands of the few underprivileged local community members, enclosing it and hence creating a landless proletariat (Kelly, 2011). These natural resources are then commercialised for capital accumulation. This approach has negative impact on the local people's access to the natural resources and also extends to violation of their human rights. The Chinyuny thermal springs premises hosts local citizens who have lived there for generations and believe that they have the right to own (even without title deeds of land) their ancestral land and free access to the thermal springs.

Some thermal springs are owned by corporations and are restricted to company members only, for example the Libertas in Bela, Bela, South Africa (Olivier & Jonker, 2013). Others have been developed by private hands for exclusive use by the private owners of the land, for example the Loubad Mineral Resort in Limpopo, South Africa. Another thermal spring in Limpopo, the Sulphur spring is owned by a Spanish Royal family and alienates access of local people (Olivier & Jonker, 2013).

Therefore, a commercialisation model that promotes primitive accumulation is not an ideal approach for Chinyuny Village but a model that is driven by the community members with the interest of the local population. This would be a model that will not disrupt the locals people's way of life but will enhance their lifestyles. Commercialisation that evicts the local people from their ancestral land

and alienates them from accessing their heritage resources with hollow promises to involve them as partners and beneficiaries is not sustainable (Mariki, 2016).

2.19. DEVELOPING THE HYPOTHESES

A common thread of the preceding literature review is that community participation or involvement, exploitation of local resources, decentralisation of decision making, and development of infrastructure within the locality can potentially improve the living standards of the local community, leading to sustainable local economic development, as the following testable hypotheses summarise:

Hypothesis 1: *The perception of the local community members in Chinyunyu Village is that local economic development (LED) in rural areas such as Chinyunyu is positively associated with increased community actors' participation in the identification, implementation and monitoring of programmes and projects in the locality.*

Hypothesis 2: *The perception of the local community members in Chinyunyu Village is that local economic development (LED) in rural areas such as Chinyunyu is positively associated with increased exploitation of local heritage and cultural resources within the locality, i.e., exploitation of thermal springs.*

Hypothesis 3: *The perception of the local community members in Chinyunyu Village is that Local economic development (LED) in rural areas such as Chinyunyu is positively associated with increased devolvment of decision making to the local authorities – decentralisation.*

Hypothesis 4: *The perception of the local community members in Chinyunyu Village is that Local economic development (LED) in rural areas such as Chinyunyu is positively associated with improved infrastructure such as feeder roads, electricity, telecommunications, water and sanitation.*

2.20. CONCEPTUAL FRAMEWORK

The reviewed literature has revealed gaps in linking community-based activities such as thermal springs exploitation to the LED approach in Zambia. The conceptual framework tries to bridge this gap by presenting policies and interventions at central government level, provincial government level and local

government level. The framework emphasises the involvement of all relevant stakeholders in the locality and embracing of a bottom-up approach. The central government level of analysis is a more strategic approach while the provincial level analysis is operational. However, both cascades down to the local level.

To enhance the effectiveness of local participation in the development of their areas, the framework has prioritised implementation of decentralisation policies that would empower the local authorities to make independent decisions. Another factor identified is the provision of hard and soft infrastructure, i.e., waste management facilities, water, electricity, and motorable roads leading to the thermal springs or indeed any other heritage site that the locality may be endowed with. These could be undertaken at a provincial level.

Development of a LED strategy is always important to guide the development of the local area. The community-based tourism development or exploitation of thermal springs has been singled out as a major intervention that could spur local economic development.

Some interventions that could be undertaken at the central or provincial levels that would trickle down to enhance local economic development include inventions such as tourism promotion/media marketing and access to finance/micro financing – to make it easy for the ancillary enterprises that would be created to borrow funds and start their businesses. The capacity building/ skills development centre would also assist the locals who want to venture into other supply business to be trained in basic business development solutions. A favourable business climate would be required to ensure that the induced start-ups survive and are sustainable.

The framework assumes that with the abovementioned policies, programmes and interventions more local citizens and the community would be encouraged to participate in the development of their localities. In addition, self-employment opportunities and decent jobs would be created. The preoccupation of the LED approach is to solve unemployment problems by doing away with traditional low salaried employment opportunities and adopting solutions that create jobs with high wages and better working conditions. These developments would normally eradicate poverty in the local area. The creation of a business eco system in the

locality would ultimately improve the regional competitiveness and its contribution to the GDP.

Based on this literature and field survey, the researcher developed a conceptual framework to empirically test the above-mentioned hypotheses. It is important to note that other factors such as culture and people's attitudes might be fundamental in LED, but discussion of such issues falls outside the scope of this dissertation. Figure 2.18 presents the conceptual framework for this study.

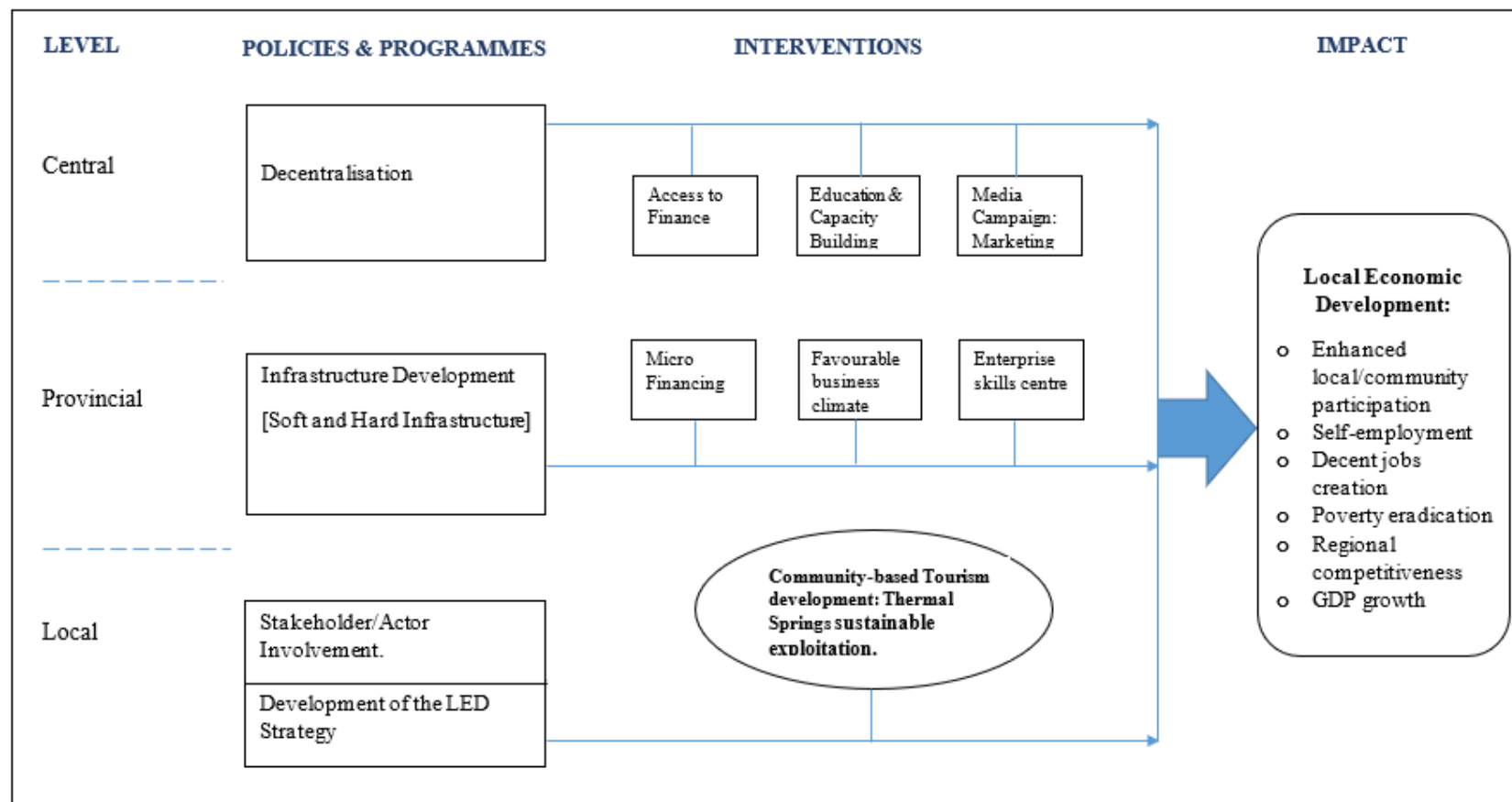


Figure 2.18: Conceptual framework: LED and community-based tourism development (thermal springs sustainable exploitation)

Source: Author's own compilation, 2020.

The conceptual framework in Figure 2.18 illuminates the development of community-based tourism which is derived from the pillars of local economic development. The local citizens or the community forms the centre of any project undertaken in a community. Therefore, community or local participation at the top most levels of Arnstein's (1969), a ladder of citizen participation i.e., partnership, delegated power and citizen control, is of paramount importance, as elaborated in the previous sections of this chapter.

2.21. CONCLUSION

This chapter went back to pre-independence historic times to accentuate the evolution of poverty structures in Zambia. It has reviewed the high poverty levels and inequalities in the country in comparison with other countries in the region. The chapter also reviewed all the national development plans that the Republic of Zambia has implemented since attaining its independence in 1964 and outlined their shortcomings.

Despite a dearth of economic data series in Zambia, the chapter revealed that Zambia's poverty structural challenges date as far back as the pre-independence era. During the pre-independence era, the colonial socio-economic policies that favoured the minority whites alienated the African citizens from benefiting from the booming mining and agricultural sectors of Northern Rhodesia (now Zambia) as they remained exploited through taxation, forced labour and bad agricultural policies. In addition, Zambia's population has also increased approximately six-fold since independence without commensurate robust economic growth as the GDP has only increased from USD3.5 billion to USD26.3 billion (Chikwanda, 2020). The chapter therefore reveals that the growth of the GDP has been inadequate to tackle high levels of poverty in the country.

The post-colonial socio-economic challenges were caused by both external and internal factors. External factors include Southern Rhodesia's Unilateral Declaration of Independence (UDI) and the collapse of copper prices that had glaring negative consequences for Zambia's socio-economic situation. Internal factors included the economic policies adopted by the first Republic which failed to improve livelihoods of Zambian citizens. In addition, most major projects

undertaken within the country prior to 1980 were simply to avert the negative effects of the UDI and had no economic backing, hence they turned out to be white elephants at a great cost to the government of the Republic of Zambia. The structural shocks in the economy during the 1990s, i.e., SAP, privatisation, and liberalisation policies, affected the rising inequality in the country that ultimately exacerbated the poverty levels in Zambia. Simply put, efforts at development of the Republic of Zambia, past and current, remained suboptimal and could not drastically reduce, let alone eradicate, poverty.

The chapter also reviewed some attempts that Zambia has made in local economic development (LED), with special emphasis on the successes and failures.

Furthermore, the chapter delved into the literature concerning sustainable exploitation of cultural and heritage resources – the thermal springs tourism for sustained tourism community-based projects. It further reviewed literature on tourism in general, community-based tourism specifically, and the possible commercialisation models to be employed. The chapter has outlined the process of developing LED strategies that may be useful to Zambian local authorities. In addition, it accentuates that successful LED projects involve a multi-sectorial, multi-level and multi-actor approach embracing community-based organisations, the private sector, the churches, the non-governmental organisations, business associations and unions. The local authorities should be at the centre of LED projects. However, the chapter reveals that without decentralisation of fiscal and political responsibilities, it is difficult for local authorities and countries in general to successfully implement LED strategies. For local authorities to successfully design, plan and implement LED activities, they require powers and authority from the central governments and the full participation of the community down to the lowest level. The chapter argues that decentralisation generally does contribute to poverty reduction and economic growth of a country.

Finally, the chapter built on the literature review to develop a conceptual framework for the study supported by different theories. The chapter has identified various pillars critical for LED at the central, provincial and local government levels. Decentralisation, infrastructure development and designing a LED strategy were

identified as critical in enhancing LED. Further, the chapter emphasised the need for local participation as a cornerstone of successful and sustainable local economic development.

CHAPTER 3

RESEARCH METHODOLOGY

3.1. INTRODUCTION

While Chapter 2 presented a comprehensive literature review and the theoretical framework guiding the study, this chapter (Chapter 3) presents the research methodology used for the purpose of this study. This important chapter puts the study into perspective in terms of the various procedures followed by the researcher to conduct the research (Bryman & Bell, 2015). Crawford (1986 cited in Devi, 2017) posited that research was simply a systematic and refined technique of thinking, application of specialised tools, instruments, and procedures for the purpose of providing solutions to the problem under study. Crawford (1986) contended that research starts with identifying a problem, collection of data or facts, and critical analysis of the data to obtain evidence-based results. Bryman and Bell (2015) define research as a systematic scientific investigation with the purpose of establishing facts and principles and providing solutions to the problem(s) being researched, while Saunders and Thornhill (2012) defined research as a set of activities undertaken to investigate things in a systematic way in order to improve the knowledge of the researcher. Mouly (2012) defined research as a systematic and scholarly application of scientific method, interpreted in its broader sense, to the problems of social studies' problems. However, Robert Rusk, a Scottish educational psychologist, had a different version of the definition of research (Patel, 2017). He defined research as a point of view, an attitude of inquiry or a frame of mind. Robert Rusk asserted that research attempts to solicit for facts and once they have been assembled, the research then analyses them (Patel, 2017). Robert Rusk is supported by James Harvey Robinson, an American historian who also contended that research was a manipulation of things and concepts for the purpose of generalising them (Patel, 2017).

The word “systematic” in the definitions entails that research is a logical process built on a defined set of rules, steps and procedures to be followed strictly by the researcher (Al Kindy, Shah, & Jusoh, 2016). The logical process in research is

followed to achieve results that are accurate and reliable (Al Kindy et al., 2016). The acquisition of knowledge through research responds to the objectives and research questions that demand answers (Saunders & Thornhill, 2012). Research methodology, therefore, gives a broader plan of the research being carried out.

For this study, the ideas and descriptions articulated by Bryman and Bell (2015) and Saunders and Thornhill (2012) were adopted as applicable. This study employed a systematic and scientific methodological approach with the objective of achieving outcomes that provide solutions to the livelihoods of the people in Chinyunyu Village.

The major components of the research methodology are the research design, the target population and sampling with its associated procedures, and the instruments utilised. This chapter covers the steps followed in the collection of data, including the pilot testing of the questionnaire and semi-structured questions. In addition, it discusses the uses of Stata 16.1 to analyse quantitative data.

- **The research “onion” process**

The research “onion” was developed by Mark N.K. Saunders, a professor of Business Research Methods at The School of Management, University of Surrey, and Philip Lewis and Adrian Thornhill, former principal lecturers at Gloucestershire Business School, University of Gloucestershire (Saunders et al., 2003). The research process was developed in 2003 to illustrate different stages that must be covered when formulating an effective methodology (Saunders & Thornhill, 2012). The research “onion” is an effective systematic process through which a research methodology can be designed (Saunders & Thornhill, 2012). Bryman (2012) argued that the research “onion” process was adaptable for any type of research methodology. According to Flick (2011), the research “onion” process permits the researcher to combine quantitative and qualitative research methodologies in a study to achieve a precise set of data. This study followed a mixed methods approach that combined the two research methodologies, hence it adopted the Saunders and Thornhill (2012) research “onion” process as a methodological study design. Saunders and Thornhill (2012) noted that the research “onion” offers more detailed steps of the research process and considered the

research “onion” as the logical unwrapping of an onion layer by layer. Therefore, the inner layer to be seen requires that the outer layer is unwrapped first. Multiple scholars have applied the research “onion” process in various social science studies (Al Kindy et al., 2016; Al Zefeiti & Mohamad, 2015; Giyane et al., 2013; Sanda, Anigbogu, & Molwus, 2019). The scholars cited ease of use and systematic procedure as reasons for adopting the research “onion” process. The research process was said to produce valid and reliable results (Al Kindy et al., 2016; Sanda et al., 2019).

Figure 3.1 shows the research “onion” applied to this study.

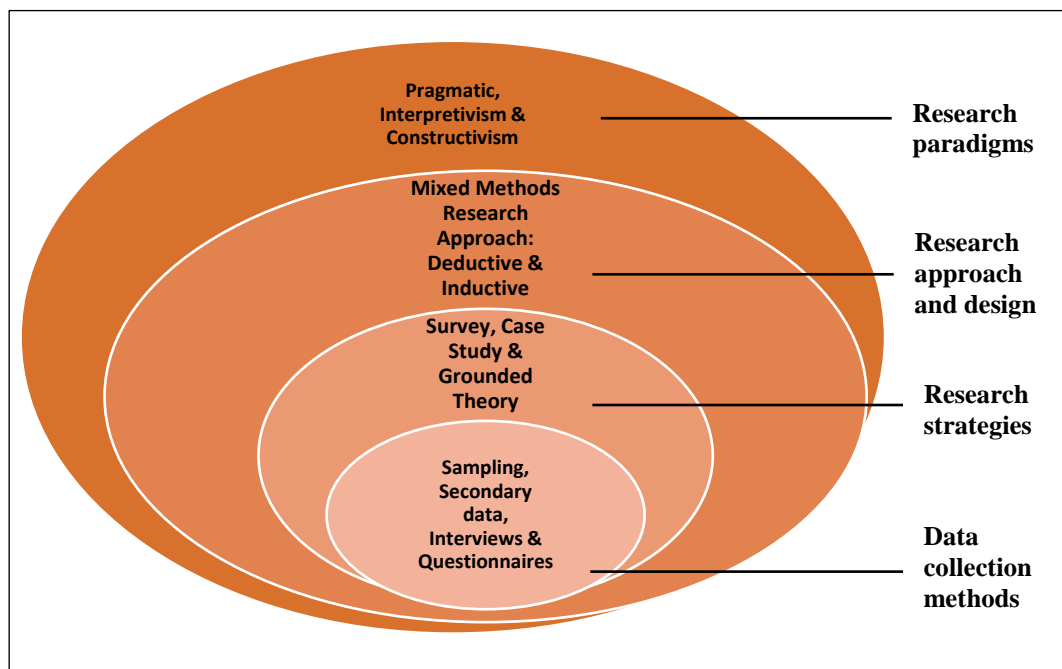


Figure 3.1: The research “onion” process

Source: Adopted and modified from Saunders et al., 2003.

Figure 3.1 shows the different layers of the “onion”. The first layer raises the question of the research philosophy the study adopted. The second layer is the approach the study followed arising from the philosophies or paradigms chosen. The third layer represents the strategies employed to answer the research questions of the study and the last layer depicts the data collection methods used in gathering the data.

3.2. THE RESEARCH PARADIGMS

A paradigm refers to the principles and values, belief system or worldview that underlie the researcher's ontological, epistemological, and methodological assumptions and inform how we undertake a study (Denzin & Lincoln, 2003; Creswell, 2015). It is about what one thinks about the development of knowledge and organises the researcher's observations and makes sense of them (Rubin & Babbie, 2011). It is therefore pertinent for researchers to outline the philosophical and methodological fundamentals their research is based on.

Epistemology is concerned with beliefs that relate to the scope and nature of knowledge, or what constitutes acceptable knowledge in a particular field of study; that is, the types of evidence used to make claims (Creswell, 2015). Ontology, on the other hand, has to do with the nature of being, existence or reality (Creswell, 2015).

This study considered an eclectic approach in adopting the research paradigms. The study employed the *pragmatic, interpretivist, and the constructivist research paradigms*, which resonated well with the aims of research study. The researcher, however, has provided a solid background on various other key paradigms commonly associated with developmental disciplines. The use of multiple research paradigms in this study is consistent with modern studies in the developmental sciences such as Creswell (2015) and Manenzhe (2015), who have professed that a multi-paradigmatic approach is the way to go in modern social and developmental sciences. They have asserted that multi-paradigmatic approaches allow for adoption of systems of interrelated ontological, epistemological and methodological assumptions. These assumptions allow the researcher to show the rationale for the research and to carry out specific data collection methods, observation, and interpretation. Other proponents of this assertion have argued for this approach, since a multi-paradigmatic approach enhances the researcher's understanding of the problem being studied and facilitates effective answers to the research questions (Mafukata, 2012; Manenzhe, 2015). The choice of research paradigms was motivated by the fact that this study is heavily reliant on the combination of qualitative and quantitative methods. In addition, this study involved interactions with various groups and individuals of different levels in society. Therefore, the

multiplicity of paradigms in the study gave the researcher some flexibility in the methods of collecting data that best suited the research problem being investigated.

Below is a review of key research paradigms critical in modern development studies, indicating the choices that were selected for this study.

3.2.1. Pragmatic paradigm

The pragmatic paradigm originated in the early 1870s in the United States by the founding fathers of pragmatism including Charles Sander Peirce, William James, Chauncey Wright, Oliver Wendell Holmes Jr., and Nicholas St. John Green (Walsh & Kaushik, 2019). Over the past century, the paradigm has been popularised by a group of philosophers and sociologists such as George Herbert, Arthur Bentley and Richard Rorty (Walsh & Kaushik, 2019).

The pragmatic paradigm is based on the ‘what’ and ‘how’ of the research problem (Creswell, 2014). It puts the research problem at the centre of the research and employs all relevant approaches to understand the problem (Creswell, 2014). The pragmatic paradigm is considered an ideal paradigm that informs both qualitative and quantitative data collection (Creswell, 2015; Tashakkori & Teddlie, 2003; Somekh & Lewin, 2005). The pragmatic paradigm offers an opportunity to employ multiple methodologies in undertaking a study as well as methods of data collection and analysis in mixed methods studies (Creswell, 2014, 2015). A pragmatic paradigm gives the researcher flexibility to select a methodological approach that best suits his or her particular research problem under investigation. A major linchpin of a pragmatic paradigm is that knowledge and reality are grounded in socially constructed beliefs and habits (Walsh & Kaushik, 2019). Critics of this paradigm such as Thompson (1997) asserted that the problem-centred nature of pragmatism is limited in terms of identifying and analysing the structural social problems. Feilzer (2010) also criticised the paradigm and raised some methodological concerns, for example, how the pragmatic paradigm would measure or observe a research problem that has different layers. However, the pragmatic paradigm has successfully been used in mixed methods research studies (Creswell, 2014, 2015). A strategy to overcome the concerns of the pragmatic paradigm was to employ multiple methodologies (Walsh & Kaushik, 2019). Therefore, the

paradigm fitted well with this study as it employed a mixed methods research approach. To conclude, this study adopted the pragmatic paradigm in studying the Chinyunyu thermal springs in the LED context as it resonated with this particular study. The study considered the experiences of the locals and their views of commercialising the Chinyunyu thermal springs as a potential strategy for local economic development.

3.2.2. Positivist paradigm

The positivist paradigm is popularly used by natural scientists (Saunders et al., 2003). Originally coined by French philosopher Auguste Comte in the early 19th century, positivism aimed at studying society scientifically using the five senses through observation and reason as means of developing concrete knowledge as opposed to using belief or metaphysics (Rubin & Babbie, 2011). This paradigm assumes that society is logical and rational and hence can be studied just like biology or physics. It also assumes that independent facts about an apprehensible reality can be measured quantitatively; that is, researchers are independent of the study where knowledge is developed and verified through measurements or direct observations (Krauss, 2005). The positivist paradigm is applicable when working with observable social reality whose end product is law-like generalisation similar to those produced by social and natural scientists (Saunders et al., 2003). Some contemporary scholars (Gage, 2007; Richards, 2003) have critiqued this paradigm, asserting that it was “naïve” to assume that applying scientific methods to social phenomena could result in developing laws that govern them. Another critique is that humans do not always act rationally and that traditions, loyalty, image and brands caused humans to act irrationally (Rubin & Babbie, 2011). The paradigm insists on a truth that exists outside the individual and therefore lacks subjectivity.

Research in the positivist paradigm places emphasis on a deductive approach in testing theories: where a hypothesis is proposed, then tested using statistical analysis, which is ideal for a quantitative methodology (Krauss, 2005; Rehman & Alharthi, 2016).

The limitation with this type of paradigm is that generalisation in this ever-changing world is normally lost with the passage of time. This approach does not favour the

study at hand, which is more orientated towards the natural sciences rather than the social phenomenon that was studied by this research.

3.2.3. Interpretivist paradigm

The critics of the positivist paradigm employ this type of paradigm, although they are not mutually exclusive. This paradigm is an attempt to address the weakness of the positivist approach. The approach was developed by German philosopher Immanuel Kant in the mid-18th century (Ryan & Sfar-Gandoura, 2018). A positivist paradigm was viewed to be simplistic and not ideal if one wanted to come up with rich insights, especially when analysing a complex social phenomenon (Saunders et al., 2003). The interpretivist approach goes deeper and gains an emphatic understanding of the details being researched to understand the motives and actions of the research participants. An interpretivist preoccupation is to understand people's feelings inside and interpret their lifestyle experiences. Different and inconclusive interpretations are bound to affect the research participants in their actions and the way they interact with others (Saunders et al., 2003). People do not just interact with their environment but also seek to make sense of it through their interpretation of events and the meaning they learn from these. Researchers that adopt this paradigm tend to spend time with the people and observe them in their natural settings for an in-depth understanding of their lives. Such researchers are inextricably attached to their study. Researchers who adopt this paradigm mostly collect qualitative data from the participants over time (Rehman & Alharthi, 2016). The method of collection of data would include semi-structured interviews, filed notes, personal notes, observations, and documents. Critics have posited that the interpretivist epistemology was not likely to yield theories that could be generalised to a larger population (Grix, 2004). In addition, they have argued that by immersing themselves in the participants' natural setting, researchers may lose their objectivity. An interpretivist paradigm may have its limitations; however, a social phenomenon may best be investigated under this paradigm (Rehman & Alharthi, 2016). This study therefore employed the interpretivist paradigm in studying the utilisation of thermal springs in the context of LED. This approach assisted the researcher to understand the social phenomena/ human behaviour (in their daily lives rather than in a controlled environment) in the study area, the Chinyunyu

Village. The method of data collection was mixed, where qualitative data was analysed inductively by means of the thematic approach. For example, the researcher discovered patterns in the data where data was collapsed into broad themes to generate theories.

3.2.4. Constructivist paradigm

Jean Piaget (1896–1980), a Swiss philosopher and epistemologist, is said to be the father of the constructivist paradigm, which he originated in the 1920s (Adom, Yeboah & Ankrah, 2016). The paradigm was later popularised by various scholars such as Jerome Bruner, Lev Vygotsky, and John Dewey in the 1950s (Adom et al., 2016).

A constructivist paradigm asserts that people gain understanding and knowledge of the world through experience (Creswell, 2014). The knowledge is co-created and influenced by the social environment in which people live (Denzin, 2018). The constructivist paradigm therefore focuses on how people create meaning of the world by using a series of individual constructs. In this paradigm, reality is constructed through interacting with people. Researchers that follow this paradigm consider themselves as participants of the study they investigate and thereby they try to understand the research subject instead of explaining it. Through this direct involvement with people being studied, the researcher can observe the research study from the inside of their life setting and understand particular situations or phenomena. It is therefore a cognitive process of being actively engaged with the environment to acquire and test new knowledge (Denzin, 2018). The goal of constructivist researchers is to depend as much as possible on the participants' views of the phenomenon being studied. The constructivist paradigm demonstrates that learning is not only through conventional means such as in schools where instructors stand in front of the class to conduct lectures, but learning occurs when a person discovers knowledge through experimentation and doing (Kalender, 2007). The paradigm borrows heavily from the Chinese philosopher Confucius' maxim: "I hear and I forget. I see and I remember. I do and I understand" (Adom et al., 2016, p. 2). This statement means that 'spoon-fed' students will not grasp the knowledge or concepts taught to them because they easily forget; as such they will

not be able to make constructive contributions or arguments about contemporary life situations. But if the students witness the carrying out of a phenomenon, they can easily remember through the sensory activity of seeing (Adom et al., 2016). The constructivist paradigm therefore believes in hands-on experiences. The constructivist researcher can rely on qualitative research or a combination of both qualitative and quantitative research methods (Knipe & Mackenzie, 2006).

Vygotsky (1962) criticised the constructivist paradigm as being too narrow, specialised, isolated and intrapersonal in standpoint (Liu & Mathews, 2005). The paradigm's assertion that knowledge is not mechanically acquired, but constructed within a constrained learning environment, was said to be subjective (Lui & Mathews, 2005). Furthermore, the paradigm's emphasis on individual or social community as a source of knowledge is said to influence idiosyncratic conclusions (Lui & Mathews, 2005).

However, this paradigm acknowledges that knowledge is acquired through experience, therefore the researcher adopted a co-learning attitude towards the people of Chinyunyu to understand their social, economic, and cultural experiences. This was important for preserving the identity of indigenous local knowledge. Indigenous people possess valuable knowledge that needs to be harnessed to be useful in resolving problems in society. The paradigm enabled the researcher to immerse himself and participate in some of the activities of the local people to gain a feel of the local experience. The researcher also heavily relied on the participants' views on the environment they live in by carefully noting their responses to the open-ended questions posed by the researcher during data collection. Therefore, this paradigm was adopted as appropriate in this research on the Chinyunyu thermal springs as a strategy for LED.

3.2.5. Critical theory

Critical theory was developed from the works of a group of 20th-century authors, notably Max Horkheimer, Theodor Adorno, and Herbert Marcuse, who were part of the Institute of Social Research at the University of Frankfurt in Germany, hence, 'the Frankfurt School' (Rehman & Alharthi, 2016). Critical theorists believe that reality exists that is not part of human thoughts and beliefs (Saunders et al., 2003).

Reality has been moulded by cultural, ethnic, gender, class, education, political and religious factors which coordinate with one another to create a social system (Rehman & Alharti, 2016). In this paradigm, the assumption is that for an object to be researched, it must be affected by the researcher (Rubin & Babbie, 2011). This paradigm is hence subjective. It asserts that social reality is historically created. It is, however, effective in researching cultural, ethnic, gender and political antecedents of situations (Rehman & Alharti, 2016). The paradigm focuses on an oppressed group of individuals and utilises the research procedures to empower them (Rubin & Babbie, 2011). Critical theorists try to bring about positive social and political change that eliminates causes of dominance and alienation. The theory's strength is that it combines theory and practice by empowering and emancipating people from "slavery". Hammersley (1997) criticised the analytical method employed by critical theorists. He argued that their analysis might be distracted by sympathising with the oppressed class. He argued that this would result in partial and judgemental conclusions. The critical theory paradigm has, however, gained dominance by feminist researchers who try to resolve gender-based violence and other kinds of social oppression in society (Rubin & Babbie, 2011). The paradigm was not appropriate for this research on maximising the use of thermal springs in Zambia as it did not resonate well with the research study and therefore was not employed.

3.3. RESEARCH APPROACH AND DESIGN

A research approach describes how the data is collected and analysed (Bryman, 2012; Ritchie, Lewis, Nicholls, & Ormston, 2013). The widely known approaches in social science are the quantitative, qualitative and the mixed methods approaches (Creswell, 2015). These approaches help the researcher decide the appropriate research strategies to adopt in a particular research study. The choice of the approach largely depends on the clarity of the theory at the beginning of the study and to a large extent the paradigm selected for the study (Saunders & Thornhill, 2012). The nature of the research questions and problems of a research study also determines the choice of a research approach that would best address those (Bryman & Bell, 2011). Based on the need to analyse both numeric and qualitative data to have an in-depth understanding of the research study, the researcher opted for a

mixed methods research approach. This approach has been recommended for use in social science studies where only one of the approaches (qualitative or quantitative) is inadequate to achieve the objectives of the study (Creswell, 2014, 2015; Mafukata, 2020; Saunders et al., 2003; Saunders & Thornhill, 2012). Consequently, the study followed both deductive and inductive methods. A deductive method is used for hypothesis development which is subjected to a rigorous test (Sanda et al., 2019). In a deductive method, observations and findings are the outcome of research (Rubin & Babbie, 2011). The method begins with a theory and derives hypotheses from the theory for testing (Rubin & Babbie, 2011). It involves a testable proposition about the relationship between two or more variables; testing the hypothesis, and examining the outcome (Saunders & Thornhill, 2012). The outcome could either confirm the theory or suggest the need for modifications. The study on maximising the use of thermal springs collected a set of quantitative data through the administration of questionnaires that needed to be analysed deductively. It also formulated some hypotheses derived from the LED theories that needed to be tested for confirmation or rejection. Therefore, the deductive approach was appropriate for this study.

An inductive method focuses on why something is happening (Saunders et al., 2003). The induction method helps researchers gain in-depth understanding of the meanings humans attach to events (Bryman & Bell, 2011; Saunders et al., 2003). Therefore, the theory is the outcome of the research in the inductive approach (Creswell, 2015; Zikmund, Babin, Carr, & Griffin, 2013). Rubin and Babbie (2011) have however asserted that both the deductive and inductive methods lead to construction of social theories. An inductive method is commonly used in qualitative studies (Flick, 2011). This study generated a component of qualitative data that needed to be analysed inductively, and therefore an inductive approach was also adopted in this thesis. These research approaches are discussed separately below to clarify the choice of the mixed methods approach for this study.

3.3.1. Quantitative research approach

Paul Felix Lazarsfeld was the founding father of quantitative research (Fleck, 2014). He founded modern research surveys using statistical survey analysis, panel

methods, and contextual analysis. Lazarsfeld conducted the first ever research survey in the early 1930s when he was analysing the high unemployment rate in a small industrial town near Vienna, Austria. Following his study, Lazarsfeld published a paper that used the quantitative research approach in which he transformed qualitative data into quantitative analysis (Fleck, 2014). Quantitative research became more popular in the mid-20th century when social researchers realised that the method yielded more generalisable conclusions (Bryman & Bell, 2011). Quantitative research is an approach where objective theories are tested through examination of the relationship among variables (Creswell, 2014). These variables, in turn, are measurable, typically on instruments that allow the numbered data to be analysed using some statistical procedures (Creswell, 2015). Zikmund et al. (2013) defined quantitative research as a social science research approach that addresses research objectives through empirical assessments that involve numerical measurement and analysis approaches. Quantitative research is more apt to stand on its own in the sense that it requires less interpretation (Zikmund et al., 2013). Quantitative researchers spend their time to measure concepts using scales that either indirectly or directly provide numeric values. The numeric values are in turn used in statistical software to undertake different computations and to test various hypotheses.

Rubin and Babbie (2011, p. 67) posited that “quantitative research emphasises objective measurements and the statistical, mathematical, or numerical analysis of data collected through questionnaires, polls and surveys, or by manipulating pre-existing statistical data using computational techniques”. Quantitative research involves putting together numerical data and therefore generalising it across groups of people or to explain and clarify a particular situation. Creswell (2014) defined quantitative research as an approach where objective theories are tested through examination of the relationship among variables. These variables, in turn, are measurable, typically on instruments that allow the numbered data to be analysed using some statistical procedures. Quantitative researchers have assumptions about testing theories deductively, putting in place protections against bias, controlling for alternative explanations, and can generalise and replicate the findings (Creswell, 2014).

The objective of conducting a quantitative research study is normally to determine the relationship between different variables, otherwise known as an independent variable and the dependent or outcome variable within a population. Babbie (2010) further described quantitative research designs as being either descriptive or experimental. Being descriptive means that subjects are usually measured once, whereas being experimental means that subjects are measured before and after a treatment. A descriptive study will only establish associations between variables, whereas an experimental study would establish causality. This study on the Chinyunyu thermal springs as an input for LED had a descriptive component as it sought to establish the association or the relationship of a number of variables tested. A quantitative approach is generally designed to provide data summaries that could be generalised about the phenomenon that is being researched and uses some prescribed procedures and processes that give the research the needed validity and reliability. The results of this study are meant to be generalised to other rural areas in Zambia with similar heritage resources in their localities. The other intriguing feature about using a quantitative approach is that it avoids biasness by keeping the participants at an arm's length. Research on this issue entails finding out something new or searching for pertinent information on a specific topic. For this study, the variables selected to assist the analysis are shown in Table 3.1.

Table 3.1: Definitions of variables

Variable label	Variable definition
LED	A categorical variable measuring the participant's perception indicating whether a local economic development ¹ model is a suitable and effective model for the development of the Chinyunyu Village (1 = strongly disagree, 2 = disagree, 3 = don't know, 4 = agree, 5= strongly agree).
Age	Continuous variable indicating the chronological age of the respondents, i.e., age of the i-th individual.
Gender	Gender of the i-th individual (1=Female, 0 = Male).
Schooling	The number of years of schooling completed by the i-th individual. ²
Infrastructure	Perception variable indicating whether infrastructure development can contribute to LED of Chinyunyu Village (1 = Yes, 0 = Otherwise).
Participation	Perception variable indicating whether community actors' participation in decision making of the Chinyunyu Village can contribute to LED of Chinyunyu Village (1 = Yes, 0 = Otherwise).
Decentralisation	Perception variable indicating whether devolvement of power/ decision making to the local municipal level can contribute to LED of Chinyunyu Village (1 = Yes, 0 = Otherwise).
Hot springs/ thermal spring	Perception variable indicating whether maximising the use of the thermal springs/hot springs can contribute to LED of Chinyunyu Village (1 = Yes, 0 = Otherwise).
Log_Income	Logarithm of the monthly income of the i-th individual.
Household	Household size of the i-th individual

Source: Author's own compilation.

¹ Local economic development was well defined and demystified in the questionnaire.

² The study adopted the use of schooling years following other studies on development (i.e. Sonobe & Otsuka, 2014).

3.3.2. Qualitative research approach

Qualitative research involves a range of philosophies, research designs and techniques that are specific, such as in-depth qualitative interviews, focus groups, document analyses, participant and non-participant observation, among others (Pope & Mays, 2006). Qualitative research emerged in the 20th century when psychoanalysis became influential in the commercial world (Bailey, 2014). Paul Felix Lazarsfeld, an Austrian American sociologist, is believed to be the father of qualitative research following the publication of his article on psychology in the Harvard Business Review in 1934 (Schwarzkopf & Gries, 2010). Lazarsfeld used qualitative research to interpret human behaviour. He introduced group discussions and unstructured interviews that are now commonly used in qualitative research. Lazarsfeld's student, Ernest Ditcher, an American psychologist, popularised qualitative research which he used to study consumer behaviour in a marketplace – the “freud of supermarket age” (Horowitz, 2010). Ernest Ditcher became the great populariser of motivational research (Schwarzkopf & Gries, 2010).

Qualitative market research rapidly expanded in the 1980s when most research companies adopted the approach (Bailey, 2014). Bryman (2012) defined qualitative research as a type of empirical research whose data is devoid of numbers. However, it must be noted that some qualitative research usually uses some form of quantification, but statistical forms of analysis are not seen as central. Therefore, this should not be taken as a mixed methods research approach (Creswell, 2015). Most importantly, the findings of qualitative research are not arrived at by statistical or other quantitative procedures. Zikmund et al. (2013, p. 132) defined qualitative research as “a research that addresses research objectives and employs techniques that allow the researcher to develop elaborate interpretations of market phenomena with no dependence on numerical measurements”. Zikmund et al. (2013) posited that the focus of qualitative research is on discovering true inner meanings and new insights. Creswell (2014) defines qualitative research as an approach for exploring and understanding the meaning individuals or groups ascribe to a social or human problem. Here the research process involves emerging questions and procedures, data that is collected in the natural setting of the participant, analysis of data in an inductive way that is built from particulars to general themes, and eventually, the

researcher is expected to make interpretations of what the data means. Researchers who normally use this type of inquiry follow a way of looking at research that brings out an inductive style, a focusing on individual meaning and the essence of giving the complexity of a situation. Qualitative researchers study things in their natural settings, they attempt to make sense of, or interpret, phenomena regarding the meanings that people bring to the researchers (Zikmund et al., 2013). This was one of the rationales in this research for using a qualitative research approach as part of the research approach since the researcher wanted to understand the attitudes and behaviours of the members of the community in Chinyunyu Village – within their natural setting. The qualitative approach phase involved the use and collection of a variety of empirical materials that included: life stories, personal experiences, semi-structured interviews with key interview informants, introspective, historical data, interactional, observational, and visual texts that normally happen daily. One of the advantages of using qualitative research is its flexibility and openness in the methods applied (Rubin & Babbie, 2011). It also aims at providing an in-depth and interpretative understanding of social phenomena by learning about the social and material circumstances which people face. Pope and Mays (2006) weighed in on this discourse and described that qualitative research involves a range of philosophies, research designs and techniques that are specific, such as in-depth qualitative interviews; focus groups; document analyses; participant and non-participant observation; and several other methods collecting data. Besides these categories of data types, there are additional wide methodological and theoretical approaches to study design and data analysis. These would include approaches such as phenomenology; ethnography; grounded theory; action research; and case studies, among others.

Qualitative research also has the ability to analyse and offer complex textual descriptions of people's experience on a specific research issue (Zikmund et al., 2013). Information on the "human" side of an issue can be detected. These would include contradictory behaviours, beliefs, relationships of individuals and emotions. Qualitative research is also applicable when one wants to identify intangible factors such as social norms, gender roles, socio-economic status and religion, whose role in the research issue may not be readily apparent. Qualitative

methods normally produce rich, detailed data that in turn even becomes beneficial to the participants of the study in the form of a greater understanding of the research study that is being undertaken. The researcher established rapport with the participants (and respondents) and clearly explained the objectives of the study which the participants themselves started appreciating after the direct interactions. By infusing the qualitative approach aspect in the researcher's methodology, the researcher was able to pioneer new ways of understanding challenges faced by the local community in Chinyunyu. The researcher was also able to respond to changes that occurred during conducting the interviews, in that new issues arose apart from the structured questions that were prepared. This enabled the researcher more flexibility in handling the topic at hand in a more holistic approach.

3.3.3. Mixed methods research approach

As explained in the preceding paragraphs, the researcher combined the two research approaches in his study and adopted what is known as a mixed methods research approach (MMR). Creswell (2015, p. 2) defines mixed methods research as “an approach to inquiry that combines collection of both quantitative (closed-ended) and qualitative (open-ended) data, integrating the two forms of data, then draws interpretations based on the combined strengths of both sets of data to understand research problems”. The understanding of this form of research method is that integrating the qualitative and quantitative approaches where the researcher displays statistical trends with stories and personal experiences gives a more complete understanding of a research problem unlike just using either approach alone. Scholars of development studies have used the MMR approach with success (Mafukata, 2012, 2020; Manenzhe, 2015). The researcher adopted the MMR approach in undertaking this study on maximising the use of thermal springs as a LED strategy for rural Zambia. The choice was motivated by the need to compare and validate the data from two different perspectives and the need to generalise the findings of the research to other areas with similar heritage resources. Data limitations on the study of thermal springs as a LED strategy in Zambia prompted the researcher to obtain a more comprehensive view on the research study and to integrate the qualitative approach where theories were derived from the data collected in Chinyunyu. The research also provided a platform for the people of

Chinyunyu to air some socio-economic challenges they face, allowing the community members to own the research outcomes, as it were. The MMR approach was also instrumental in assisting the researcher to capture the various participants' perspectives on using the thermal springs for a community-based tourism project. Mertens (2009) posited that MMR is a participatory approach that reflects participants' point of view by giving them a voice and ensure that the findings of the study are grounded in participants' experiences.

The MMR approach allowed the researcher some flexibility where data collected from either approach was able to corroborate findings from the other. This allowed the researcher a more detailed understanding of the data collected to tell a complete story. The use of MMR was further necessitated by the fact that the research study required several methods of data collection to achieve the desired results. The MMR enabled the researcher to answer questions pertaining to 'where', 'how' and 'who' (qualitative approach) and also to answer questions of 'why' and 'how', following a quantitative approach. As Creswell (2014) puts it, the main intention of utilising the MMR is to maintain the strengths and ameliorate the weaknesses that appear in both designs. This in turn increases the trustworthiness of the collected data and research results. However, the MMR was quite complex to plan, time consuming, and required more resources. It also required that my research assistants needed to have some basic understanding of both methods.

Creswell (2014, 2015) emphasised that an MMR approach is not simply collection and presentation of qualitative and quantitative data but goes beyond this to the integration of both data sets. He outlined the three basic method designs of MMR namely: *a convergent design*, where two data sets from the quantitative and qualitative data sets are collected, analysed and merged with the purpose of comparing the results; *an explanatory sequential design*, where the researcher first employs the quantitative approach followed by the qualitative approach to assist in explaining the quantitative results in depth; *an exploratory sequential design*, where the researcher first explores the problem by using the qualitative approach followed by the use of qualitative findings to build a second phase of the quantitative study.

A convergent design was found to be more appropriate for this study as it was easier to integrate the data collection and analysis of the study to come up with a richer result. Figure 3.2 is a simple schematic diagram explaining the sequence followed by the researcher.

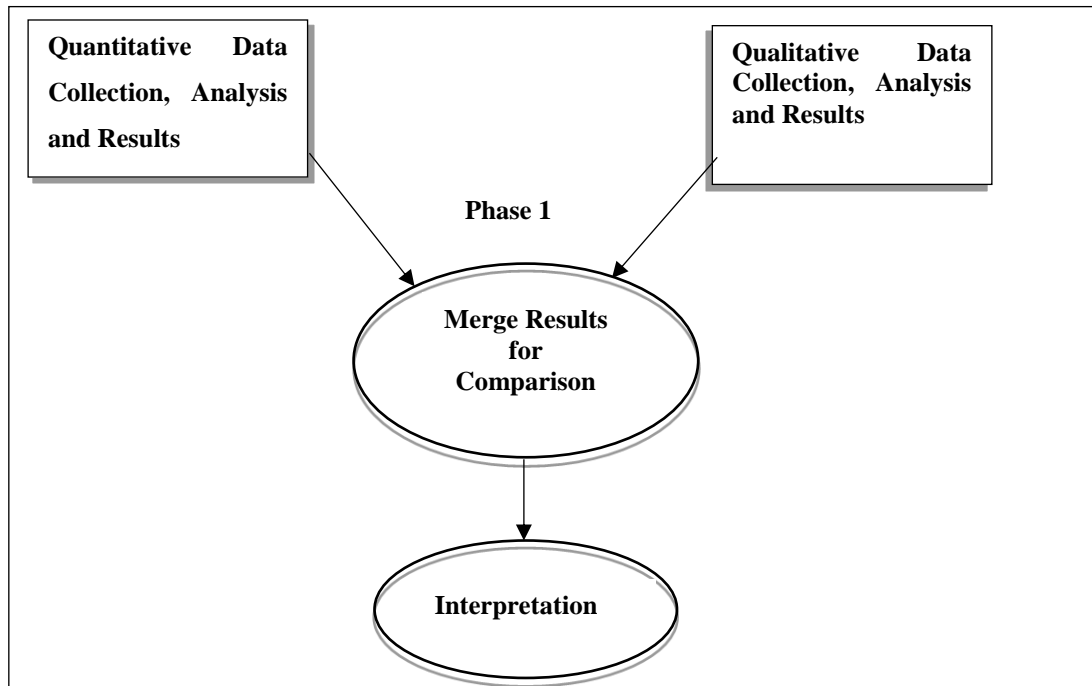


Figure 3.2: The mixed methods research approach – convergent design

Source: Adopted from Creswell, 2015.

As depicted in Figure 3.2, the convergent design’s intent is to merge results of the two data analyses from the quantitative and qualitative approaches. The merging then gives a wider and insightful picture of the problem at hand, seeing it from multiple angles and perspectives. This combination not only added to more data in this field of study but also provided a better instrument to display complete understanding of the problem being studied.

The researcher therefore decided to combine the two methodologies to arrive at the results presented in this dissertation with a clearer perspective.

3.4. RESEARCH STRATEGY

This being an MMR study, the researcher considered strategies that were appropriate for a combination of quantitative and qualitative methods. The

researcher employed a survey and grounded theory strategies in the study of thermal springs as a LED strategy for the Chinyunyu Village. The strategies are explained in detail below.

3.4.1. Survey

A survey is a strategy associated with the quantitative approach (Saunders et al., 2003). A survey strategy allows the researcher to collect a large amount of data from a sizeable population. The collection of data is done in a more economical manner mainly through the use of questionnaires. The researcher administered questionnaires and gathered data by targeting respondents who were deemed to have the desired information.

3.4.2. Case study

Yin (2014) defines case study research “as an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used” (p. 16). Case studies are believed to have been conducted as early as the 19th century (Flyvbjerg, 2011). Pierre Guillaume Frédéric Le Play, a French economist, engineer, and sociologist, is believed to have been the first person to conduct case studies in his study of family budgeting (Freemantle, 2017). Case studies became common in anthropology and social sciences research studies in the 20th century when detailed studies were conducted on individuals and culture using this design (Simons, 2009; Stewart, 2014). People's lives and experiences were investigated in their natural setting by anthropologists and sociologists to gain an understanding of the social and cultural context of their world (Simons, 2009). Silverman (2013) argued that the case study could establish the significance of cultural and contextual factors in differences between cases being studied (Silverman, 2013). The case study of Chinyunyu thermal springs involved socio-cultural imperatives that needed to be incorporated throughout the study. This research design therefore gave the researcher an opportunity to gain in-depth understanding of the different cultural issues within Chinyunyu Village.

The case study research design has undergone tremendous developments in the last forty years. The development was motivated by the need to gain a more

comprehensive in-depth understanding of issues across various disciplines (Freemantle, 2017). Barney Glaser and Anselm Strauss are some of the scholars who popularised the case study design through their grounded theory methodology paper (Glaser & Strauss, 1967; Harrison et al., 2017). Glaser and Strauss (1967) developed grounded theory methodology following critiques that a case study research design was unable to support generalisability of results and therefore had limited validity (Johnson & Turner, 2003). The grounded theory methodology addressed the limitations of the case study design by merging the qualitative and quantitative field study methods (Johnson & Turner, 2003). Numerous scholars have since embraced case study design in their research studies (Creswell, 2014; Flyvbjerg, 2011; George & Bennett, 2005; Merriam, 2009; Simons, 2009; Stake, 2006; Yin, 2014). Empirical studies have used case studies to investigate the economic values of thermal springs as an input to LED (Hoole, 2000; Kapasa, 2014; Tshibalo, 2011, Olivier & Jonker, 2013).

The case study design is relevant when a research study is exploratory in nature; when the “how” and “why” questions are posed to the research participants (Yin, 2014). This particular study was exploratory, where the interview participants were asked “how” questions. The author intended to generate ideas from the participants in relation to how the Chinyunyu thermal springs could be commercialised and used as an economic input to the LED efforts of the municipality. The case study design was thus appropriate.

3.4.3. Grounded theory

The paucity of data on LED and thermal springs in Zambia and the need to collect comprehensive qualitative data motivated the researcher to apply the grounded theory strategy. Grounded theory, a term coined by Glaser and Strauss (1967), is a qualitative research methodology designed to build an explanation or to generate a theory around the main theme derived from the data collected (Saunders et al., 2003). In this strategy, the researcher interrogates the information provided by the research participants or obtained from historical records (Zikmund et al., 2013). The researcher poses these questions to himself or herself repeatedly to drive a better understanding. Grounded theory is a bottom-up inductive approach of

understanding a social phenomenon. It follows a structured and systematic way of analysis. Grounded theory begins with observations and looks for patterns, themes, or common categories (Rubin & Babbie, 2011). Grounded theory makes constant comparisons, then, once the researcher detects some inductive observations, they develop concepts and working hypotheses based on those patterns. More cases are then sought through observations and are then compared with concepts and hypotheses developed from earlier observations. If there are no more new insights being generated from a similar case, the researcher selects a different type of case, and the process is repeated until all the cases are exhausted, reaching a saturation level. Grounded theory strategy was especially helpful as it enabled the researcher to analyse the data while collecting it, concurrently, thereby allowing him to adjust the methodology in response to the set objectives of the research study. Traditional grounded theory is devoid of reviewing any of the existing literature of the study area (Mills, Bonner & Francis, 2006). It asserts that is done to avoid researcher bias from pre-conceived views developed prior to the field research. However, this research utilised a more flexible variation that allowed for a significant amount of literature review that helped in designing the research process (Strauss & Corbin, 1998) and increased understanding of the different perspectives and experiences.

3.5. STUDY SETTING, STUDY POPULATION, SAMPLING AND SAMPLE SIZE

This sub-section presents the study setting, study population, sampling, and sample size.

3.5.1. Study setting

The study was conducted in Chinyunyu Village, located in Rufunsa District. The map in Figure 3.3 below shows the location of Chinyunyu Village in the Rufunsa District.

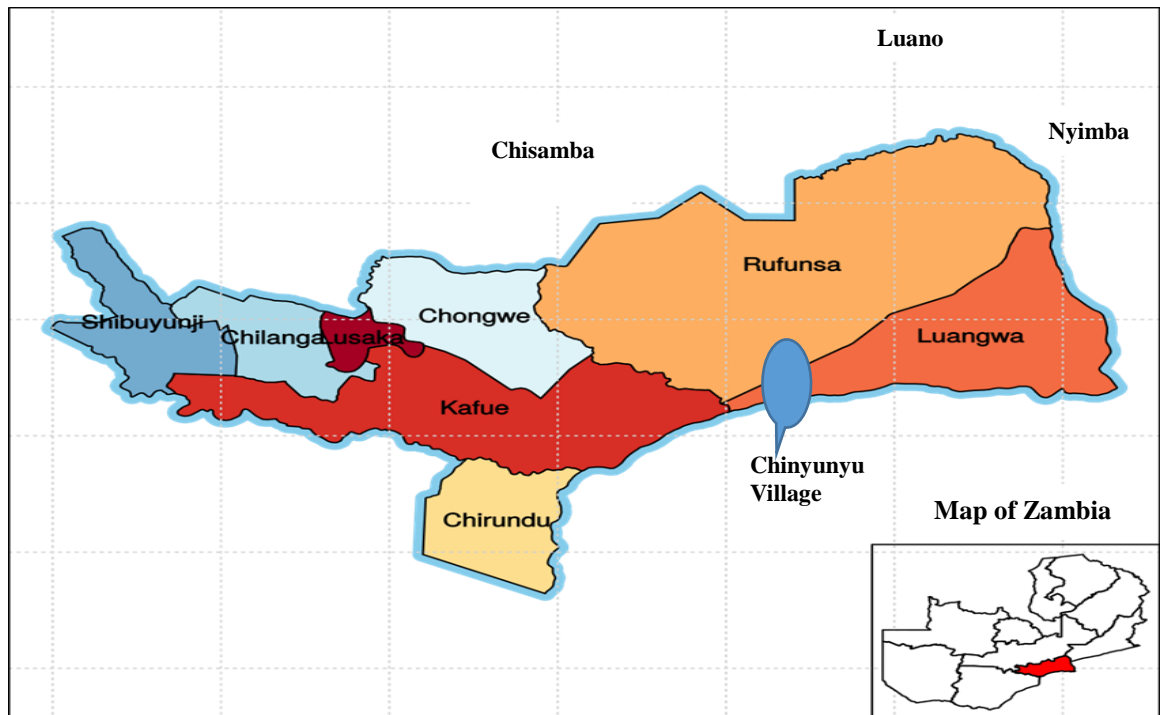


Figure 3.3: Location of Chinyunyu Village

Source: Lusaka Administrative Office, 2019.

The study area is geographically located some 80 kms from Lusaka central business area, along one of the main highways in Zambia, the Great East Road. It shares its borders with Chongwe District to the west and Luano and Chisamba Districts on its northern border, with Luangwa and Nyimba Districts to the east. It covers an area of approximately 7,500 square kilometres.

Rufunsa was declared a district in 2012. Until its declaration, Rufunsa was a satellite office for Chongwe Municipal Council. It draws its name from the Rufunsa Stream that runs in some parts of the district. The district has one constituency and 10 wards. This entails that there is one elected area member of parliament, one council chairperson and 10 elected councillors. There are three chiefdoms in Rufunsa District, namely Mpanshya, Shikabeta and Bunda-Bunda. These are assisted by headmen and women in various villages who act as arbitrators. Chinyunyu Village, where the thermal springs are located, falls under Chief Bunda-Bunda.

The local settlers in Chinyunyu Village are the remnants of the Soli people who are the indigenous settlers (Simbao, 2014). Most residents of Chinyunyu Village are

unemployed and poor (Simbao, 2014). The main source of livelihood in the village is small-scale informal mixed-systems agriculture and remittances from other household members engaged in various forms of economic activities outside the district – especially from the capital Lusaka. Rufunsa district is one of the poorest districts in Zambia, with poverty levels at around 79 percent (De la Fuente et al., 2015). The locals can be described as the working poor, meaning persons that are engaged in the labour force but do not earn enough income to bring them out of poverty.

3.5.2. Study population

The study was conducted in the population of Chinyunyu Village located in Rufunsa district. According to the data from the World Population Review, Rufunsa district has a population of approximately 100,000 inhabitants (WPR, 2021). Of these, 50.6 percent are males while 49.4 percent are females. Chinyunyu Village has a population of approximately 20,000 inhabitants (WPR, 2021). This study considered the actual population of Chinyunyu Village as its population proportion. A population is the universe of units from which the sample is to be selected.

3.5.3. Sampling and sample size

Researchers use samples to undertake various studies as opposed to the entire population, which may in certain instances prove to be very time consuming, costly, or even impossible (Bryman & Bell, 2011). To make the findings of a research more general, it is important that the sample is representative of the population (Moser & Kalton, 2001). Sampling allows the researcher to collect data in a smaller quantity which is representative of the population. Researchers undertake the sampling procedure for many reasons. Cooper and Schindler (2006) outlined the main reasons as cost minimisation of the study, data collection expedition; and allowing for more accurate outcomes. Saunders and Thornhill (2012) added that the sampling process allows the researcher to obtain more detailed data from difficult research settings. This study opted to adopt the sampling procedure as Chinyunyu Village is deep rooted with multi-cultural issues that can be difficult for data collection.

Being a mixed methods analysis, this study needed to select a sample that would produce both quantitative and qualitative data. Therefore, quantitative data was

collected from the members of the community or local participants through the questionnaires that were administered to them. The quantitative data was obtained from the key interview informants (KIIs), the focus group discussions (FGDs), and participant observation.

The researcher approached the local municipality offices to request a list of micro enterprises, retail shops, faith-based organisations, civil society organisations, community-funded schools, government schools, clinics, members of the small business association, the political leadership, and the traditional leaders. This formed part of the researcher's sampling framework from which a sample was purposively selected. The rationale was to select a sample of local community members, some of whom serve in various ward developmental committees, and select individuals who fitted the profile of the people relevant to the study.

In selecting the sample size, the researcher was guided by the Taro Yamane (1967) formula for determining sample sizes. According to Yamane (1967), if the population proportion parameter is N , level of precision, e , for a 95% confidence level ($e = 0.05$), the sample size, n , can be calculated from a population of 20,000, using the following formula:

$$n = \frac{N}{1+N(e)^2} = \frac{20000}{1+20000(0.05)^2} = 392$$

The formula provided a guide for the target sample size which was 392 respondents. However, the researcher collected data from 139 participants to strike a balance between the time constraints and cost associated with this larger sample size. This sample size was sufficient to trigger the saturation of data collected (Creswell, 2015). Therefore, it can be said that with a lower sample size than the Yamane formula, the data collected achieved its intended purpose. In addition, the population proportion of Chinyunyu Village was assumed to be homogenous and thus the number of variations in the participants' responses was minimal and did not necessitate a very large sample size.

Purposive sampling was used in this research. This is a non-probability sampling method also known as judgemental sampling, which is based on the judgement of the researcher regarding the characteristics of a representative sample (Saunders et

al., 2003). The sampling method was selected to produce a sample that could be logically assumed to represent the population. The researcher wanted to select participants intentionally who had a basic knowledge of the topic of the research study; that is, knowledge of the needs of the people of Chinyunyu Village, and who had suggestions on how the use of the thermal springs could be optimised to better their standard of living. The selection was further motivated by the fact that the two research assistants/enumerators had a good knowledge of the population being studied and were able to guide on the selection of the target sample. The availability of the participants was the other motivation for selecting a purposive sampling method. However, it is important to acknowledge the possibility of selection bias in our sample. For example, it is possible that our sample could have left out the more capable individuals because they might have much busier schedules and would therefore have been unable to participate in the interviews. Therefore, several measures were attempted to mitigate this problem and increase the validity/credibility and reliability/dependability of the survey responses and the interviews. First, similar questions were asked of all the participants to check the consistency and accuracy of their responses. Second, interviews were conducted in a discussion style to allow respondents to supply proof of the existing situation. This allowed the researcher to probe where the response was unclear. Third, this study, being a mixed methods research study and using a variety of data collection methods, otherwise known as triangulation, assisted in increasing the trustworthiness of the results (Rubin & Babbie, 2011; Saunders et al., 2003). Lastly, although the selection was purposive, participation was voluntary, and each participant was free to change interview appointments and the respondents to the questionnaires were free to participate or not. Furthermore, the confidentiality of collected information was guaranteed.

3.6. DATA COLLECTION METHODS AND PROCEDURE

Data collection tools were selected to satisfy both the quantitative and qualitative aspects of the research. The data collection tools employed in the research study are discussed below.

3.6.1. Secondary data sources

Published books and articles were especially useful in gathering the literature review for this study. This was useful in gathering historical data regarding the socio-economic trends in Zambia, comparisons of other models of developing the thermal springs especially in Africa, and the local economic development status of implementation in Zambia. Government documents, pieces of legislation, policy documents, newspaper cuttings, and social media articles were also critical in arriving at a broader view of the issues under discussion.

3.6.2. Primary data sources

Unlike the secondary data, the primary data involved collection of data by the researcher directly from the participants and respondents. The following primary data collection tools were used:

- **Questionnaires:** The researcher designed and administered questionnaires to capture the quantitative data in Chinyunyu Village (Annexure I). Questionnaires were chosen as they were seen to be easily understood by the respondents. It was also easy for the researcher to control the research process with the use of questionnaires. However, it was difficult in some cases to receive back the questionnaires as some respondents opted to complete them at their own pace. To mitigate this difficulty, as guided by Saunders and Thornhill (2012) and Bryman (2012), the research assistants were asked to visit the respondents to remind them to respond to the questionnaires, despite an added cost associated with this activity. This approach produced a response rate of above 98 percent. Research assistants were recruited from within Chinyunyu Village and were familiar with some respondents, which made it much easier for the process of collecting responses.
- **Semi-structured interviews:** Unlike structured interviews that are based on a predetermined and standardised set of questions, semi-structured interviews can vary from interview to interview and are guided by a list of themes and key questions (Saunders et al., 2003). This allowed for flexibility and openness which encouraged informants to express their views freely and in their own terms. One-on-one key informant interviews (KIIs) were arranged

with the purposively selected key informants of the research. The KIIs were useful because they provided a platform for face-to-face encounters that led to better understanding of the informants' perspectives on their experiences or situations and local issues. Interviews also gave an opportunity for the researcher to clarify questions to the informants in an elaborative manner. The KIIs were guided by the interview guides that were prepared ahead of time (see Annexures II to V).

- **Focus group discussions (FGDs):** Focus groups, also called group interviewing, refer to interviews that allow the researcher to question several individuals in a systematic and simultaneous manner (Zikmund et al., 2013). FGDs are among the most accepted data collection techniques for qualitative research that entirely rely on the discussion of group members to produce data (Weeden, 2005). FGDs normally use open questions to ask the participants regarding a specific situation or an event that is relevant to them and at the same time ask questions that are of interest to the researcher. Strictly adhering to the COVID-19 set regulations and the UNISA ethical issues, the researcher used the FGDs because he wanted to obtain in-depth and specific issues for use in the research study. Further, with the assistance of the local community, it was easy to identify willing and available participants for the FGDs with no incentives or cost attached. The FGDs were guided by an FGD interview guide (see Annexure VI).
- **Transect walk:** A transect walk and field work assisted the researcher to collect archaeological evidence regarding the thermal springs although for the purpose of this study the researcher did not intend to undertake any archaeological excavations on the sites. Transect walks have been used recently by other scholars to collect data (Mafukata, 2020). The transect walk within Chinyunyu Village also assisted to collect additional data on the locals' lifestyles and livelihood through informal conversations with the locals. In addition, the researcher had to familiarise himself with the familiar local words used in Chinyunyu Village which were critical in collection of data for analysis. For example, the name "Chinyunyu thermal spring" will not be recognised by the indigenous people unless one uses its local name,

“*kalungula*”. Data collected from the transect walk was recorded as field notes. The transect walk furthermore enabled the researcher to observe aspects of socio-economic infrastructure such as the inner roads, energy infrastructure, telecommunications, schools, and health facilities in the area.

3.6.3. Sampling frame and sample selection

The research employed the following sample frame and selection:

- **Preliminary survey:** The researcher conducted a preliminary field study in October 2020. This was undertaken to first seek expert opinion regarding the implementation of LED in Zambia and the use of thermal springs. Secondly, the field study was aimed at building rapport with the officials that manage the Chinyunyu thermal springs (the gatekeepers) and to explore the feasibility of conducting an actual survey in the Chinyunyu Village. Most importantly, as a matter of protocol and showing respect to the locals, the researcher sought permission from Chief Bunda-Bunda, the traditional leader in the local area. Although the researcher did not physically meet with the Chief, a representative of the Chief was met, Headwoman Hildah Shangobeka. The researcher explained his intentions to the Headwoman and its expected duration. The researcher was formally welcomed to conduct the research and interact with the locals in the chiefdom. The Headwoman informed the researcher that the chiefdom was open to render any assistance he would need for the research study. The Chiefdom was grateful that the researcher had taken the initiative to meet with them and explain his objectives.

The researcher was also able to meet with officials from the National Heritage Conservation Commission (NHCC) and the Ministry of Local Government officials. In addition, the researcher was able to interact with some representatives of the informal sector in Chinyunyu, mainly the people who own small retail shops (kiosks). These interactions assisted the researcher to adjust the questionnaires and the interview guides to align them with the real-life situation on the ground that would generate rich data.

- **Survey:** The questionnaire was amended to include issues that arose from the preliminary survey. The survey enabled the researcher to capture quantitative

data. The use of the survey provided a snapshot analysis sufficient to study and interpret the existing situation in Chinyunyu. To ensure quality data was collected, firstly, the researcher conducted a pilot survey (pre-testing) with the senior officers from the Lusaka City Council, Rufunsa Town Council and Masaiti Town Council (Rural Northern part of Zambia). Nine participants were selected, chosen from the planning departments of the three local authorities, a department in charge of LED implementation. Participants gave their opinion on content of the questions in the questionnaire to highlight areas that were unclear to them. Pilot surveys are important to gauge whether the respondents interpret the questions as they are intended to be interpreted by the researcher (Cooper & Schindler, 2006; Rubin & Babbie, 2011). Validity of quantitative data depends on how the questions are structured (Collis & Hussey, 2003). The outcomes of the pilot surveys were used to amend the questionnaires. The pilot survey also allowed the researcher to approximate how long it would take to answer a questionnaire. Secondly the researcher hired two experienced enumerators (research assistants) with good knowledge of the local socio-economic and cultural situation of Chinyunyu Village. The confidentiality forms were duly signed before the enumerators could commence the survey. Further, the ethics for the study were shared with the enumerators and the researcher undertook a full day's training session for the enumerators on the administration of questionnaires, practices, and nature of the study. The questionnaire contained both closed and open-ended questions as well as Likert-scale questions. The data set was divided into four sections: first, respondent characteristics, which included socio-demographic data such as gender, age, level of education, profession, their source of income and household size of the participants. The second part aimed at obtaining data regarding the participants' perceptions on poverty and unemployment levels in Chinyunyu Village; the third part was wholly dedicated to suggestions for maximising the use of the Chinyunyu thermal springs; and the fourth part aimed at gauging the local economic development involvement of the community actors in Chinyunyu in identification, formulation and implementation of local projects in Chinyunyu Village.

Local participants/ community members of a sample size of 120 (n=120) were purposively selected from the list obtained from the municipal council for a survey. Two (2) respondents from the 120 selected failed to respond to the questionnaires and were replaced by two other respondents. The questionnaires were designed not to take much of the time of the respondents. An average time of 15 minutes was estimated for completing the questionnaire. The administration of questionnaires was done from October to December 2020. Cross-sectional data collected from the survey were cleaned, coded and entered into Stata 16.1 software for analysis. Cross-sectional data, unlike time series data that includes observations over a time period, is data on one or more variables at a single point in time (Creswell, 2014). Panel data, on the other hand, is a combination of elements of cross-sectional and time series data. The researcher and his assistants were somehow lucky in that not much research activities had been undertaken in this rural setting, so the issue of research fatigue that is normally exhibited by the respondents in similar research was not directly observed.

- **Focus group discussions:** Two focus group discussions (FGDs) were held at the site of the Chinyunyu thermal springs on 6th and 10th November 2020. The FGDs were conducted across languages (English-Nyanja). The first FGD had eight (n=8) selected participants while the second FGD had five (n=5) participants. Four members of the first FGD were purposively selected from the community members (two of the members were peasant farmers who “owned” fields in the thermal springs site) from the list provided by the area councillor, one tour operator from the National Commission Conversation Authority (NHCC) and three teachers from within Chinyunyu Village. The second FGD comprised one representative of the traditional leaders (headwoman), one tour operator and three owners of micro businesses in Chinyunyu Village. The researcher selected a sample based on who he thought would be appropriate and beneficial for the study. Taking cognisance of the fact that the participants could be committed with other engagements, the FGDs were conducted during the lunch break (between 12:00 to 14:00). The participants of the FGDs were provided with snacks during the sessions.

The researcher moderated both sessions of the FGDs although assisted by one hired research assistant who also provided language interpretation services. During the FGDs, the researcher was interested in how participants responded to each other's views, which provided more interactive issues for discussion. This stimulated discussion on the study area. FGDs were used to extract qualitative data. Participants in focus groups were knowledgeable about the issues they were involved in and were able to bring out the issues in relation to a topic that they deemed to be important and significant. This assisted the researcher to arrive at a fair conclusion of the findings of the study. The FGDs lasted an average of 90 minutes each. The rationale was to reach a point where all important issues had been discussed and a saturation level reached. Data collected from FGDs were recorded as field notes for analysis. To increase the transferability of the results, thick descriptions of data were collected during the FGDs. The researcher recognised and ensured that respect, protection and promotion of the rights of participants were made intrinsic at every stage and level of the FGDs.

- **Semi-structured interviews:** Semi-structured interviews were conducted with the six (n=6) identified key informants within the study area. The key informants comprised the area member of parliament (n=1); the area councillor (n=1); a representative from the Rufunsa Town Council (n=1); a representative from the National Heritage Conservation Commission (n=1); a representative from the traditional leaders (n=1) and a representative of an environmental advocacy firm, Mizu-Ecocare (n=1). All KIIs were conducted by the researcher. Strictly adhering to set COVID-19 regulations, the researcher successfully conducted the KIIs. However, since 2021 is an election year in Zambia, it was difficult to secure appointments with the political leaders as they were mostly engaged in campaign activities. With the help of the NHCC and the Rufunsa Town Council, the researcher managed to secure interviews with the area member of parliament and the area ward councillor.

Before the KIIs commenced, the researcher had to explain the objectives and expected outcomes of the research, the ethical considerations, such as signing of

the informed consent forms. The KIIs were held from October to December 2020 and conducted in English as all the identified key informants were fluent in the language. Rapport was established that enhanced the flow of the interviews. Interviews led to in-depth and accurate information since the researcher spent prolonged time with the informants. However, to avoid interview fatigue, a deliberate effort was made not to make the interviews inordinately long. The interviews took on average 45 minutes each. This was deemed adequate to ensure that the data collected was credible. Time spent with the research participants has a bearing on the credibility of the data collected (Garner, Wagner, & Kawulich, 2009). Data collected from the KIIs was recorded as field notes for analysis. In some cases, the researcher used an audio recorder to obtain interview recordings that assisted in cross-referencing.

3.7. METHODS OF ANALYSIS

Following the convergent design mixed methods approach, the researcher undertook two different methods of analysis suitable for each approach – quantitative and qualitative.

3.7.1. Quantitative analysis method

Ordered probit was used as the main estimation model for the qualitative part of this research study. The choice of this model is informed by ordinal variables with categories that are ranked from low to high and vice-versa, which might not meet some standard assumptions of linear regression models (Long & Freese, 2014; Verbeek, 2004). Ordinary least squares (OLS) regression assumes that dependent variables have normal distributed errors that exhibit homoscedasticity, that is, error terms having the same finite variance. However, most of the categorical dependent variables do not exhibit these properties and fail to meet this assumption (Cohen, Cohen, West, & Aiken, 2003). In certain circumstances when ordinal dependent variables are measured on a Likert scale with categories that are equally spaced across the continuum, the usual OLS and ordinal regression results can converge (Cohen et al., 2003; Long & Freese, 2014). If these conditions are not met, then OLS regression may be inefficient and might lead to the problems of non-normality

of residuals and heteroscedasticity where the variance of errors is not constant across observations.

Therefore, a standard ordered probit model is presented in the following form:

$$Y_i^* = X_i'\beta + \mu_i \dots\dots\dots (1)$$

Where, in equation (1), the dependent variable is a single latent variable Y^* which is unobserved, X and β are variables and parameter matrices and μ is a vector matrix of normally distributed error term. In this case, Y^* is unobservable efforts but what is observed is just the selection of individuals and thus Y^* is known only when it crosses the thresholds of such selections. Ordered outcome examples can be in the form of rating systems such as poor, fair, good, excellent or opinion surveys such as strongly agree, agree, neutral, disagree, strongly disagree. Therefore, the categories for the dependent variables are rankings or rather numbers that do not make sense even if they were coded as 1, 2, 3, 4, 5. The difference between the first and second outcome may not be the same as between the second and third. In the case of this research, for example, if the level of opinion that local economic development was an ideal and effective model to bring development in Chinyunyu is ordered such that: **1.** Don't know, **2.** Strongly disagree, **3.** Disagree, **4.** Agree, **5.** Strongly agree, it means that there is a latent continuous variable with 1 to 5 groups and four (4) thresholds. These thresholds are basically cut-off points between the five categories and are denoted by α . This can be expressed as follows:

$$Y_i = j \text{ if } \alpha_{j-1} < Y^* \leq \alpha_j \text{ such that:}$$

$$Y = 1 \text{ (or perception 1) if } Y^* \leq \alpha_1 \dots\dots\dots(2)$$

$$Y = 2 \text{ (or perception 2) if } \alpha_1 < Y^* \leq \alpha_2 \dots\dots\dots(3)$$

$$Y = 3 \text{ (or perception 3) if } \alpha_2 < Y^* \leq \alpha_3 \dots\dots\dots (4)$$

$$Y = 4 \text{ (or perception 4) if } \alpha_3 < Y^* \leq \alpha_4 \dots\dots\dots (5)$$

$$Y = 5 \text{ (or perception 5) if } \alpha_4 \leq Y^* \dots\dots\dots(6)$$

Therefore, the general analytical framework that will guide the subsequent empirical analysis is specified in the model below:

$$LED = f_m (C_p, D_p, I_f, R_x, A, G, S, I) \dots\dots\dots(7)$$

Where LED is local economic development as a dependent variable is a function of the independent variables. A dependent variable is a characteristic or element that is influenced by, and therefore dependent on, independent variables (Creswell, 2014). The variables of interest are the correlates specified in the conceptual framework which are: C_p is community participation, D_p is implementation of decentralisation policies, I_f is development of infrastructure such as feeder roads, electricity and communication, R_x is exploitation of local natural and heritage resources – the thermal springs. The model will be controlled by individual characteristics of the respondents: A – the age of the respondent, G – the gender of the respondent and S – the schooling years of the respondent. I – the monthly income of the respondent. These make the independent variables of the model. An independent variable is a characteristic or element that has an effect or influence on the dependent variable (Creswell, 2014). Other scholars have equally used estimation and econometric models to analyse the local economic development and thermal springs tourism (Matipa, 2020, Mi et al., 2019; De Bruyn, 2018).

3.7.2. Qualitative analysis method

Thematic analysis was employed to analyse quantitative data collected from the FGDs, KIIs and secondary data sources. Thematic analysis popularised by Braun and Clark (2006) is among the most widely used methods of analysis for qualitative data as it is embedded across most methods of searching for themes in the data. Thematic analysis aims at understanding the meaning of the data by way of identifying themes (Braun & Clark, 2006). In other words, thematic analysis is a generic approach for analysing data by looking for patterns, such as similarities, common and different experiences that emerge from the data. The choice of thematic analysis was motivated by the fact that a fairly large data set was collected and the need to produce a rich report based on an insightful analysis. Thematic analysis can produce an insightful analysis that answers particular research questions (Braun & Clarke, 2006). Thematic analysis allowed the researcher to analyse this data in a more structured and organised way. The choice of thematic analysis was also motivated by Caulfield’s (2019) assertions that thematic analysis

is the best method when a researcher is trying to find out something about people's views, opinions, knowledge, experiences, or values from a set of qualitative data. This assertion resonated well with the objectives of this study.

The grounded theory strategy also influenced the choice of thematic analysis. Grounded theory was particularly useful in the initial phases of data collection when key research issues were emerging; therefore, an inductive approach where data determined the themes was considered. Ryan and Bernard (2003) have provided eight techniques that would assist in identifying themes from the data, namely: repetitions or frequency of terms and synonyms in the narrative description; indigenous typologies and categories such as local words/language; metaphors and analogies that tell of a meaning behind a particular phenomenon; transitions such as shifts in topics and change in voices or tones; similarities and difference in the data as building blocks of themes; linguistic connection by looking for words and phrases indicating attributes that relate to the data either causally or conditionally; missing data or gaps in the data collected; and the theory related to material that illuminates questions of theoretical importance. Guided by Ryan and Bernard (2003) and Braun and Clarke (2006), the researcher familiarised himself with the data collected, generated codes, and collated data to the relevant codes. These codes were collated into potential themes. The themes were reviewed and led to the assignment of clear names and definitions for each theme generated. The identified themes were significantly related to the research questions and objectives of the study. These themes formed a strong basis for the study findings.

3.8. ETHICAL CONSIDERATIONS

Ethical principles governing research at the University of South Africa (UNISA) were adhered to as required and provided for by the university's ethics committee from time to time. The ethics were applied throughout the research process. Firstly, the researcher obtained approval to carry out the study from the custodians of the Chinyunyu thermal springs, the National Heritage Conservation Commission (NHCC). The researcher briefed the NHCC to explain intentions of the study and expected results. Other participants will be debriefed at the conclusion of their study involvement. To kickstart the study, the researcher signed a confidential agreement

with the two research assistants (enumerators). A copy of the confidential agreement is attached to this report in Annexure VII. Secondly, the researcher obtained consent from the participants to participate in the research. The researcher explained the research to be undertaken and obtained all the necessary consent from the respondents before commencement of the process. The researcher also endeavoured to make and report observations that did not infringe on the feelings of persons being observed. Where necessary, a consent agreement was signed between the respondents and the researcher. A copy of the consent agreement is attached to this report in Annexure VIII. Finally, the data collected was reported in a factual and accurate manner and no figures or estimates were fabricated.

The researcher furthermore ensured that confidentiality was guaranteed. The researcher took necessary steps to protect the information provided by the respondents from being discovered by others. The researcher was also cognisant of the fact that any references to specific respondents could be identified even without naming the respondent, otherwise known as deductive disclosure or internal confidentiality. Therefore, the researcher avoided stating the traits of individuals or groups that were interviewed. Mostly, aggregate findings and not individual-level data were revealed to the public. In addition, anonymity of participants was ensured.

Psychological or social harm such as distress or embarrassment, loss of employment or civil liability were avoided to ensure that the welfare of the respondents was maintained.

The research not only aimed to do good (i.e., beneficence), but also endeavoured to avoid doing any harm (i.e., non-maleficence) to the participants. Despite Zambia not adversely affected by the COVID-19 pandemic compared to other countries, at the time of this study the researcher strictly followed the health protocols as recommended by Zambia's Ministry of Health. These included frequent sanitising of hands for both the researcher and the participants, maintaining one metre of physical distancing and the researcher was ever masked up. To ensure that the respondents were protected, the researcher provided them with free masks.

Finally, the researcher ensured that the information collected from individuals is secured using a password protected file. The collected information is kept strictly confidential.

3.9. VALIDITY AND RELIABILITY OF THE STUDY

This sub-section stresses the validity/credibility and reliability/dependability of this case study adopting Yin’s (2009) approach. Since case studies are subject to criticism, mitigating and guaranteeing the quality of the study becomes imperative. This thesis adopted the four main tests used for measuring the validity and reliability of case studies, namely construct validity, internal validity, external validity, and reliability (Yin, 2009). Construct validity is the degree to which operational measures for the variable being tested are correct; internal validity tests the truism of the association between the variables identified in the study; external validity is the extent to which findings of the study can be generalised to other settings and populations; reliability refers to the possibility of collecting the same data/results each time a similar study is repeated (Rubin & Babbie, 2011; Saunders & Thornhill, 2012; Yin, 2009). Table 3.2 summarises the tactics employed in this study that assisted to guarantee the validity and reliability of the study.

Table 3.2: Validity and reliability tests for a case study

Tests	Case study tactics	Phase of research in which tactics occur
Construct validity	<ul style="list-style-type: none"> • Multiple evidence used from various sources • Key informants reviewed the draft report 	<ul style="list-style-type: none"> • Data collection • Composition
Internal validity	<ul style="list-style-type: none"> • Pattern matching • Explanation building • Use of logic models 	<ul style="list-style-type: none"> • Data analysis • Data analysis • Data analysis
External validity	<ul style="list-style-type: none"> • Use theories 	<ul style="list-style-type: none"> • Research design
Reliability	<ul style="list-style-type: none"> • Use of interview protocols (ask similar questions) • Develop a database of respondents – follow up for non-responses 	<ul style="list-style-type: none"> • Data collection • Data collection

	<ul style="list-style-type: none"> • Pre-test • Guarantee confidentiality 	<ul style="list-style-type: none"> • Data collection • Data collection
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Source: Adopted and modified from Yin, 2009.

3.10. CONCLUSION

This chapter has discussed the various paradigms and a detailed research design for the research study. The chapter has demonstrated a firm position on the data collection methodology that was employed in the study to satisfy the adopted mixed methods research approach. An empirical analytical framework was also developed and the technique for qualitative analysis has been outlined in the chapter. Ethical considerations followed by the study have been outlined. The chapter therefore lays the groundwork for discussions in Chapter 4 that present an empirical examination of local economic development (LED) and a qualitative analysis of the data collected.

CHAPTER 4

DATA ANALYSIS, FINDINGS AND DISCUSSION

4.1. INTRODUCTION

While Chapter 3 presented the methodology adopted for the study, this chapter provides analysis of data collected through the mixed methods research approach and discussion of the findings. Data analysis entails immersing oneself in the collected data to bring order and meaning to a vast narrative. The first sub-section comprises the quantitative analysis, which includes a discussion on the statistical results (empirical model) arising from the primary data collected through questionnaires. The second sub-section of this chapter comprises the qualitative part of this study, a thematic analysis of data collected from the focus group discussions (FGDs) and the key informant interviews (KIIs).

4.2. QUANTITATIVE ANALYSIS AND RESULTS

This sub-section gives an analysis of the quantitative data collected from the respondents.

4.2.1. Descriptive analysis

The full sample comprises 120 observations. Of this, 60 percent are females while 40 percent are male as shown in Table 4.1.

Table 4.1: Frequency table for gender

1= Female 0 = Male	Frequency	Percent	Cumulative
0	48	40.00	40.00
1	72	60.00	100.00
Total	120	100	

Source: Author's computation.

Table 4.2 shows the descriptive statistics of the independent variable, the local economic development (LED) and the predictor variables.

Table 4.2: Descriptive statistics for LED and the predictor variables

Variable	Obs	Mean	Std. Dev.	Min	Max
LED	120	3.866667	1.0688521	1	5
Participation	120	0.8083333	0.3952626	0	1
Decentralisation	120	0.6916667	0.4637413	0	1
Infrastructure	120	0.7416667	0.4395535	0	1
Thermal springs	120	0,8083333	0.3952626	0	1
Age	120	36.30833	8.288694	21	51
Gender	120	0.6	0.491952	0	1
Schooling	120	12.51667	4.170693	0	16
Income	120	3391.717	1313.038	300	5800
Household	120	5.333333	2.498179	1	13

Source: Author's own compilation.

- **Mean age among the respondents**

From Table 4.2, the mean age of 120 respondents is 36.3 years old. The minimum age invited to participate in the survey was 21 years old and the maximum age was 51 years old. Because of the purposive sampling method used, where most of the respondents identified were engaged in economic activities within Chinyunyu Village, i.e., already working as teachers, nurses, community workers or business persons, the most active age cohort is within this age group. The average of household size for the respondents was 5.33 persons per household with the minimum size being one (1) and the maximum household size being 13.

- **Average monthly income of the respondents**

As shown in Table 4.2, the average monthly income of the respondents was 3,391 Zambian kwacha (USD161), with the highest being K5,800 (USD290) and the lowest K300 (USD15).

- **Highest formal schooling grade completed**

The average schooling years of the respondents were 12.52 years, meaning most of the respondents to the questionnaires had completed elementary education which takes 12 years to complete in Zambia. A certificate level takes 13 years to complete whilst a diploma takes 14 years and a degree takes 16 years. The researcher was

cognisant of the fact that some respondents may have taken longer or shorter to complete their education, i.e., repeaters or those who skip academic years. The researcher however adopted the use of schooling years as demonstrated by other development studies scholars such as Sonobe and Otsuka (2014).

The other correlates such as infrastructure, community actors’ participation, decentralisation and thermal springs take binary values of 0 and 1, so the interpretation of their mean would not be inappropriate for ordinal data – statistically incorrect (Jamieson, 2004).

In addition, as seen from Table 4.3, it would be statistically incorrect to interpret the descriptive statistics for LED as it takes categorical values of 1 to 5 (that is 1 = strongly disagree, 2 = disagree, 3 = don’t know, 4 = agree, 5= strongly agree). Therefore, Table 4.4 is a frequency table that tabulates the respondents’ views on LED.

Table 4.3: LED frequency table

1=strongly disagree 2=disagree 3=don’t know 4= agree 5 = strongly agree	Frequency	Percent	Cumulative
1	5	4.17	4.17
2	12	10.00	14.17
3	11	9.17	23.33
4	58	48.33	71.67
5	34	28.33	100.00
Total	120	100.00	

Source: Author’s own compilation.

As depicted in Table 4.3, the respondents were asked if local economic development was the appropriate and effective strategic model to adopt for the development of Chinyunyu Village. The respondents in the “agree” category – agreed and strongly agreed that LED was the appropriate and effective strategic

model to be adopted in Chinyunyu Village – were 76.66 percent (28.33+48.33). The other categories (disagree and don't know) were 23.34 percent.

4.2.2. Correlation analysis

Table 4.4 shows the correlation matrix of LED and its predictor variables.

The correlation analysis in Table 4.4 shows that all the variables of interest are significantly correlated with the outcome variable and all signs are going in the expected direction. Specifically, the perception that: infrastructure development, community actors' participation, decentralisation, and exploitation of natural and cultural heritage resources (hot springs) can contribute to the LED of Chinyunyu Village are positively and significantly correlated with local economic development (LED) perception variable at 5 percent significant level.

Table 4.4: Correlation matrix of LED and its predictor variables

	LED	Age	Gender	Schooling	Income	Infrastructure	Participation	Decent~	Thermal springs	Household
ED	1.0000									
Age	0.0910	1.0000								
Gender	-0.0384	0.0326	1.0000							
Schooling	0.1268	0.1529	0.0156	1.0000						
Income	0.0884	0.4132*	-0.0789	0.5378*	1.0000					
Infrastructure	0.6238*	0.1720	-0.209*	0.2064*	0.1302	1.0000				
Participation	0.5956*	-0.0023	-0.0951	0.0351	-0.0037	0.4865*	1.0000			
Decent~	0.4929*	0.1517	-0.1400	0.0222	-0.0327	0.4305*	0.4084*	1.0000		
Thermal springs	0.5160*	0.2439*	-0.1383	0.1166	0.1485	0.4381*	0.4083*	0.4084*	1.0000	
Household	0.1742	0.1939*	0.0205	-0.0554	-0.0755	0.0408	0.1248	0.0024	0.0908	1.0000
No. of Objs	120	120	120	120	120	120	120	120	120	120

Notes: Stared coefficients are significant at the 5 percent level

Source: Author's own compilation.

4.2.3. Estimation results

Results of this section attempt to determine the relationship between LED and its correlates. As explained in Chapter 3, LED, the output variable, was ordered into five categories by asking the respondents their opinion on whether local economic development was the ideal and effective strategic model for developing Chinyunyu Village. The respondents gave one of the following responses: 1. Strongly disagree 2. Disagree 3. I don't know 4. Agree 5. Strongly agree.

Therefore, the econometric specification that is estimated is as follows as defined in the previous chapter:

$$LED = f_m (C_p, D_p, I_f, R_x, A, G, S) \dots\dots\dots(7)$$

Table 4.5 presents the main results in different regression models on how LED is associated with local participation, decentralisation, infrastructure development and thermal springs maximisation.

Table 4.5: Estimations of LED and its correlates

Variables	OProbit	OLogic
	[1]	[2]
Participation of community actors	0.9610445 **	1.932192 ***
	(2.97)	(3.23)
Decentralisation	0.6231246**	0.9628334**
	(2.24)	(1.93)
Infrastructure	1.372089***	2.700724***
	(4.20)	(4.10)
Thermal springs	0.7984001**	1.101657**
	(1.95)	(1.95)
Age	- 0.012968	-0.029568
	(-0.87)	(-1.18)
Gender	0.5908295**	1.115167**
	(2.54)	(2.76)
Schooling	0.0031774	0.0156811

Variables	OProbit	OLogic
	(0.10)	(0.28)
Log_Income	0.2049257	0.2733494
	(0.403)	(0.65)
Number of observations	120	120

*Notes: Numbers in parentheses are z-values. Both models contain 120 observations ***, ** and * indicate 1 percent, 5 percent and 10 percent significant levels, respectively.*

Source: Author's own compilation.

Column (1) presents the results of the preferred specification model, which is Ordered Probit, and Column (2) reports results from another specification, the Ordered Logistic (OLogic) model. The ordered logistic model was performed to check the robustness of the preferred model.

In both models, results show that perception variables indicating whether: participation of local community actors; devolvement of authority and responsibilities to the local municipalities - decentralisation; infrastructural development; and maximising the use of natural and cultural heritages - thermal springs can contribute to LED of Chinyunyu Village are significant and positively associated with the LED perception variable. These findings support hypotheses 1, 2, 3 and 4 from the previous chapter. These results are corroborated by findings in numerous previous studies on LED that found that local participation, maximising the use of local cultural and heritage resources such as thermal springs, devolution of decision making to the local authorities, and improvement of infrastructure were directly associated with increased local economic development (e.g., Chirikure, 2017; Hall et al., 2005; Helmsing, 2003, 2005; Lee & King, 2008; Leigh & Blakely, 2017; Mafukata, 2020; Mazibuko, 2020; Lund, 2007; Olivier & Jonker, 2013; Rodríguez-Pose & Palavicini-Corona, 2013; Rodríguez-Pose & Tijmstra, 2005; Rogerson, 2015; Swinburn & Yatta, 2006; Tshibalo, 2011; Tshibalo & Olivier, 2010).

Most importantly, this study attempted to test the impact of exploitation of local natural and cultural heritage within the rural areas to contribute to LED. The results show that indeed, maximising the use of the existing resources in Chinyunyu

Village, the thermal springs, will positively and significantly contribute to LED of Chinyunyu Village. However, the question is “How”? This study responds to this question by suggesting a commercialisation model which would assist this objective at Chinyunyu Village (see Figure 5.1 in Chapter 5). Doing so, this study would have responded to the purpose and main aim intended for this study as discussed in Chapter 1.

4.2.4. Marginal effects of the regressors

Seeing from the previous sub-section that it would not make sense to interpret the coefficients of the regressors of interest as they take binary values of 0 and 1, this study went further to estimate the marginal effects of each independent variable of interest.

The marginal effect results from the outputs are interpreted collectively as follows: a unit increase in the perception indicating whether community actors’ participation can contribute to LED of Chinyunyu Village is about 1.5 percent less likely to be in the “strongly disagree” category, i.e. LED = 1; 9.6 percent less likely to be in the “disagree” category, i.e. LED = 2; 14.9 percent less likely to be in the “don’t know” category, i.e. LED = 3, 9 percent more likely to be in the “agree” category, i.e. LED = 4 and 17 percent to be in the “strongly agree” category, i.e. LED = 5.

A unit increase in the perception indicating whether decentralisation of decision making to local municipalities can contribute to LED of Chinyunyu Village is about 0.6 percent less likely to be in the “strongly disagree” category, 4.7 percent less likely to be in the “disagree” category, 9.1 percent less likely to be in the “don’t know” category, 1 percent more likely to be in the “agree” category and 13.4 percent more likely to be in the “strongly agree” category.

A unit increase in the perception whether infrastructure development can contribute to LED of Chinyunyu Village is about 2.8 percent less likely to be in the “strongly agree” category, 14.8 percent less likely to be in the “disagree” category, 20 percent less likely to be in the “don’t know” category, 13.8 percent more likely to be in the “agree” category and 23.8 percent more likely to be in the “strongly agree” category.

A unit increase in the perception whether the utilisation of the thermal springs resource can contribute to LED of Chinyunyu Village is about 1 percent less likely to be in the “strongly disagree” category, 7.3 percent less likely to be in the “disagree” category, 12.3 percent less likely to be in the “don’t know” category, 5.7 percent more likely to be in the “agree” category and 14.9 percent more likely to be in the “strongly agree” category.

These conclusions are consistent with the results of only estimating the coefficients in the OProbit and OLogit models.

4.2.5. Socio-demographic characteristics of the respondent households at Chinyunyu Village: Poverty levels

The respondents were asked to gauge the socio-economic status of Chinyunyu Village based on their perception. The respondents were asked to describe the levels of poverty in Chinyunyu by rating the categories as follows: 1. Low (1% – 30%); 2. Moderate (31% – 50%); 3. High (51% – 70%); 4. Extremely high (71% – 100%).

Figure 4.1 depicts the results from the collected data:

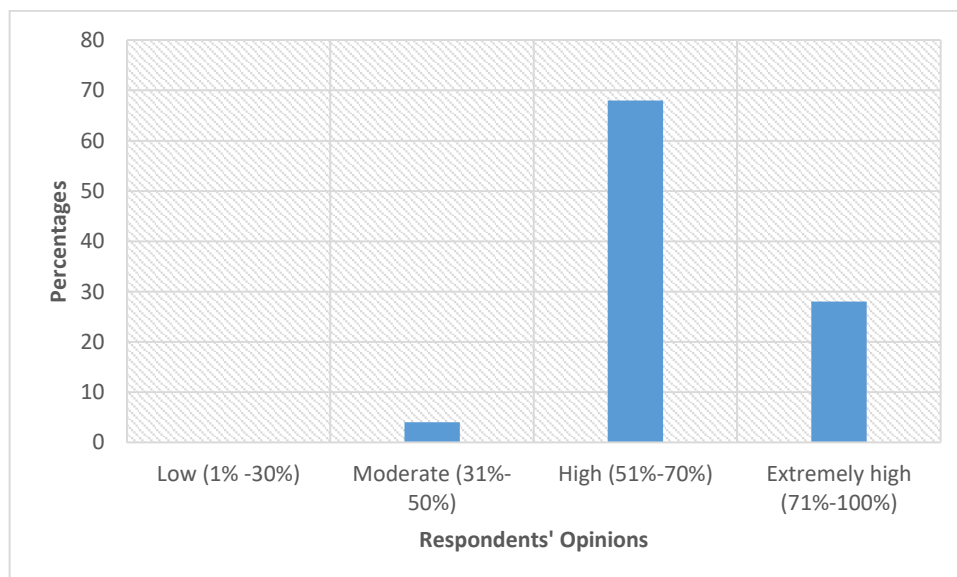


Figure 4.1: Respondents’ perception on levels of poverty in Chinyunyu Village

Source: Author’s own compilation.

Figure 4.1 shows the respondents' perception on the levels of poverty in Chinyunyu Village. Twenty-eight percent of the respondents were of the view that Chinyunyu Village had extreme poverty levels of between 71 to 100 percent, whereas 68 percent of the respondents indicated that Chinyunyu Village had high poverty levels of between 51 to 70 percent. Only four (4) percent indicated that the levels of poverty in the village were moderate and none of the respondents indicated low poverty levels in Chinyunyu Village. Here, the parameter used to measure poverty was the Zambia Central Statistics Office's guide and the World Bank's (2018) guide for people living on less than USD1.90 a day or 45 Zambian kwacha per day. These findings, although based on the respondents' perceptions, corroborate the World Bank empirical results that showed high levels of poverty in the locality (De la Fuente et al., 2015; World Bank, 2018). The result suggests the assertions that poverty in Zambia is predominantly concentrated in rural areas and therefore calls for drastic measures to overturn this phenomenon by leveraging the resource endowments of these rural areas. Most of the local people in Chinyunyu Village are engaged in the agricultural sector, livestock, charcoal burning and retail trading. This study asserts that even though the local people are involved in the above-mentioned economic sectors, poverty levels are persistent in Chinyunyu Village as most of these people generate less income than the subsistence level, and therefore they remain trapped in a vicious cycle of high poverty. For example, the cost of living for a household of five (5) members measured by the Jesuit Centre for Theological Reflection (JCTR) (2021) stood at K8,394.01 (USD419.70) at the time this study was being undertaken. This suggests that a household of five household members or more would require to generate at least K8,394.01 per month to at least meet the basic needs for their household. Considering that the average monthly income for the respondents of this study was K3,391.72 with a mean household size of 5.33, this study posits that a larger cohort of people in Chinyunyu Village were struggling to meet basic needs for their household members. JCTR does not disaggregate its cost-of-living data between rural and urban areas; however, it is a good statistic to draw inference on the prevailing cost of living in the country.

4.2.6. Socio-demographic characteristics of the respondent households at Chinyunyu Village: Unemployment levels

The respondents were asked to describe the level of unemployment by rating the categories as follows: 1. Low (1 % – 30%); 2. Moderate (31% – 50%); 3. High (51% – 70%); 4. Extremely high (71% – 100%). This study adopted the ILO’s (2019) definition of unemployment as an active person without a job and a living wage. The choice of this option was motivated by the fact that ILO’s harmonised definition was an internationally recognised definition adopted by many countries. In addition, the choice was also motivated by the revelations that the Zambian national definition had deficiencies and did not reveal the true extent of unemployment in the country (Mujenja, 2014).

Figure 4.2 depicts the results from the collected data:

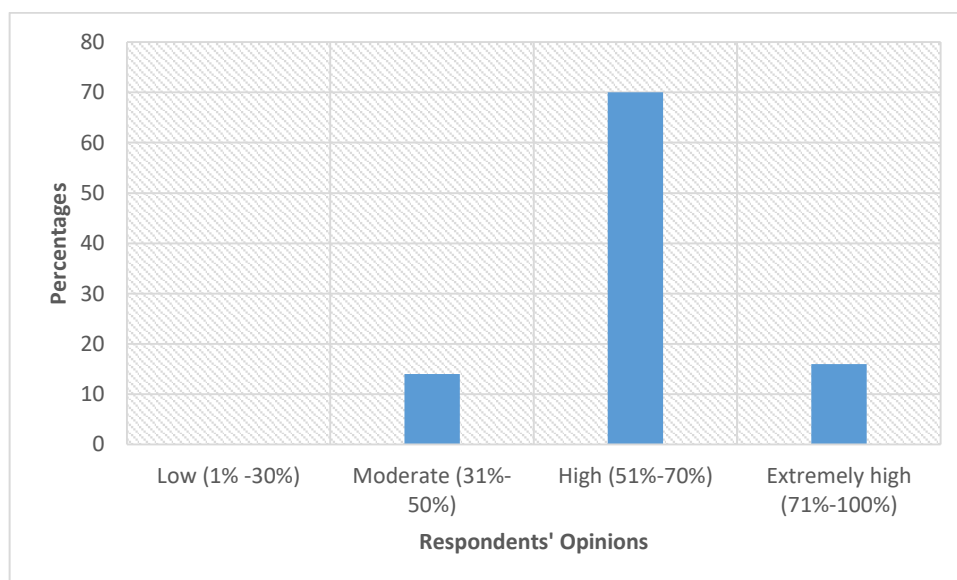


Figure 4.2: Respondents’ perception on levels of unemployment in Chinyunyu Village

Regarding the unemployment levels, Figure 4.2 shows that 16 percent of the respondents indicated that Chinyunyu Village had extremely high levels of unemployment, between 51 to 100 percent, 70 percent of the respondents revealed that the unemployment levels in Chinyunyu Village were high, between 51 to 70 percent, while 29 percent believed the unemployment levels in the village were moderate, between 31 to 50 percent. This result shows a huge divergence from the

official statistics by the central statistics office of Zambia. The CSO (2018) estimates an unemployment rate of 11.4 percent. However, CSO (2018) has taken a broader definition of employed people. Going by their definition, CSO includes active people who do not earn a wage as employed. Peasant farmers or even retirees who are growing vegetables for home consumption are regarded as employed in the CSO broader definition of employment (Mujenja, 2014). Nonetheless, this result is similar to other independent studies that were conducted regarding people's perception on unemployment in Zambia which revealed that about 80 percent of Zambians perceived themselves as unemployed (Mujenja, 2014).

4.2.7. Respondents' opinions on the current development status of the Chinyunyu thermal springs

The respondents were asked about the current development status of the Chinyunyu thermal springs and to indicate whether the thermal springs were fully utilised. The question that was posed to them was as follows: "What is your opinion on the current development status of the Chinyunyu thermal springs? **1.** Very underdeveloped; **2.** Underdeveloped; **3.** Neutral; **4.** Developed; **5.** Very developed". Initially the author designed a questionnaire with a three-point rating scale of "developed, neutral and underdeveloped". Having conducted a preliminary survey, the author decided to adjust the initial questionnaire to a five-point Likert scale (added 'very developed/very underdeveloped'). This was motivated by the fact that in the last five (5) years, a shelter (reception), a fence and a toilet had been erected at the Chinyunyu thermal springs. This adjustment to the questionnaire was to allow respondents to express their opinions on these infrastructural changes at the thermal springs. The five-point Likert scale was also motivated by other psychology and development studies that have used the Likert scale, with success, to capture the intensity of respondents' feelings and opinions (Burns & Burns, 2008).

Guiding the concepts of "Very underdeveloped" and "Underdeveloped" would be Olivier and Jonker (2013), who contended that "underdeveloped" was lack of leisure, recreation resorts and other thermal springs uses such as industrial, geothermal energy, and agriculture in their categorisation of thermal springs in South Africa. On the one hand, "developed" and "very developed" were conceptualised from Sanli and Kara's (2019) study of thermal tourism potential in

Turkey who defined “developed” as meaning “sufficient recreational facilities and infrastructure”. In addition, conceptualisation of “developed” and “very developed” was borrowed from Yu (2015), who asserted that development of tourism thermal springs corresponds to having tourism resort facilities and a thermal spring hotel. A footnote in the questionnaire was added to explain the concepts of “developed” and “undeveloped” based on these guiding concepts.

Figure 4.3 shows the respondents’ opinions on the current development of the Chinyunyu thermal springs.

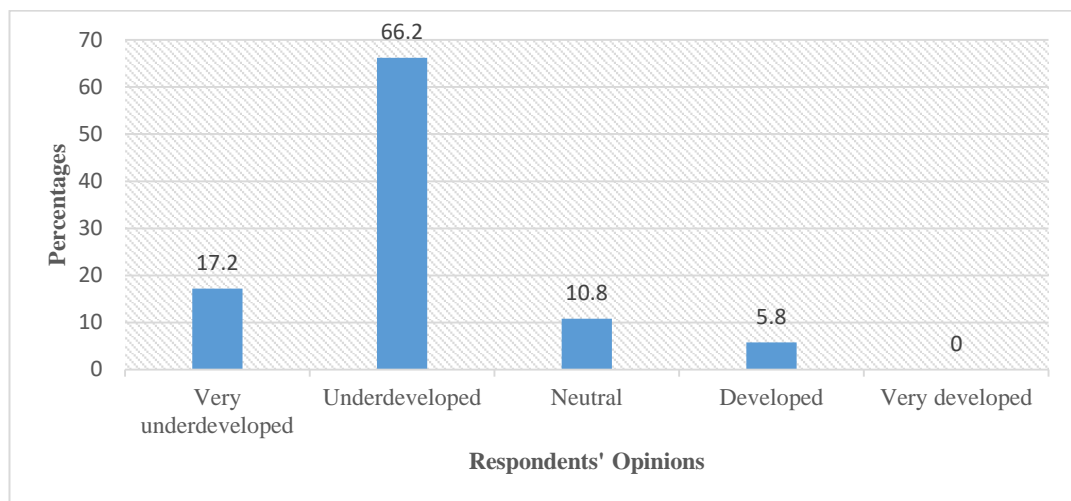


Figure 4.3: Respondents’ opinions on the current development status of Chinyunyu thermal springs.

Source: Author’s own compilation.

Figure 4.3 depicts that none of the respondents believed that the Chinyunyu thermal springs were very developed, although 5.8 percent indicated that the thermal springs were developed in their current state. About 10.8 percent were unsure, 66.2 percent indicated that the thermal springs were underdeveloped, while 17.2 percent responded that the thermal springs were very underdeveloped. This corroborates many studies on thermal springs, especially in rural Africa, that have remained undeveloped (Bwembya et al., 2018; Hoole, 2000; Tshibalo, 2011; Olivier & Jonker, 2013; Kafuwe, 2018; Kapasa, 2014; Niles, 2012).

4.2.8. Respondents' opinions on the current utilisation status of Chinyunyu thermal springs as an economic input for LED

The respondents were asked to state the current utilisation of the Chinyunyu thermal springs as an economic input for LED by selecting one of the following opinions: 1. Highly underutilised; 2. Underutilised; 3. Neutral; 4. Well utilised; 5. Highly utilised. Figure 4.3 below summarises the responses received from the respondents. A footnote in the questionnaire was added to clarify what the author meant by “utilisation” and “underutilisation”, adopting Olivier and Jonker (2013) and Tshibalo and Olivier (2010), who defined “utilisation” as optimising the use of thermal springs to the benefit of the local community. They defined “underutilisation” as failure to optimise the uses of thermal springs. They outlined various uses of thermal springs including, among others, agriculture, aquaculture, geothermal energy, thermal springs education, balneology, tourism resorts, recreation facilities (swimming pools), and industrial uses (production of mineral water, salt and aesthetic products).

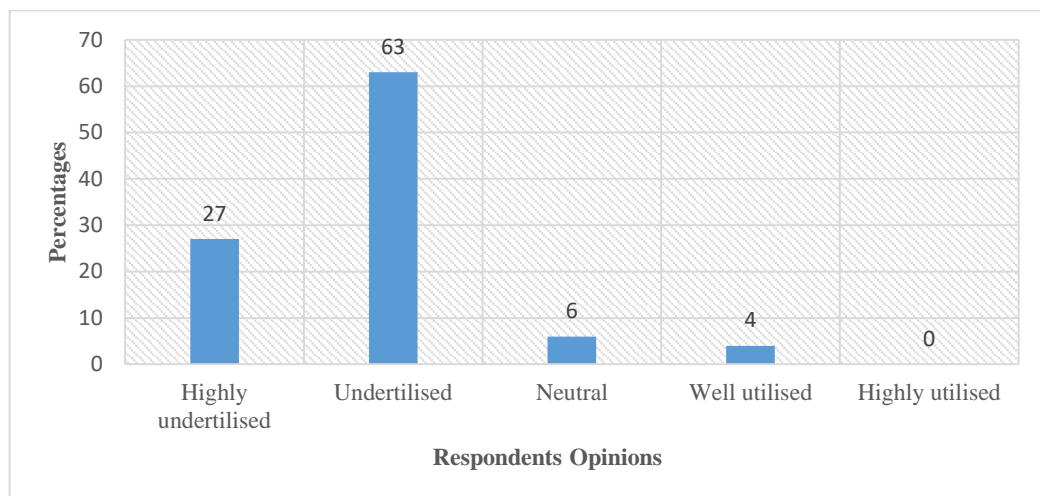


Figure 4.4: Respondents' opinions on the current utilisation of the Chinyunyu thermal springs

Source: Author's own compilation.

Figure 4.4 provides similar results to the question on the development status of the thermal springs. Twenty-seven percent of the respondents indicated that the thermal springs were highly underutilised, while 63 percent indicated that the thermal springs were underutilised. Six percent of our respondents were unsure and neutral

about the status of its utilisation. Four percent of the respondents thought that the thermal springs were well utilised, while none of the respondents were of the opinion that the thermal springs were highly utilised. A total of 90 percent (27 + 63) of the respondents felt that the thermal springs were not being utilised to benefit the local community members in Chinyunyu Village. This result is similar to the findings reported by Tshibalo (2011) and Tshibalo and Olivier (2010), who found that local residents around the Sagole thermal spring in Vhembe District, Limpopo Province of South Africa also thought that their local thermal spring was underutilised for tourism and mainstream retail economy. Similarly, a study by Olivier and Jonker (2013) found that even though South Africa had commercialised most of its thermal springs, a lot of them still remained underutilised. Other studies such as Hoole (2000) found that the poor rural community of Lilani, a local municipality of KwaZulu-Natal Province of South Africa, did not benefit from the presence of the Lilani thermal springs within their locality as the thermal springs were underutilised. In addition, studies that were conducted in Zambia on thermal springs, although they focused on the geothermal energy potential, also found that the thermal springs in Zambia were underutilised for geothermal energy generation (Bwembya et al., 2018; Kapasa, 2014; Musonda & Sikazwe, 2005). This study argues that the Chinyunyu thermal springs are underutilised in their current form.

4.2.9. Respondents' perceived ideal type of development for Chinyunyu thermal springs

The respondents were asked to indicate their perceived ideal type of development that would optimise the use of the thermal springs to fully benefit the local community. They were asked to indicate their preferred choice from the following: 1. Geothermal energy; 2. Tourism hub (community-based tourism); 3. Agriculture; 4. Industrial; 5. Other. Regarding the preferred choice for utilisation, those who indicated that the thermal springs were underutilised proposed the following as an ideal development for the thermal springs, as depicted in Figure 4.5.

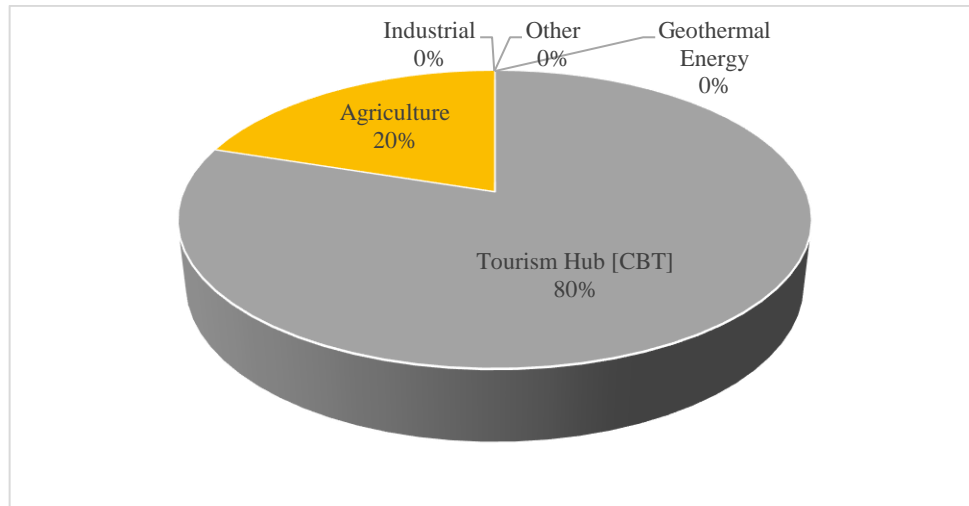


Figure 4.5: Respondents’ perceived ideal type of development for the Chinyunyu thermal springs

Source: Author’s own compilation.

The results of this study (Figure 4.5) show that 80 percent of the respondents believed the Chinyunyu thermal springs needed to be developed into a tourism hub (community-based tourism project) to bring socio-economic benefits to the local communities. Twenty percent reported that the thermal springs should be used for agricultural purposes, while none reported other uses such as industrial and geothermal energy usage. The choice of tourism by the respondents could have been influenced by the associated benefits a tourism industry brings to a local economy such as jobs creation and its ability to stimulate other ancillary enterprises (Rogerson, 2003, 2015). Similar studies have proposed tourism as an ideal type of development for the thermal springs, especially in rural areas (Chuamuangphan, 2016; Erfurt-Cooper, 2010; Lee & King, 2008; Sanli & Kara, 2019). In fact, South Africa has over 31 out of 74⁺ documented thermal springs developed into family leisure, recreational resorts, and other tourism activities (Boekstein, 1998, 2014; Olivier & Jonker, 2013). Most thermal springs around the world serve as tourism thermal springs known for therapeutic and medical reasons. Lee and King (2008) found that in Taiwan citizens were increasingly concerned with good health and longevity and therefore they frequented thermal springs. Lee and King (2008) also found that because of the ageing population challenge in Japan coupled with the

Japanese ethos of using natural remedies, thermal springs in Japan were very popular as they were used for therapeutic and spiritual purposes.

4.3. QUALITATIVE ANALYSIS AND RESULTS

The qualitative part of the research thematically analyses data collected through focus group discussions (FGDs) and the key informant interviews (KIIs). The central aim for these data collection tools was to reach saturation, where no new data emerged from the interviews. The data saturation was reached after interviewing five key informants. In addition, the first FGD provided more information to the extent that a saturation point was achieved; however, the researcher decided to conduct a second FGD to satisfy his planned scheduled.

The researcher observed that Chinyunyu Village is predominantly an agro-based community where most of its community members are involved in peasant farming and rearing of livestock such as cattle (*Bos taurus*), goats (*Capra aegagrus hircus*), sheep (*Ovis aries*), chickens (*Gallus gallus domesticus*) and pigs (*genus Sus*). The other common economic activity undertaken by the locals in Chinyunyu Village is charcoal burning. Charcoal is the predominantly used source of energy in the village.

The researcher undertook a transect walk of the village and the thermal springs sites accompanied by a tour guide. The guide revealed several historic, cultural and spiritual issues surrounding the thermal springs. Figure 4.6 shows the researcher interacting with the local community in Chinyunyu Village.



Figure 4.6: The researcher interacting with the local community in Chinyunyu Village

Source: Author's own.

Results from the transect walk and interview with the tour guide who was from the NHCC and also a key informant revealed that the thermal springs have been in existence for a long time. Kapasa (2014); Legg (1974); and Musonda and Sikazwe (2005) asserted that thermal springs in Zambia have existed since the 19th century and were mostly used for salt production by the villagers. To date, Zambia has approximately 80 documented thermal springs spread all over the country (Legg, 1974). The thermal springs are known by a local dialect, Soli, as *kalungula*, which means “hot”. The main thermal spring on the eastern side is referred to as *kalungula kamuna* while the one on the western side is referred to as *kalungula kakazi*. *Kamuna* in Soli language means male and *kakazi* means female. These gender names were given because only men were allowed to bathe at the main thermal spring (*kalungula kamuna*) and the women were allowed to use the western thermal spring (*kalungula kakazi*) for bathing. The researcher heard that this separation was

a cultural issue of not mixing the two genders in a single pool. Figures 4.7 shows the researcher at the discharge point of the Chinyunyu thermal springs – eastern side.



Figure 4.7: The researcher at the discharge point of the Chinyunyu thermal spring on the eastern side – Kalungula kamuna

Source: Author's own.



**Figure 4.8: The Chinyunyu “cold” spring on the western side –
Kalungula kakazi**

Source: Author’s own.

It was observed that only one of the two thermal springs in Chinyunyu was functional as a hot spring while the other one on the western side (Figure 4.8) has cooled off, transformed into what can be called a cold spring. The researcher learned that the cooling off of the other thermal spring located on the western side occurred in 1990. The KII informed the researcher that there were many beliefs regarding how/why the other thermal spring cooled off. Firstly, an Italian attempted to install a pipe from one of the thermal springs so that he could pump water to his private swimming pool in the 1980s. This was done without the approval of the local community members. The Italian farmer, however, did not succeed in executing his plan to pipe the hot water from the spring. The locals believed that the ancestral spirits were not happy with what they called tampering of the natural flow of the thermal springs by a foreigner. According to the locals, their ancestors commanded the thermal spring to cool-off because of this interference. The scientific explanation, according to the NHCC tour guide, was that the cold spring was

because of earth's movements caused by tsunamis and earthquakes that ended up closing the cracks underneath. Although Zambia has never experienced tsunamis and earthquakes, the KII revealed that the occurrences of such calamities in other distant countries still had a bearing on Zambia's underground system when the earth was shaken. The tour guide further explained that when the faults closed underneath, the heat ceased to be transmitted from the hot magma and therefore the thermal springs became cold. This particular cold spring does not attract visitors. The cold spring was used as a source of water for animals. This finding is similar to that of Olivier and Jonker (2013), who found that the Sagole thermal spring was used as a source of water for domestic animals and wildlife.

The local community members use the thermal springs for washing their clothes. Figure 4.9 is a picture of the clothes laid out on the ground to dry after washing.



Figure 4.9: Clothes lying on the ground to dry at the Chinyunyu thermal springs premises

Source: Author's own.

The KII explained that the local community members have dug-out pools on the eastern-side of the Chinyunyu thermal spring - *kalungula kamuna*, where they take their bathes and also use it for religious and ritualistic activities. This finding collaborates Kapasa's (2014) findings that the local people in Chinyunyu Village use the Chinyunyu thermal springs for bathing, spiritual, religious and ritualistic activities. Figure 4.10 is a picture of children from the local community taking a bathe/swimming in a dug-out pool at the *kalungula kamuna*.



Figure 4.10: Children from the local community swimming/bathing in a dug-out pool at the Chinyunyu thermal springs

Source: Author's own.

The transect walk and interview with the key informer from the NHCC further revealed that the Chinyunyu thermal springs area was vast and in the extent of 240,000 square metres (24 hectares). The area was gazetted as a national heritage area/ national monument through Gazette Notice Number 6791 of 2019 (GRZ, 2019b). Figure 4.11 shows the surrounding area of the Chinyunyu thermal springs.



Figure 4.11: The researcher in the surrounding area of Chinyunyu thermal springs

Source: Author's own.

It was observed that there were 19 members of the local community, peasant farmers who were cultivating maize, tomatoes, onions and other vegetables within the premises of the thermal springs. These farmers diverted the flow of water from the thermal springs to irrigate their respective fields. The thermal springs' fluid loses its temperature as it runs down the stream and eventually becomes cold water suitable for farming. In fact, the researcher was informed that because of the chemical composition in the thermal spring fluids, the area was very fertile and productive. Figure 4.12 shows a vegetable field in the Chinyunyu thermal springs premises grown by the local community members.



Figure 4.12: A vegetable field at the Chinyunyu thermal springs

Source: Author's own.

Furthermore, it was revealed that some locals had settled on the heritage land and believed that they owned the land. These people were the third and fourth generations of the settlers who possess very rich cultural beliefs and indigenous knowledge about the thermal springs, an important factor for sustainable development (Chikaire et al., 2012). It is common in the developing regions to have locals associating natural features such as mountains and valleys – and especially rare features such as thermal hot springs – with cultural beliefs. For example, Mafukata (2020) reported a similar incident in a community in rural Limpopo Province, South Africa. These beliefs would impact on the efforts of rural development in such areas as most locals would invoke the beliefs to stop such advances by rural development practitioners. Maluleke (2018) reported this incident in Makuleke community in Vhembe District of South Africa.

The thermal springs premises are used as a sacred place for traditional rituals. The researcher was told that the people of Chinyunyu believed that the water from the

thermal springs were spiritual and had healing powers. Some church organisations usually went to draw water from the springs for use as anointing water and baptism in their churches. Others went to pray around the premises of the thermal springs whilst others drank and steamed themselves with the fluid to get healed from various ailments. It was revealed that the water had health benefits exceptionally good for the skin, rheumatism and stress. Further, the area was used for other rituals where traditional doctors took their patients, normally at night, for healing bathes or to communicate with their ancestors. The locals believed that the water was heated by ancestral spirits that intervened to heal their patients. Rituals such as killing of chickens as a sacrifice to their ancestral spirits were normally performed around the premises of the thermal springs. Buckets containing charms and clothes were left behind and often discovered around the thermal springs. The researcher also learnt that the thermal springs premises were used for dumping stillborn babies. In Africa and parts of Asia, stillborn babies are considered a cultural taboo and often treated as if they had never happened (Tseng, Hsu, Hsieh, & Cheng, 2018).

In addition, trees within the thermal springs area were believed to have healing powers. One could therefore observe several trees with their outer layers peeled off. The bark was cut off for use in spiritual and ritual activities. Some trees within the area were tied with plastic and beads. These findings corroborated numerous other studies that found thermal springs around the world that are considered as sacred places and associated with ritual spirits (Boekstein, 2012, 2014; Hoole, 2000; Olivier & Jonker, 2013; Tshibalo & Olivier, 2010; Olivier et al., 2013; Mafukata, 2020). Figure 4.13 shows trees with peeled-off barks.



Figure 4.13: Trees with peeled-off barks at the Chinyunyu thermal springs

Source: Author's own.

Figure 4.14 shows a plastic bag containing herbs used for rituals.



Figure 4.14: A piece of a plastic bag containing herbs used for rituals at Chinyunyu thermal springs

Source: Author's own.

The fact that the thermal springs were considered as a sacred place meant that it could serve to conserve the heritage resource. The locals never tampered with the thermal spring's natural essence. Therefore, entry into the thermal springs area by the local community members was self-regulated. Nonetheless, the surroundings of the thermal springs' premises were unkempt. The surrounding area was littered by plastic used for rituals, clothes, and over-grown grass which were an eyesore and not a good image for tourists. Figure 4.15 shows the surroundings of the Chinyunyu thermal springs.



Figure 4.15: Littered Chinyunyu thermal springs surroundings

Source: Author's own.

The researcher also smelt a scent of rotten eggs from one of the Chinyunyu thermal springs. It was explained that the chemical composition in the thermal springs, in particular the hydrogen sulphite, causes the fluid to smell like rotten eggs. It was explained that the problem of the smell can be corrected if the fluid is exposed to air for some time. The fluid was said to be non-toxic for recreation and tourism purposes. It can be assumed that since local people use some dug-out pools to bathe in the fluid the health and safety of people that swim in the Chinyunyu thermal springs are guaranteed. Other chemicals in the Chinyunyu thermal springs were said to be silica, calcium, and manganese. This chemical composition of the thermal spring fluid could scientifically explain why thermal springs have some healing properties. It was further revealed that the sulphur content was excessive, hence nearby people who drank the water from the thermal springs had stained and discoloured teeth. The locals were therefore discouraged from drinking water from the thermal springs.

In terms of infrastructure around the premises of the Chinyunyu thermal springs, the researcher observed a toilet, a reception office for tour guides and a game (wire) fence that had been erected to protect the thermal spring on the western side. These structures were not connected to the national grid for electricity and used solar power, especially at night. The researcher was informed that the infrastructure was built in 2015 when the custodians, the NHCC, decided to start charging people who were visiting the thermal springs. The NHCC employed four locals to staff the thermal springs, two tour guides and two general workers. With this infrastructure around the thermal springs, the visitors from the local community used a different entrance to enter and exit the heritage area free of charge at any time whilst the “external” domestic visitors outside Chinyunyu Village area paid K8.00 (0.36 USD). The external visitors were visitors from outside Chinyunyu Village. The foreign visitors were charged 15.00 USD. Figure 4.16 shows some infrastructure at Chinyunyu thermal springs – a reception area.



Figure 4.16: The reception area at Chinyunyu thermal springs

Source: Author's own.

Figure 4.17 shows a toilet at Chinyunyu thermal springs. The NHCC charges ZKW 1 (0.04 US Cents) for using the toilet.



Figure 4.17: A toilet structure at Chinyunyu thermal springs

Source: Author's own.

The researcher was informed that the inflow of visitors was low as most people did not see the need to travel to Chinyunyu to view the thermal springs without recreation facilities around the area. The KII said that the thermal springs received approximately 10,000 visitors a year with its peak period in cold seasons from April to July. Of this number of visitors, the researcher was informed, approximately 95 percent were Zambians – external domestic visitors and approximately five percent were foreigners. It was observed and revealed that the average time taken by each visitor at the thermal springs was 25 minutes as there was nothing else to do after viewing the thermal springs. There were no refreshments either at the site. During the days the researcher spent at the thermal springs, he did not observe any foreign visitor. This could be attributed to the lockdown measures that were implemented

by the tourism source countries as they fought the COVID-19 pandemic; however, aggressive marketing to the international tourist would need to be undertaken to sell the Chinyunyu thermal springs value proposition (Osterwalder & Pigneur, 2010). Boekstein (2012) reported that South Africa internationalises its thermal springs through aggressive marketing. Only 30 Zambian visitors (in groups of four to five people) per day on average were observed and paid at the gate during the researcher’s stay in Chinyunyu. The thermal springs were not aggressively marketed within Zambia and abroad, and therefore very few people knew of their existence and benefits.

Qualitative data was further collected through FGDs and KIIs. Since the FGDs and KIIs were open-ended, the responses were categorised into themes. As guided by Ryan and Bernard (2003) and Braun and Clarke (2006), seven important themes emerged from these discussions: (i) the people of Chinyunyu are living in extreme poverty; (ii) the thermal springs are decidedly underutilised and underdeveloped, hence the locals have not benefited; (iii) the management of Chinyunyu thermal springs does not follow a commercial model; (iv) the thermal springs should be developed into a tourism resort industry; (v) although the locals have been consulted through their community leaders, the final decision making on local development remained a preserve of the political leaders; (vi) the absence of decentralisation policies has led to very little support from the local authorities in developing the area; (vii) the absence of a LED policy framework to guide local authorities on LED. Table 4.6 below summarises the themes and results emanating from the qualitative data.

Table 4.6: Themes and results from the KIIs and FGDs

Themes	Operative definitions	Some extracts from the participants
1People in Chinyunyu are living in extreme poverty	The aim of this theme was to assess the levels of socio-economic status of Chinyunyu Village.	<i>“people in Chinyunyu are very poor and mainly depend on farming for their livelihood” (1)</i> <i>“people in Chinyunyu struggle and have to depend on government support for their fertilizer to cultivate their fields” (2)</i>

Themes	Operative definitions	Some extracts from the participants
		<p><i>“things have been hard in Chinyunyu as there are no factories or major economic activities to employ people” (3)</i></p>
<p>Chinyunyu thermal springs are underutilised and underdeveloped.</p>	<p>The aim of this theme was to assess the level of utilisation and development of the Chinyunyu thermal springs.</p>	<p><i>“the Chinyunyu thermal spring is a ‘gold mine’, a natural wonder whose potential is being wasted” (1)</i></p> <p><i>“the Chinyunyu thermal spring is a sleeping giant” (2)</i></p> <p><i>“the thermal spring can change the entire economic landscape of Chinyunyu if government prioritised its development” (3)</i></p> <p><i>“the only developments we have seen at the Chinyunyu thermal springs are a toilet and a fence, the place has been neglected by the authorities” (4)</i></p> <p><i>“the Chinyunyu thermal springs is a wasted gem” (5)</i></p> <p><i>“the current inflow of visitors at the thermal spring is not satisfying, very few people visit the site because there is nothing much to do once they have seen the thermal spring” (6)</i></p> <p><i>“the Chinyunyu thermal spring has not been looked after properly. You can tell from the surroundings and the greens. It’s a sorry sight!” (7)</i></p> <p><i>“I want the Chinyunyu thermal spring to offer more to the community. At the moment it is not enough. People go there and pay K8.00, it is not enough!” (8)</i></p> <p><i>“There is need to make the thermal springs better and be developed into a more money generating project” (9)</i></p> <p><i>“The thermal springs have not been utilised to its full capacity” (10)</i></p>

Themes	Operative definitions	Some extracts from the participants
<p>The management of Chinyunyu thermal springs does not follow a commercial model – Absence of a commercial model</p>	<p>The aim of this theme was to assess whether the Chinyunyu thermal springs have a commercial model in place that is followed and implemented by the company manning the thermal springs.</p>	<p><i>“we have price differentiation for foreigners and domestic visitors although we do not have a commercial model per se” (1)</i></p> <p><i>“here it is just business as usual, even when there is change in the business environment, for example, the advent of COVID-19, we have not adjusted or come up with any major innovations to respond to this business shock. However, we have provided a bucket of water at the entry and a bottle of sanitizers for visitors to use” (2)</i></p> <p><i>“we expect the parent Ministry through the Zambia Tourism Agency to market and advertise the thermal springs; however, nothing much is done to do that. As result, not many people know about the Chinyunyu thermal springs, except passersby, those driving to the eastern part of Zambia” (3)</i></p> <p><i>“I think we can do better if the thermal springs were run like a pure commercial business” (4).</i></p>
<p>Developing the thermal springs into a tourism resort industry.</p>	<p>The aim of this theme was to solicit views of the participants on the possible and ideal uses of the thermal springs.</p>	<p><i>“the Chinyunyu thermal springs can be commercialised and developed into a powerful tourism resort industry and be more beneficial to the locals” (1)</i></p> <p><i>“the Chinyunyu thermal springs can be transformed into an eco-resort where environmental sustainability aspects issues are respected but at the same time it can generate income for the benefit of the locals and give employment opportunities” (2)</i></p> <p><i>“I think, we can put up hotels and lodges here so that we provide accommodation facilities for people to stay here” (3)</i></p>

Themes	Operative definitions	Some extracts from the participants
		<p><i>“this place can be the main health tourism area in Zambia” (4)</i></p> <p><i>“Spas, saunas, jacuzzis can be constructed at the thermal springs” (5)</i></p> <p><i>“proper swimming pools for people to come and relax need to be developed at the thermal spring” (6)</i></p> <p><i>“erect better infrastructure such as hotels, swimming pools and a play park” (7)</i></p>
<p>Lack of local participation in local development projects</p>	<p>This theme was intended to solicit views of the locals regarding their involvement in the development and implementation of local projects.</p>	<p><i>“yes, we have the structures in place to receive proposals but the ultimate decision on what project is approved is made by the Member of Parliament” (1)</i></p> <p><i>“local community members are willing to fully participate in decision making but politicians take the lead and only select projects that serve their personal interest” (3)</i></p> <p><i>“here, we just see projects being undertaken and we wonder who proposed them” (4)</i></p> <p><i>“The Chinyunyu thermal springs development will never be a success without the participation of the local people” (5)</i></p> <p><i>“for example, we have been suggesting to the authorities that Chinyunyu need to be connected to the national electricity grid, but 56 years after independence this place still is not connected to the national grid making it extremely difficult for the locals to access electricity” (6)</i></p>
<p>Absence of decentralisation policies</p>	<p>The aim of this theme was to assess the involvement of the local authority in</p>	<p><i>“Local support has been limited by lack of funds to implement projects” (1)</i></p>

Themes	Operative definitions	Some extracts from the participants
	developing the Chinyunyu Village.	<p><i>“In terms of devolving responsibilities and fiscal devolution, nothing much has been done” (2)</i></p> <p><i>“the country is going through a rough patch where its economy was deteriorating [and] availability of funds was a challenge” (3)</i></p> <p><i>“Decision making process by the local authorities is a lengthy one as we need to get approval from the Capital” (4)</i></p> <p><i>“Chinyunyu has a Member of Parliament (MP) from the opposition political party while the Council Chairman and the Ward Councillor are from the ruling party. This has made it difficult to implement projects in the locality. There seem to be lack of cooperation between the MP and the Councillor” (5)</i></p> <p><i>“As a local authority, we have nothing to do with the heritage resources in the district such as the Chinyunyu thermal springs. The management of the thermal springs fall under the Ministry of Tourism and Arts” (6)</i></p>
Absence of a LED policy framework to guide the local authorities.	The aim of this theme was to determine whether the local authority has a LED policy framework.	<p><i>“we do not have a LED strategy per se but we are guided by the integrated development plan (IDP)” (1)</i></p> <p><i>“LED doesn’t exist in our locality” (2)</i></p> <p><i>“Most of our development plans and programmes are as dictated by the committee responsible for project approval” (3)</i></p>

**Numbers in parentheses denote the respondents in Chinyunyu Village who could not be named for the sake of confidentiality.*

From examining the responses from the participants as summarised in Table 4.6, it can be deduced that the people of Chinyunyu lack opportunities that would assist them in improving their livelihoods. A number of participants bemoaned the deep state of poverty of people in the village. This finding confirms data collected by De la Fuente et al. (2015), who found that Rufunsa district was among the poorest districts in Zambia.

Chinyunyu Village is predominantly an agro-based village. The commercial model for Chinyunyu thermal springs should accommodate and not disrupt this economic norm in Chinyunyu Village (Mafukata, 2020). Some participants submitted that there are small business enterprises, especially in the trading sector, that locals are involved in. However, the participants highlighted that the businesses in the village were struggling as the business environment was not conducive to supporting entrepreneurship. Figure 4.18 shows some small retail shops in Chinyunyu Village.



Figure 4.18: Retail shops in Chinyunyu Village: Chinyunyu Complex

Source: Author's own.

Chinyunyu does not host any large-scale industrial activities or firms that could employ a large number of its locals. Furthermore, there is an absence of industrial clusters of economic activities that could create jobs for the local community. The participants cited lack of access to electricity, or “energy poverty”, as one of the major constraints the village was facing which also deterred productive activities in the locality. Chinyunyu Village is not connected to the national grid; therefore, people depend on the use of biomass, fuel-powered generators and solar-powered energy. Generators and solar are expensive alternative sources of energy. The participants called on the local authorities to identify youths within Chinyunyu who could be empowered with financial resources to create entrepreneurial businesses. This, in their view, would stimulate more economic activities in Chinyunyu Village and support the actualisation of a modern thermal spring hotels resort in the village. The other impediment identified by the participants was the high levels of illiteracy in the village. The participants reported that the village has six community schools and two secondary schools that are inadequate to provide for the needs of the population in the village. Lack of adequate education facilities was said to adversely affect the literacy levels in the village. The pupil-teacher ratio was reported to be high, around 100:1, meaning one teacher was responsible for 100 pupils compared to the national average pupil-teacher ratio (PTR) of 42:1 (Walter, 2018). This finding corroborates Walter’s (2018) findings that PTRs in Zambia varied widely and were as high as 1:101. This phenomenon has affected the quality of education service delivery. The participants also highlighted the long distances that pupils cover on foot to get to their schools. Todaro and Smith (2015) emphasised the importance of education and stressed that education was extremely critical in fostering economic development.

The discussions and FGDs were clear evidence that the Chinyunyu thermal springs have remained undeveloped and underutilised for economic benefit of the local people. The locals and all stakeholders expressed concern about why this natural wonder was operating at its current sub-optimal state. The sentiments from the participants were that the thermal springs, once developed and commercialised, could benefit the local economy by creating employment opportunities, and as a source of foreign exchange and local revenue for the council. This finding was also

observed in the survey data, where respondents expressed the view that the Chinyunyu thermal springs were underutilised. The district of Rufunsa holds three traditional ceremonies every year, namely the Nkombalyanga traditional ceremony, the ceremony of Shikabeta Chiefdom, and the Chibwela Kumunshi traditional ceremony of Bunda-Bunda Chiefdom. These ceremonies were identified as potential sources of clients to the thermal springs once developed. In addition, the thermal springs, once developed, were said to be a huge potential market for the locally grown agro-products that could uplift a lot of lives in the villages.

The FGD participants zeroed in on the need to have development that would consider the surrounding environment and the welfare of the people. In fact, a representative from the chiefdom informed the researcher that the chief was interested to see that the area was developed. However, the chief emphasised that such development should first benefit the locals. Therefore, it was discussed that there was need to come up with a model that would incorporate the abovementioned issues if anyone was to succeed in developing the Chinyunyu thermal springs. An example was given in one of the FGDs where the Italian attempted to interfere with the thermal springs with an inappropriate development model. With that in mind, the participants expressed discomfort of involving a foreign company to develop the Chinyunyu thermal springs. An extract from one of the respondents' verbatim response is as follows:

“the locals own this place, whoever sets up any kind of development, will be investing on their place, therefore, there is need for all stakeholders to be involved. In fact, I wouldn't be comfortable for any individual to own it but if you are inviting an investor, that investor should just part of the stakeholders”.

Asked if the Chinyunyu thermal springs (i.e., NHCC) had a commercial model they followed to operate the thermal springs, the KII revealed that they did not, as they conducted their operations as business as usual. This finding corroborates various studies that found that tourism-based firms ignored the application of commercial models in the operations of their businesses (Ambrož & Omerze, 2018; Reinhold et al., 2017; Szromek & Naramski, 2019). Nonetheless, the adjustments to follow

customers' preferences, i.e., the introduction of hand sanitisers and a bucket of water at the entrance after the outbreak of the COVID-19 pandemic, may indicate that the Chinyunyu thermal springs management implicitly possess a commercial model. This author supports Chesbrough's (2007) assertions that commercial models must be possessed explicitly to allow all the workers to buy in and implement it collectively. All elements of the commercial model need to be known and understood; only then can it be successfully changed to adopt changes in the business eco-system (Chesbrough, 2007).

Respect of indigenous knowledge systems (IKS) or traditional knowledge was reported to be important in developing a workable commercial model for the Chinyunyu thermal springs. Spiritual and cultural beliefs are important in shaping rural development as the locals own useful knowledge. If this were ignored, the project would fail. A convergence of thoughts occurred on this particular issue. It was discussed that most developers or investors ignored the local knowledge in development of their projects in rural areas, hence the local community members felt disrespected. The following is an extract from the notes made during the FGDs:

“if you want this project to be successful, do not alienate local knowledges, even though they may sound superstitious and outdated to you, they are beliefs that have been there since the evolution of these thermal springs. Therefore, ensure that these issues are taken on board when developing your model. They may not be scientifically proven, but they are important in storytelling and folklore”.

Although critics of indigenous knowledge systems have argued that the cultural and traditional values are too archaic to meet the demands of a contemporary scientific world (Oke, 2006). Adejumo-Ayibiowu (2020) has counter-argued that culture mattered in policy effectiveness and that indigenous knowledge systems were a major link in achieving rural development in Africa. Adejumo-Ayibiowu's argument is consistent with the findings of this study. Mafukata (2020) has also emphasised the need to avoid disrupting social and cultural factors of the communities involved with respect to their connections with their local heritage resources. Indigenous knowledge systems are a pertinent ingredient in the

development of a sustainable commercial model for the Chinyunyu thermal springs into a CBT project (Chikaire et al., 2012). In his study of the application of IKS in Baleni and Sagole thermal springs in Limpopo, in northeast South Africa, Tshibalo (2020) found similar results. It is, therefore, imperative to involve the local community in the project formulation stage where all factors that may be in conflict with their cultural beliefs are ironed out. The KII shared the challenges and shortcomings they faced and how they overcame them when they decided to fence the Chinyunyu thermal springs. The KII revealed that the local community members almost revolted when they heard that the NHCC was planning to fence “their” cultural resource. The author was informed that the local community members believed that their ancestors would get annoyed by the planned action of the NHCC and the ancestral spirits would command the thermal springs to become cold. The local community also believed that their ritualistic activities at the site would be disturbed by the planned intervention of the NHCC. This confirms findings of other studies (Gamman, 1995; Phiri, 2019) that indigenous community members often placed non-economic value on local natural resources that were tied to cultural and traditional beliefs involving rituals and sacred sites. The finding also confirms many other scholarly studies that revealed that heritage resources, in particular thermal springs, were associated with spiritual and religious beliefs (Hoole, 2000; Tshibalo, 2011, 2020; Monaheng, 1995; Noyoo, 2007).

The author heard that the NHCC had to abandon their plans and brought together all the affected representatives of the surrounding community to clearly explain and communicate to them why the NHCC was fencing the thermal springs. This was done to start charging the “external” visitors to the thermal springs. The local community was informed that the NHCC would channel some of its revenues to build them a secondary school within the area. By following this approach, the author argues that commercialisation of the Chinyunyu thermal springs would only be a success if the economic, social and environmental benefits this development would bring to the people of Chinyunyu Village were clearly explained to local community members. Gamman (1995) supports this approach and posits that ignoring or undervaluing the importance of cultural factors surrounding local natural resources would lead to difficulties in implementing policies and projects.

Gamman (1995) recommended a social process that communicated with and involved the indigenous communities.

Another issue that was discussed in the FGDs was connected with the existing peasant farmers earning their livelihood from the premises of the Chinyunyu thermal springs. The participants believed there was need to involve them and invite them to visualise the thermal springs as something that could be converted into a cash cow that would better their livelihoods. In fact, suggestions were that these farmers should be left to continue cultivating within the premises and should be considered as potential suppliers of vegetables.

Generally, the key informants and the participants of the FGDs overwhelmingly and unequivocally agreed that the ideal development model for the thermal springs was to transform the area into a giant tourism resort area. The participants proposed facilities such as saunas, jacuzzis, spas, swimming pools, lodges and hotels as some important facilities that needed to be developed. They were quick to mention that, in contrast with the current situation, this development and ownership should benefit the local communities. The following is a verbatim extract from one of the participants:

“the current developments at Chinyunyu thermal springs do not benefit the locals in any way. Granted that the manning of the premises has created insignificant employment opportunities for the locals, the community at large does not benefit from this development by the NHCC. When they were erecting this fence, we were promised that some of the proceeds from the gate takings would be channelled to building a school in the village. Five years down the line, nothing tangible has come out of this thermal spring”.

It was emphasised that the current developments at the thermal springs have not benefited the local community. The participants discussed and agreed on the idea of modelling the thermal spring into a community-based tourism (CBT) project that would be controlled and managed by local community actors.

The planning, implementation and management of local economic development (LED) is participatory and cooperative in nature, which needs the involvement and contribution of the relevant local actors (Helmsing, 2005; Rodríguez-Pose &

Tijmstra, 2007; Rogerson, 2015; Swinburn & Yatta, 2006), for instance, the local authorities, government departments, civil societies, political leadership, the local private sector, and most importantly, the local community members. These actors must see the economic development of the local area as their collective responsibility. Key informants submitted that there were structures in place for collecting proposals and projects from the community members. The key informants indicated that the collection of ideas starts at what they called the zonal level (otherwise known as the Residents Development Committees) – the lowest level of collecting ideas and proposals from the members of the community at the grassroots. The proposals and projects lists are collected by the four zone leaders who prioritise the list and transmit the same to the Ward Development Committee for further transmission to the Constituency Development Fund Committee. Figure 4.19 provides a simplistic sketch of ideal local participation at ward level in Chinyunyu Village.

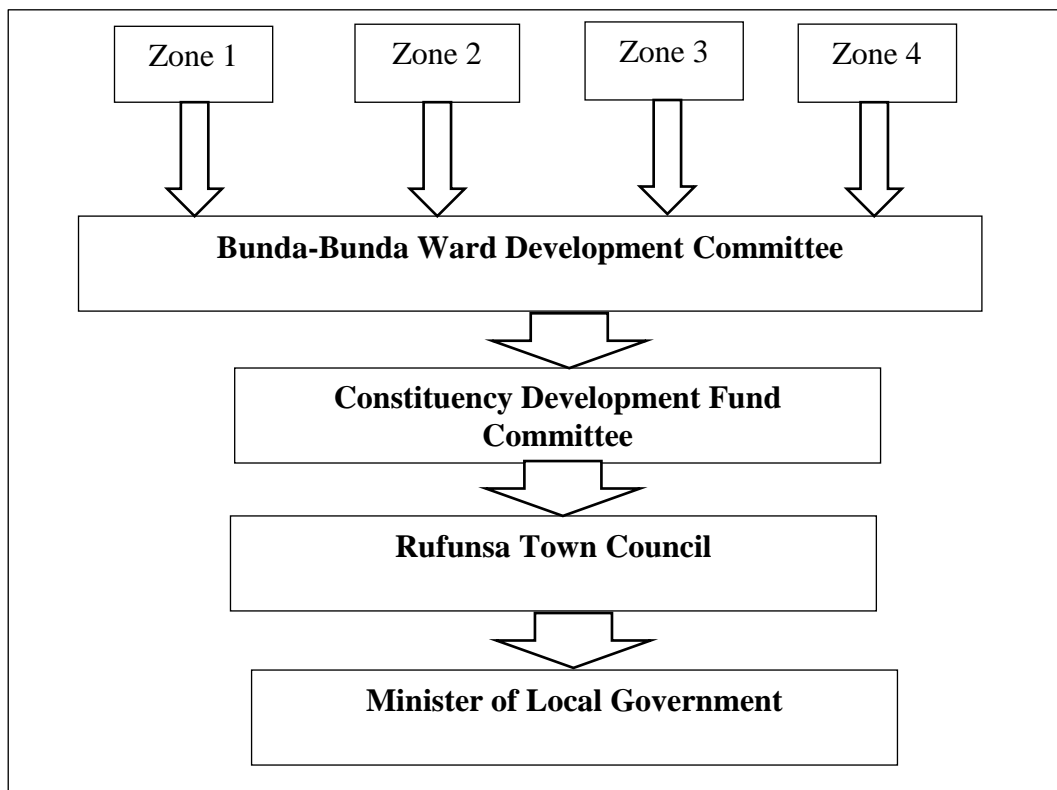


Figure 4.19: Ideal local participation at ward level in Chinyunyu Village

Source: Author's own compilation.

As shown in Figure 4.19, the zones represented by the zone committees initiate the project identification process, collect the list of proposals and projects, and submit them to the Bunda-Bunda Ward Development Committee. The local people normally have a great amount of local knowledge, experience and insight into what works or does not work for them, and the reasons for this. This is the general motivation behind initiating the process from the smallest units of the structures which are closest to the community members. The zones generate ideas that aim at satisfying the common needs of individuals in the municipality. These ideas should be viable once transformed into projects. This is where the Bunda-Bunda Ward Development Committee (WDC) comes in. The Bunda-Bunda WDC deliberates on the ideas to determine their viability and then transforms them into proposals and projects that are thereafter submitted to the Constituency Development Fund (CDF) Committee. The CDF Committee is a ten-member committee representing various constituents of the local community, namely the area member of parliament (MP); two community representatives nominated by the area MP; three councillors (one of whom is nominated by the Area MP); a representative of the chief; a representative of a civil society organisation nominated by the area MP; a representative of a religious organisation and the director from the local authority. The CDF Committee further deliberates on the submissions from the WDC, then prioritises and selects a few projects that are then transmitted to the local authority, the Rufunsa Town Council, for onward transmission to the Minister of Local Government for approval. The Ministry of Local Government thereafter funds the projects that are approved in line with the available financial resources.

A key informant reported that each constituency is funded 1.6 million Zambian kwacha (USD73,000) per year as CDF. The CDF is aimed at funding projects that have an immediate socio-economic impact of the local citizens, with a view of improving lives, alleviating poverty, and bringing development (Chibomba, 2013; EAZ, 2011; EFZ, 2013; National Assembly of Zambia, 2019). The process of local participation is intended to empower individuals and communities for them to understand their own situations and also for them to gain increased control over the factors affecting their lives. This, in turn, enhances their sense of well-being and improves their quality of life.

The CDF amount allocation for each constituency should cater for all the wards under the constituency. In this case, the CDF for Rufunsa constituency needs to cater for the 10 wards. A key informant revealed that the CDF amount had proved to be inadequate to meet their needs. For example, the results of this study revealed that in the last five years Bunda-Bunda ward where the Chinyunyu thermal springs are located has only been funded once under the CDF regarding a project to construct a clinic. The researcher was informed that this clinic has not been completed as funds were inadequate to fully complete the project. Participants in the FGDs confirmed that the current amount of the CDF was insufficient to meet the many challenges faced by the people in Chinyunyu and that the amount did little to address the high poverty levels in the municipality. The CDF does not consider factors such as poverty levels, population or geographical size of the constituency. An equal amount is allocated to each of the 156 constituencies in Zambia. Rufunsa is a vast area covering approximately 7,500 square kilometres with its citizens living in abject poverty. In addition, Rufunsa is a district as well as a constituency in itself. Its population is uniformly dispersed throughout the district. The CDF project has failed to reach all corners of the district. In fact, a Bill that was introduced in Zambia's National Assembly in 2019, namely the Constitution of Zambia (Amendment) Bill No. 10 of 2019, had proposed a delimitation exercise that would have divided Rufunsa district into three constituencies (GRZ, 2019c). A delimitation exercise is the action of creating boundaries, i.e., within the constituencies or within a country. The proposal was motivated by the desire to bring development to all parts of the district. This would have meant that the district of Rufunsa would receive three CDFs from the central government. However, the Bill failed to garner the required support by the parliamentarians at third reading stage. The failure to pass the Bill was mainly attributed to other contentious issues that were contained in the Bill. Kenya adopted a different approach of disbursing its CDF. Kenya's CDF accounts for 2.5 percent of government's revenues where 75 percent of the 2.5 percent is equally distributed amongst its 290 constituencies and the remainder, 25 percent allocated based on the poverty index of the constituency (Namano, 2014). This disbursement approach would ensure that

poverty stricken constituencies such as Rufunsa, are given more funds than other constituencies with less incidence of poverty especially those located in the cities.

A key informant reported that in 2019 the ward had submitted three projects and none was selected for funding under the CDF. The key informant submitted that the selection of the projects in the ward was ultimately determined by the area member of parliament (MP) and that the MP selected projects that would increase her political mileage, i.e., projects that would serve her own personal interest. In fact, as outlined above, the Constituency Development Fund Act of No. 11 of 2018 empowers the MP to directly appoint six (including herself) out of ten representatives to sit on the CDF Committee. This arrangement was said to favour projects of interest to the MP and thereby nullifies the effectiveness of the entire consultation process. Put differently, the process alienates the local community members from participating in the decision-making process as the selected community representatives on the CDF Committee are answerable to the MP as opposed to the community they represent. This phenomenon is what Arnstein (1969) termed as levels of “tokenism” where a picture is portrayed of “participation” by the have-nots yet in the actual sense the have-not citizens do not have the power to ensure that their views are taken into account by the powerholders, in this case the political leadership, as such the have-nots do not influence any change in the decision - making process. This finding confirms Caritas Zambia’s (2011) assertions that local participation in the CDF project identification and selection was highly influenced by partisan political attitudes and was at variance with the CDF guidelines. A more specific study by Hapompwe, Nantias, Kukano and Siwale (2020) on the impact of CDF on the development of Rufunsa Constituency found some prima facie evidence of developmental discrepancies and inadequacies of the CDF management, utilisation and application in the constituency. This study confirms Caritas Zambia’s assertions.

The results of this study revealed that the CDF project selection process relegates the local actors to being onlookers in the development of areas in which they live. This was interpreted by the participants as that the local government did not value these structures as a part of the local stakeholders’ consultation in its process of LED. This finding also corroborates the findings by other studies that CDF was

ineffective as it marginalised and disadvantaged the local people (EAZ, 2011; EFZ, 2013; LGAZ, 2018; Matipa, 2020; Phiri, 2016; ZIPAR, 2015). The lack of commitment to implement the decentralisation policies has posed several challenges regarding active involvement of the lower levels and local authorities in local economic development promotion.

The FGD participants were asked whether they were participating in the CDF projects implementation or whether they were aware of community members who were participating in the CDF projects implementation, such as working in the construction stage or as sub-contractors. The FDG revealed that the main contractor was solely responsible for executing the CDF projects and that community members were not fully involved, especially in highly technical construction works. The main contractors therefore used their own qualified workers, mainly immigrants from the neighbouring districts. The participants attributed this phenomenon to the possibility of lack of skilled labour in Chinyunyu Village.

The participants further stressed that local authorities had the main role to play in ensuring the development and maintenance of adequate infrastructure. However, the Bunda-Bunda ward was said to have inner roads that were in disrepair, poor information and communication technology (ICT) infrastructure, lack of clean water due to inadequate boreholes, and inadequate health facilities and schools. The participants blamed the lack of full decentralisation of policies for the failure of the local authority to adequately perform its duties in the ward. This finding confirms many assertions on the failure of implementing decentralisation policies in Zambia (Gumboh, 2012; Hampwaye, 2008; Mukwena, 2014; Mpundu, 2020; ZIPAR, 2015). As Gumboh (2012) asserted, lack of political will to concede political power to lower levels of governance has affected the implementation of decentralisation. A decentralised system also involves a shift of political power: the political leadership in Zambia is reluctant to move the decentralisation agenda, more especially to councils that belong to opposition political parties. This would be seen as implementing a policy that would concede power to their political rivals and would weaken the ruling political party's prowess.

In fact, when a key informant from the local authority was asked about the current development of the Chinyunyu thermal springs, the researcher learnt that the thermal springs were managed from the Capital under the Ministry of Tourism and Arts and that the local municipal council had no influence on the management of the thermal springs. This finding underscores the need to decentralise responsibilities to the local authorities as they are closer to the people at grass roots and are more likely to implement development projects that are supported by the community members. This finding confirms Lee and King's (2008) assertions in their study in Taiwan that found that some local authorities were hardly involved in the management of local thermal springs. Hoole (2000), in the study of thermal springs in Kwazulu-Natal, South Africa, also observed that the local authority was not actively involved in the operations of the local thermal springs. However, other studies (Olivier & Jonker, 2013; Tshibalo, 2011) revealed that some thermal springs were run by the local municipalities. This research follows the LED approach, in which the local authorities are considered as a critical stakeholder in commercialising the local cultural and heritage resources in their own municipalities.

According to the local authority, there are some community projects that the council is implementing. These are the construction of a refuse bay and the drilling of additional boreholes at Chinyunyu market. This is being done with a view to improve water and sanitation facilities in Chinyunyu especially in the trading areas. These are the "major" infrastructural projects being undertaken in the village.

A key informant from the local authority revealed that 70 percent of the main functions carried out by the council are to do with day-to-day operations. About 20 percent is devoted to maintenance of infrastructure in the municipality. It can therefore be argued that the local authority in Chinyunyu considers itself as mainly an administrative local authority and not as both administrative and entrepreneurial local authority. Its focus is more on the day-to-day running of the local administrative mechanism than supporting local economic development activities that would create gainful employment and eradicate the high poverty levels in the municipality. The researcher probed the key informant to find out why the local authority was less effective in promoting LED projects in its area of jurisdiction to

ensure the well-being of the local people. Lack of financial resources made it difficult for the council to support LED projects in the ward. Here is a verbatim extract from the response of one of the key informants:

“we have seen increase of officers representing other Ministries in the district but these have not come with matched financial resources needed”.

There has been retention of funds at the central government level – ministries, departments, and agencies – while the functions for which these funds are devoted to have been transferred to the local authority, hence failing to fully implement fiscal decentralisation. In fact, at the time of undertaking this study, the researcher was informed that the council workers had gone for three months without being paid their salaries. This situation has had a negative impact on the morale of local authority workers and motivation to deliver quality services in the municipality. The local authorities are meant to receive what is called the Local Government Equalisation Fund (LGEF) at the end of every month. The LGEF is meant to cater for salaries of local authority workers and stipulates that 20 percent of the total amount is supposed to be devoted to infrastructural works. The erratic release of the LGEF by the central government has made it difficult for the local authorities to undertake infrastructural works in the municipalities. This finding corroborates the Bertelsmann Stiftung’s Transformation Index’s (BTI) (2012) assertions that Zambia’s system of local government was based on effective control from the centre and that this undermined innovation among the local authorities. BIT (2012) contended that because of this centralisation, councils in Zambia were unable to fulfil their obligations such as paying of staff monthly wages.

When probed to suggest some solutions to the current challenges in Chinyunyu, the key informant said there was need to resolve differences of coordination issues at the political level. There has been a lack of cooperation among the political leadership in the municipality. The area MP is on record of informing the nation that her constituency has continued to lag behind in terms of development because, as an opposition MP, it was difficult for her to source funding from the central government for the development projects in the area (Chisanga, 2017). However, the Zambian government has continuously blamed the MP for lack of development

in her constituency and that, as an area MP, she has failed to present the developmental issues for government attention (Lusaka Times, 2020b). Political conflicts are common in most municipalities. In the northern part of Zambia, as revealed in Chapter 2, factions in the Mungwi district council between the district commissioner and other political members in the district resulted in non-implementation of projects despite those projects being funded by the central government (Lusaka Times, 2020a). The concerns of the local people are that these differences at the political levels have continued to adversely affect their standard of living where most of the members of the community live below the poverty datum line. Therefore, the Chinyunyu village has perpetually remained underdeveloped. The need for harmony among elected leadership, therefore, cannot be gainsaid.

When probed whether the Rufunsa Town Council has a comprehensive LED policy framework, the key informant from the local authority responded that the local authority did not have a local economic development (LED) policy framework. The informant informed the researcher that the local authority's programmes and activities for implementation were guided by the Integrated Development Plan (IDP). Zambia's Urban and Regional Planning Act of 2015 (GRZ, 2015) demands that all districts should have an IDP. The IDP has become the main pillar for budget prioritisation and the main interface with the local community members. Therefore, at the Rufunsa Town Council, LED is seen as an integral part of the IDP where key stakeholders in a municipality ought to come together to reach an agreement and take decisions to make the economy grow and create income opportunities for the local people. However, as Malefane and Mashakoe (2008) clearly enunciated in their study of the link between IDP and LED, they asserted that although the IDP may incorporate some aspects of LED, IDP is not LED and LED is not IDP. Therefore, the absence of a comprehensive LED policy framework at the municipal council in Chinyunyu makes it unclear for the local authority to implement specific income generation activities that would support the promotion of economic development targeting the impoverished people. The local authority has consequently failed to promote business development through, for example, promoting skills development; facilitating the acquisition of credit lines for the

entrepreneurs; provision of modern machinery and equipment to the entrepreneurs; and enhancing access to markets for entrepreneurs. The local authority's IDP is a five-year plan that mainly focuses on "hardware" aspects such as infrastructural development. The IDP acknowledges the infrastructural gap in the district and calls for radical measures to curb this crisis.

The local authority, as reported before, was said to be incapacitated without financial resources to fully implement its IDP. A well-articulated LED programme that would incorporate entrepreneurial wealth creation projects such as community-based tourism development for the Chinyunyu thermal springs would therefore have a greater impact on improving the livelihoods of the people in Chinyunyu and spur local economic development and growth.

4.4. CONVERGING THE RESULTS AND INTERPRETATION

As guided by Creswell (2015), results from both the quantitative and qualitative approaches need to be merged and interpreted. In this section, the study endeavours to converge the results arising from both approaches.

Evidence from the survey data, FGDs and interviews revealed that Chinyunyu Village is faced with serious socio-economic challenges such as high poverty levels, unemployment, high illiteracy levels and poor social and economic infrastructure such as schools, health facilities, feeder roads, electricity, ITC, water and sanitation. These findings were confirmed in both the quantitative and qualitative data collected. The respondents and participants of the study believed solutions to these challenges lie within the municipality and to some extent within the central government. Within the municipality are issues to do with implementing an effective LED model where local resources, and participation of local community actors in decision making could stimulate local development. The need for the central government to devolve power to the local authorities for them to implement developmental projects was felt to be of paramount importance in transforming Chinyunyu Village. This finding was supported by the estimation model that showed that implementation of decentralisation policies could positively and significantly contribute to LED of Chinyunyu Village.

The results of this study revealed that 70 percent of the main functions carried out by the local authority, the Rufunsa Town Council, was to do with day-to-day operations. The local authority in Chinyunyu has nothing to do with the local cultural heritage resources as they are controlled by the principal ministry in the capital city of Zambia, Lusaka. It could be fair to postulate that the local authority in Chinyunyu is mainly an administrative local authority rather than an authority that supports local economic development (LED) activities that relate to direct improvements in the living standards of the local residents in general and those which create an enabling environment for development in the local areas. This is not unique to this municipality but common in most municipal councils in Zambia. Lolojih (2014) in his study of local government and service delivery in Zambia found that most local authorities had no technical and financial capacity to implement developmental projects in their municipalities. Lolojih (2014) contended that local councils failed to effectively and efficiently discharge their mandate because they lacked manpower skills, equipment and machinery.

The results of this study also revealed that lack of adequate financial support from the central government has hampered the operations of the local authority to implement developmental activities in Chinyunyu Village. The results showed that the central government struggled to meet the wages for the council workers, let alone finance infrastructural development projects in Chinyunyu Village. Despite the estimation model showing that infrastructure development is important to stimulate economic activities in Chinyunyu, it was revealed that the lack of support for proper infrastructure by the central government has caused Chinyunyu to remain trapped in poverty and underdevelopment. For example, the results revealed glaring infrastructural deficiencies such as absence of a national electricity grid, lack of proper feeder roads, water and sanitation and poor ITC. These factors have continued to hinder the local economic development of Chinyunyu Village.

The results of this study clearly revealed that Chinyunyu Village has not made the most of its comparative advantage of maximising the use of the natural and cultural heritage the village is endowed with – the Chinyunyu thermal springs. The survey revealed that 79.4 percent of the respondents responded that the Chinyunyu thermal

springs were underdeveloped whilst 90 percent were of the view that the thermal springs were underutilised.

Results from this study show that residents in Chinyunyu have not appreciated the benefits arising from the current developmental status of the thermal springs. The thermal springs in their current state have failed to attract the high numbers of tourists that could make a positive impact on the local economy. The few visitors who are attracted to the thermal springs do not spend more than 25 minutes as very limited recreational activities are offered within the thermal springs' premises. The results have revealed that the local residents in Chinyunyu prefer a more developed thermal spring that can change the economic landscape of this rural setting. Development of a tourism resort at the thermal springs was consistent in all the discussions and survey data collected. Eighty-seven (87) percent of the respondents chose "tourism hub" as a preferred development activity for the Chinyunyu thermal springs.

Participation of local community actors was central to the discussions and data collected from the survey. The estimation model showed that the participation of local community actors in decision making has positive and significant effects towards LED in Chinyunyu Village. The FGDs revealed that the locals rarely participated in the decision making of the developmental programmes and projects in the village. The participants felt marginalised and alienated from developmental issues that directly affected their livelihoods. The existing tools for local development such as the CDF and LGEF have not been inclusive insofar as they have been ineffective in tackling the high levels of poverty in Chinyunyu. The underdevelopment of Chinyunyu Village could thus also be attributed to lack of participation of the local community actors in the development activities of the village compounded by lack of cooperation by the local political leadership.

In addition, the results of this study revealed that respect for indigenous knowledge systems (IKS) or traditional knowledge is important in developing a sustainable development model for the Chinyunyu thermal springs. Tshibalo (2020) in his study of the application of IKS in Baleni and Sagole thermal springs in Limpopo, in northeast South Africa, found similar results. Therefore, the development of a LED

strategy in Chinyunyu Village needs to avoid disrupting social and cultural factors of the communities involved with respect to their connections with their local heritage resources.

Furthermore, the results of this study revealed that Rufunsa Town Council does not have a comprehensive LED policy framework but relied on the IDP for development project implementation in the municipality. Therefore, strategies of attracting and establishing new firms in the municipality are not elaborate. Nonetheless, a LED policy framework without matching resources would not be of much help. However, the fact that a comprehensive LED policy framework is developed, in itself would attract other sources of finances not only from central government but also the non-governmental organisations and cooperating partners that would go towards developing LED projects in the municipality. It is important that local authorities in rural areas develop a LED policy framework to kickstart the development process in rural areas.

4.5. CONCLUSION

The chapter analysed the data using a mixed methods approach. The main focus of the analysis was to determine whether maximising the use of thermal springs in Chinyunyu would fit as a LED strategy that would spur rural development. Survey data and data from the FGDs and interviews were used for the analysis. The results revealed that the thermal springs in Chinyunyu were underused and underdeveloped. Respondents and participants to the study called for a more ambitious facility to be developed at the thermal springs that would benefit the local community. The results show that the ideal proposal was to transform the thermal springs into a tourism hub to be managed by the local community, otherwise known as a community-based tourism project.

The study used both descriptive and econometric analysis to test the correlates associated with LED. The results were consistent with previous studies on LED. The study found that sustainable exploitation of cultural heritage within the localities is critical for spurring rural development. In addition, the study analysed other factors that are crucial for a successful LED. Participation of community actors, decentralisation, and infrastructure development were found to be

significantly and positively associated with LED. Respect for local knowledge systems was another important aspect in the implementation of LED activities in rural areas. Use of self-reported data especially for the quantitative data is a limitation of this study as it might lead to biased conclusions; however, several mitigation measures were applied to minimise potential biases. The use of a pilot study and triangulation were employed to minimise biasness of results.

The results of this study revealed that the local authority in Chinyunyu was incapacitated to deliver on its expected mandate due to financial constraints. This phenomenon underscores the emphasis on devolving power to the local authorities to allow them to effectively deliver on their mandate. The existing “LED tools” were found to be ineffective and alienated the local community actors from participating in the identification, design and implementation of projects in Chinyunyu.

A drastic future paradigm shift in the development approach for Chinyunyu Village would be required to change its hitherto ailing socio-economic status.

CHAPTER 5

COMMERCIAL MODEL FOR THE CHINYUNYU THERMAL SPRINGS

5.1. INTRODUCTION

This chapter proposes a commercial model based on the Osterwalder and Pigneur (2010) commercial canvas model. This model has been applied by other tourism firms to commercialise their businesses (Ambrož & Omerze, 2018; Wensveen & Leick, 2009).

5.2. A PROPOSED COMMERCIAL MODEL FOR THE CHINYUNYU THERMAL SPRINGS

This study proposes that the Chinyunyu thermal springs need to be commercialised to maximise socio-economic benefits to the local community members and contribute to LED. Commercialisation of the Chinyunyu thermal springs requires the development of a commercial model, a tool used to run the businesses in a sustainable and profitable manner. This study adopts the commonly known Osterwalder commercial canvas model describing nine (9) critical building blocks of a commercial model (Griol-Barres & Martinez, 2013; Hoffmann, 2013). Figure 5.1 shows the proposed commercial model for the Chinyunyu thermal springs.

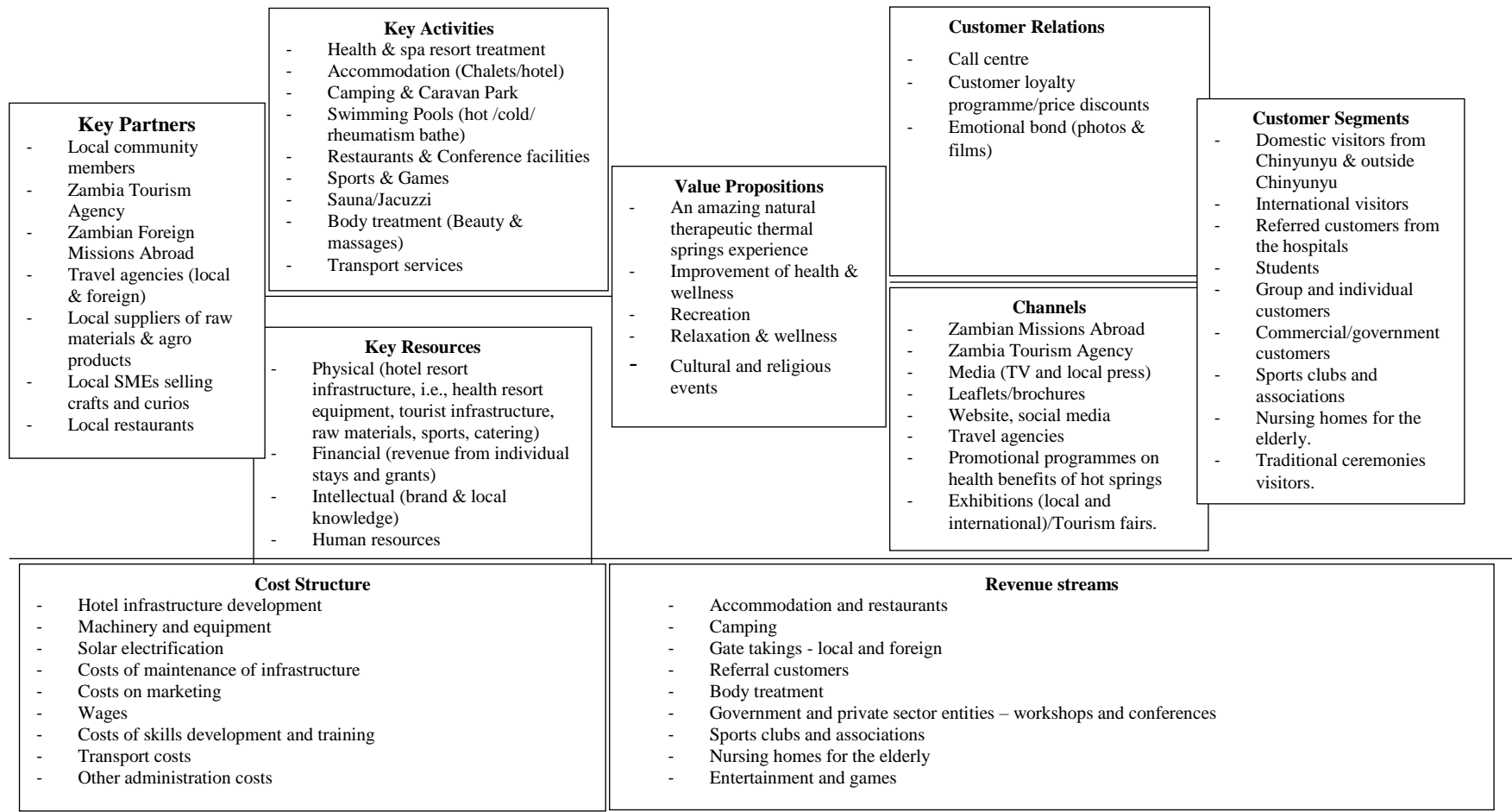


Figure 5.1: A proposed commercial model for the Chinyunyu thermal springs

Source: Author's own compilation.

Figure 5.1 depicts a sustainable commercial model that can be adopted by Chinyunyu thermal springs. The core of a commercial model is in defining the way in which enterprises capture the value for customers, entice them to pay for this value, and convert payables into profits. This, as revealed during the KIIs, is one of the missing links at Chinyunyu thermal springs. Therefore, a sustainable commercial model would be a source of competitive advantage and economic benefits for the Chinyunyu municipality. Huge financial resources would be required to commercialise the Chinyunyu thermal springs and implement such a model there. This study proposes a big push approach in mobilising resources for the development of the Chinyunyu thermal springs. Following the approach, it will be imperative for the local authority in Chinyunyu to mobilise resources from various sources to kickstart the commercialisation of the thermal spring tourism resort. The Chinyunyu thermal springs, currently a sleeping giant, need to “take off” to become a “growth pole” for the entire Chinyunyu Village. The financial resources required for commercialisation of the thermal springs could be identified and sourced from within Zambia from various institutions, for instance the pension funds, the Industrial Development Corporation – an investment arm of the government of Zambia – and grants from the central government. The local authority could also reach out to development finance institutions and cooperating partners interested in supporting climate resilient projects. The tourism resort being proposed would be eco-friendly and would create opportunities for the charcoal burners. This would in turn address the indiscriminate cutting and felling of trees to protect the local environment and contribute to reducing global warming. The potential of the project to reduce the carbon and environmental footprint could therefore provide an avenue for funding, depending on how the project is packaged.

From Figure 5.1, key partners would be institutions and entities that would partner with the thermal springs tourism resort to assist it in achieving its set objective of creating value propositions. Institutions such as the Zambia Tourism Agency (an agency mandated to promote tourism in Zambia), Zambian Foreign Missions abroad and travel agencies – both local and foreign – would assist in aggressively marketing the thermal spring within and outside Zambia. The local community would need to be thoroughly consulted for full support of the project as they too

make especially important partners. Suppliers of raw materials, agro products, local restaurants – providing local gastronomy and traditional culinary culture – and the creative industry would be significant partners in sustaining the operations of the tourism facility. In fact, the agricultural activities within the premises of the thermal springs should not be disrupted but supported to become the major suppliers to the thermal springs hotel resort.

Key activities directly related to the Chinyunyu tourism resort include health and spa resort treatment, accommodation (Chalets/hotel), camping & caravan park, swimming pools (hot /cold), restaurants and conference facilities, sports and games, sauna/jacuzzi and body treatment (beauty & massages). These activities collectively would increase the visitors' length of stay, which would in turn increase revenues for Chinyunyu thermal springs.

In the commercial model, the identified key resources to achieve the value propositions include physical resources such as the hotel resort infrastructure, and “software” resources such as financial, intellectual and human resources. The construction of new buildings at the site, and installation of a solar system for electrification would be part of the physical infrastructure. The tourism resort will need to invest heavily in upgrading skills for its workers to create a cadre of workers that will offer high quality services to the customers. It is imperative that these workers are sourced from within the local community of Chinyunyu Village.

In this model, the value propositions entail the value that the Chinyunyu thermal springs promise to deliver to customers. The value will focus on solutions that are offered to the customers' problems, and products and services for each customer segment. The value proposition in this case includes an amazing natural therapeutic thermal spring experience, improvement of health and wellness, recreation, relaxation, and cultural, spiritual, and religious events.

Customer relations are the connection created between the business entity and the customers. This will outline strategies to retain and grow the customer base. A call centre, customer loyalty programme, and emotional attachment would entice other customers to visit the thermal springs and at the same time ensure that the existing customers are maintained. The model also outlines the channels to be used for

reaching out to the customers segments. This would require a cost-effective and efficient means of communication. The model proposes the Zambia Foreign Missions abroad, the Zambia Tourism Agency, the media (TV and local press), leaflets/brochures, the website, social media, travel agencies and exhibitions.

In addition, the model proposes different customer segments to target for whom the thermal spring can create value and shows the customer archetypes for the thermal springs. Included are domestic visitors from Chinyunyu and outside Chinyunyu, international visitors, referred customers from hospitals, students, group and individual customers, commercial/government institutions, sports clubs and associations, nursing homes for the elderly, and visitors for local traditional ceremonies.

The model incorporates the most important costs inherent in the Chinyunyu thermal springs tourism resort. These costs include hotel infrastructural development, solar electrification, machinery and equipment, maintenance of infrastructure, marketing, wages, skills development and training, transport, and other administration costs.

The revenue streams are gained from customers willing to pay for the value. These include proceeds from accommodation and restaurants, camping, gate takings, referral customers, body treatment activities, government and private sector entities' workshops and conferences, sports clubs and associations, nursing homes for the elderly, entertainment and games.

5.3. A SUSTAINABLE DEVELOPMENT MODEL OF THE CHINYUNYU THERMAL SPRINGS

In formulating a LED approach to commercialising the Chinyunyu thermal springs, a holistic sustainable development approach would be important. Figure 5.2 gives a snapshot of factors to consider when commercialising the thermal spring. The key areas under discussion emanate from the reflections of the researcher at the conclusion of the study.

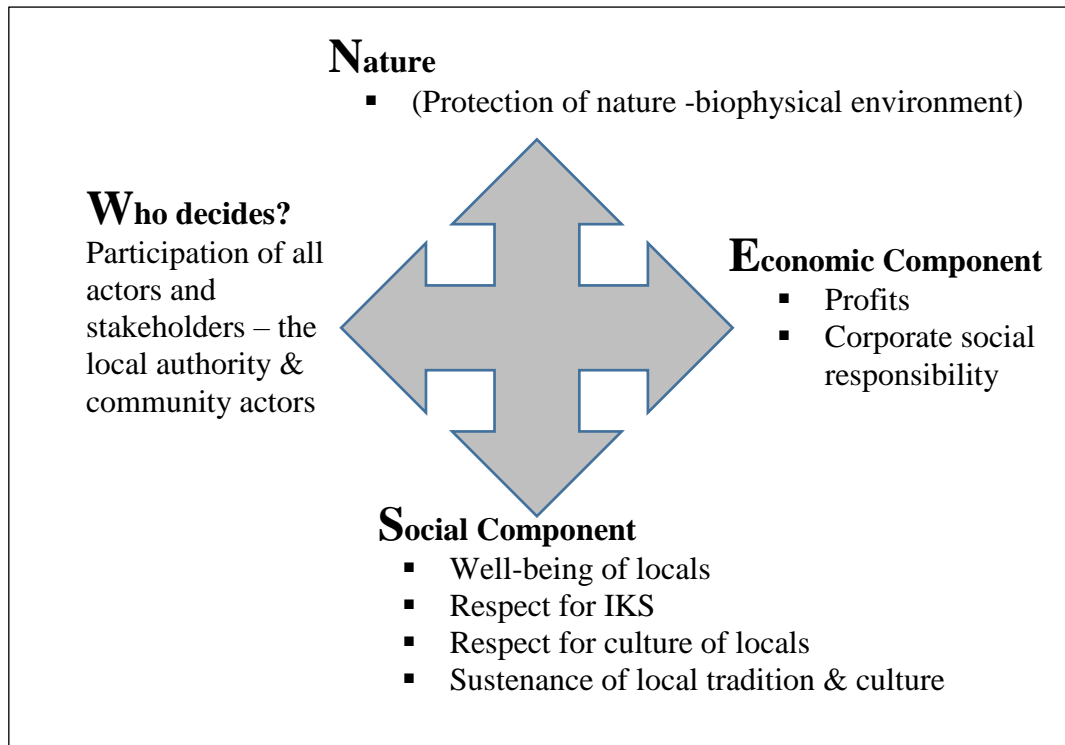


Figure 5.2: Developing the Chinyunyu thermal springs – Factors for consideration

Source: Author's own compilation.

Figure 5.2 depicts important development components that need to be considered when developing the community-based tourism resort at the Chinyunyu thermal springs. Respect for nature is paramount whenever such an undertaking is considered. Nature, such as the biophysical environment concerning birds and wildlife would need to be respected. Here, an environmental impact assessment or an environmental brief would need to be undertaken before the commencement of the project. The economic aspects introduce the issue of commercialisation. The project needs to be profitable and such profits will need to be ploughed back into the community to undertake projects related to social corporate responsibility.

The social component refers to ensuring that the project brings about change in the well-being of the local people. In addition, it entails respect for indigenous knowledge systems (IKS), respect for local culture, and supporting local traditions and culture. The proposed commercialising of the thermal springs needs to strike a balance between commercial and the cultural aspects of the springs. The ritualistic and religious significance of these thermal springs for the local community

members needs to be conserved and sustained. This study calls for full participation of the local community in the development of the thermal springs for them to own the project from the outset. There will be need for aggressive sensitisation of the local community members on the potential benefits of the thermal springs and reassurance that their cultural beliefs will not be bypassed by the proposed development.

Lastly, the decision makers for such an undertaking need to be identified. All relevant actors and stakeholders need to be brought on board for the success of the project. The interaction of the issues discussed: nature, who decides, economic and social (NWES), need to be in balance. Any imbalance in this configuration means a distortion and will have a negative impact on the benefits of all actors involved. Figure 5.3 shows a proposed development model for the Chinyunyu thermal springs with consideration of the issues discussed above.

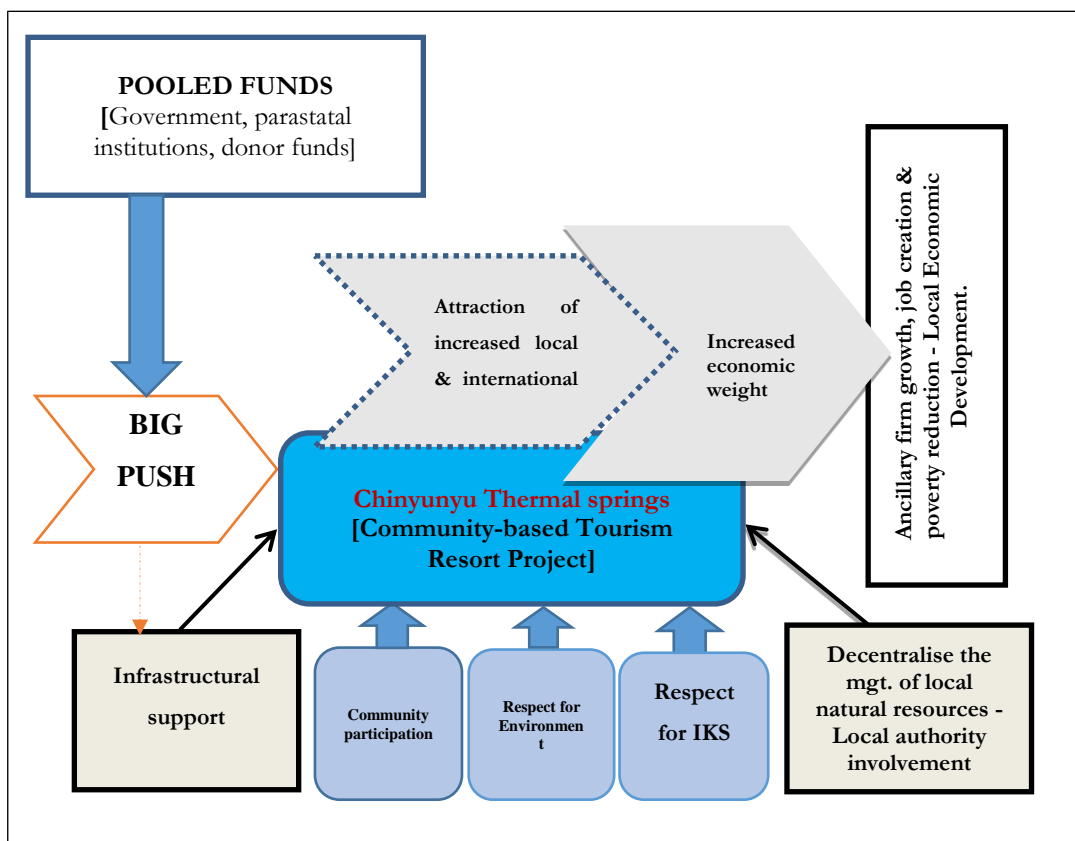


Figure 5.3: The Chinyunyu thermal springs sustainable development model

Source: Author's own compilation.

Figure 5.3 shows an ideal Chinyunyu thermal springs sustainable development model. It incorporates the components discussed in Figure 5.2. In addition, the development model suggests a big push approach of mobilising resources from various sources. The funds could also be used to upgrade infrastructure within the premises of the thermal springs such as inner roads, electricity, and ICT. The model shows that once social, economic, and environmental issues are met, and the heritage resource is decentralised, the Chinyunyu thermal springs could be transformed into a cash cow that would be attracting huge numbers of visitors spending a prolonged period at the premises. Attracting a larger number of visitors would in turn increase the economic weight of the tourism resort, stimulate growth of ancillary firms, create jobs, reduce poverty, and ultimately lead to local economic development of Chinyunyu Village.

5.4. CONCLUSION

The chapter proposed a commercial model for the Chinyunyu thermal springs that could be adopted by relevant stakeholders in commercialising the Chinyunyu thermal springs into a community-based tourism resort project.

CHAPTER 6

CONCLUSION AND RECOMMENDATIONS

This section provides the conclusion of the study.

6.1. SUMMARY OF FINDINGS

The main aim of this study was to examine and evaluate the potential of the Chinyunyu thermal springs for the purpose of local economic development in Chinyunyu Village. This was done with a view to proposing ideas to stimulate rural development by way of maximising the economic weight of heritage and natural resources endowments in these areas. The study examined the socio-economic status of the community members in rural Zambia, in particular the Chinyunyu Village, the area that hosts the Chinyunyu thermal springs; investigated the potential uses of the Chinyunyu thermal springs; and identified the most perceived ideal type of development that would optimise their use. It further evaluated the impact of the existing local economic development (LED) tools, determined the level of community participation in decision making, and identified and assessed the constraints that hindered the development of thermal springs in Chinyunyu.

This study was motivated by the fact that the country of Zambia is made up of various villages located in rural areas. It believed that developing individual villages such as Chinyunyu would in turn develop the entire country.

This study employed a mixed methods approach with a sample size of 139 individuals. A survey, key informant interviews, and two focus group meetings were conducted to collect data. The researcher collected data on the correlates that are found to be commonly associated with LED and tested them to determine if they indeed were associated in the case of LED for Chinyunyu village.

The study concluded that the Chinyunyu Village has failed to take advantage of sustainably exploiting the exciting heritage and natural resources within its locality. The local municipality has not been able to mobilise and fully utilise the economic potential available in their area and that of their people to their advantage. Specifically, the local authority in Chinyunyu focuses more on the day-to-day

running of the local administrative mechanism than supporting local economic development activities that would create gainful employment and eradicate the high poverty levels in the municipality. The existing tools for rural development such as the CDF, FISP and the LGEF have been hitherto ineffective for reducing the levels of poverty in Chinyunyu.

From the interviews and discussions, it emerged that the resource, the Chinyunyu thermal springs in this case, has remained underdeveloped and underutilised. The facility currently does not follow a commercial model in its management and operations. This local natural resource has failed to significantly contribute to the well-being of the community members in Chinyunyu Village. Evidence from this study has revealed that levels of poverty in Chinyunyu village are extremely high, with 28 percent of respondents indicating that the poverty rate is between 71 to 100 percent and 68 percent of respondents reporting high poverty levels of between 51 to 70 percent. The local people in Chinyunyu Village struggle to meet the basic needs of their families.

The results of this study also revealed that the local community are only involved up to the consultation levels - levels of “tokenism”, i.e., suggesting ideas and proposals for local projects; but their proposals are not taken on board when elevated to higher levels in the structure. The failure of the local community to participate in the decision making for their future has also contributed to the underdevelopment of the rural areas. LED is about community participation to continuously improve their investment climate and business-enabling environment to enhance their competitiveness, retain jobs and improve incomes. Lack of decentralised authority and poor infrastructure were other factors identified in this study that have contributed to underdevelopment of the rural areas in Zambia. In addition, the absence of a local economic development policy framework and hence an institutional structure for local economic development promotion has exacerbated the situation. In its current form, the local authority in Chinyunyu is hardly committed to implementing plans and programmes that have a direct bearing on LED in the municipality.

Finally, the results of this study showed that people in Chinyunyu overwhelmingly selected a community-based tourism resort as an ideal local economic development for the Chinyunyu thermal spring. The results of this study present an opportunity for Zambia to introduce the first ever health tourism centre in the country, as there is currently none. This will have many advantages, including creating employment for the people in rural Chinyunyu Village, where unemployment and poverty are a major problem. Development of thermal springs is labour intensive and could provide a stable source of employment not only in Chinyunyu but across rural Zambia where these thermal springs are mostly located. This would fit well with the aspirations of the Zambian government of promoting labour intensive industries in rural Zambia.

6.2. RECOMMENDATIONS AND POLICY IMPLICATIONS OF THE PROJECT

This study has several recommendations and policy implications for practitioners, and academic and policy researchers.

The following recommendations are proposed:

(1) Decentralise the management of the Chinyunyu thermal springs

Decentralisation has the ability and potential to improve economic development at the local level. The findings of this study have shown that decentralisation of authority and responsibilities from the central government to the local authority increases local economic development. The study identified that local authorities are in a better position spatially to promote local economic development as they are closer to the development action spots and closer to the challenges various local areas are facing under their control. Disparities in the poverty levels in Zambia suggest that interventions to fight poverty need to be tailored at local government levels. The concept of decentralisation in Zambia has been under “implementation” for the last two decades with no tangible results. This situation has hindered the ability of local authorities to effectively promote LED. This study, therefore, proposes that as part of public sector improvement policies, Zambia should accelerate the full implementation of the national decentralisation policy. Of specific interest, the study proposes that the management and control of the

Chinyunyu thermal springs should be decentralised by transferring it to the local authority and ultimately to the community members of Chinyunyu. Once the thermal springs are detached from central government, the local municipal council will need to work out the modalities of transferring the heritage resource to the community members in Chinyunyu for them to own and manage the resource – *bricolage*. The community members should therefore eventually take charge of this resource as espoused by the community-based tourism projects proponents. The community members would be expected to establish corporate governance structures and run the thermal spring on a purely commercial basis.

The results of this study further revealed that the municipal council in Chinyunyu is seriously underfunded. Fiscal decentralisation, once fully implemented, would improve the resource envelope of the local authority and in turn lead to improvement of service delivery. The improved service delivery would create a conducive environment for business to flourish in the municipality.

(2) Commercialise and develop the Chinyunyu thermal springs into a community-based tourism resort

The findings of this study have shown that exploitation of the local resource endowments can contribute positively to the local economic development of Chinyunyu Village. Participants to this study showed enthusiasm for the Chinyunyu thermal springs to be commercialised and developed into a tourism resort industry so that more benefits could accrue to the local community members. In its current state, the results of this study have revealed that the contribution of the Chinyunyu thermal spring to the local economic development of Chinyunyu is sub-optimal. The results suggest that in the development process and maximising the use of Chinyunyu thermal springs, it is essential to consider both the indigenous knowledge system and scientific knowledge. An expert from outside the municipality whose role can be advisory in nature is recommended in the development process of the Chinyunyu thermal springs.

As reported in this study, charcoal burning is prominent in Chinyunyu. The need to provide charcoal producers with alternatives to protect the environment cannot be over-emphasised. A community-based tourism resort would, therefore, provide a

sustainable and eco-friendly alternative and absorb most people that conduct charcoal business as a livelihood resource.

(3) Enhance participation of community actors in decision making of the locality

Participation of the local community actors was found to be significantly and positively associated with local economic development. This participation of stakeholders should start from the inception of ideas of development projects to implementation – more like forging a partnership with the community actors. All stakeholders should be valued in the LED process. The goals of LED are unlikely to be achieved without the active involvement of the relevant community actors in the process. The results of this study brought to light that the current tools used for LED, such as the Constituency Development Fund (CDF) and Local Government Equalisation Fund were not sufficient to meet the needs of the local people. Local community actors were said to be excluded in the decision-making process of developmental projects earmarked for the locality. A smoke-screen of “citizen participation” or the levels of “tokenism” was seen to be practised by the powerholders i.e., the political leadership. This study therefore strongly recommends for a total overhaul of the structures for project identification and implementation to allow room for real participation by the local community members through partnerships, delegated powers or citizens control. The principal act, the CDF Act no. 11 of 2018, would need to be revised in order to reduce the powers of the area member of parliament in deciding the fate of his or her electorates. In addition, besides a drastic increase of the CDF budget allocation - a big-push, Zambia should adopt a CDF disbursement system based on the poverty index of each constituency where constituencies with higher poverty incidence receive a larger share of the CDF. This will address the hitherto regional imbalances in the country. Furthermore, in order to increase the absorption capacity of the CDF funds, local authorities need to build technical capacities that will empower them with technical know-how regarding the formulation and implementation of local economic development programmes and projects.

(4) Provide basic infrastructure

The findings of this study showed that infrastructure development significantly increases local economic development. The FGDs and KIIs revealed that Chinyunyu Village was in dire need of basic soft and hard infrastructure. The study proposes that the central government of Zambia should, as a matter of urgency, consider electrifying the village. In addition, the central government should improve the road network within the village, water and sanitation, ICT, education, and health infrastructure. These interventions are critical for the local economic development of the village.

(5) Formulate a local economic development policy framework

The local authority in Chinyunyu should consider formulating a stand-alone LED policy framework to guide its developmental projects in the municipality. The document could also be used to source funds for development. The LED policy framework could complement the existing integrated development plan (IDP) if not an alternative to the IDP. The LED approach emphasises stronger participation of the local community actors, the formulation of development strategies that are well balanced for sustainable development and offers a new way of resolving some challenges faced by poor rural areas in Zambia. The absence of a comprehensive LED policy framework in the municipality makes it unclear for the local authority to implement specific income generation activities that would support the promotion of economic development targeting the impoverished local people. The study generally recommends that Zambia should adopt a LED approach in developing its depressed areas, especially the rural areas.

6.3. AREAS FOR FUTURE RESEARCH

This study, though exhaustive within the scope in which it intended to research, leaves room for other aspects to be researched regarding exploitation of local heritage resources for local economic development in rural areas. These aspects may include:

- (i) A comprehensive study to assess the capacity of the local authorities to effectively implement local economic development policies and programmes. This would be important if Zambia adopts the LED approach for its rural

development, since the local authorities would need to be equal to that task to implement the LED strategies.

- (ii) Comprehensive research on how the indigenous knowledge systems would affect the implementation of LED strategies in the municipalities. This is important, as ignoring such knowledge would be detrimental to the effective implementation of the LED approach.
- (iii) Although this study has high external validity, it would be interesting to undertake a similar study at a national level involving the 116 municipal councils in Zambia. This would enable the study to collect a larger data set from which results on other pre-conditions of implementing LED strategies would be drawn.

6.4. CONCLUSION

The chapter summarised the findings of this study and articulated a number of policy recommendations and implications that are deemed necessary to help address the high levels of poverty in the country and in Chinyunyu Village in particular. These cut across issues related to adopting a comprehensive LED approach in developing the rural areas. The LED approach would encompass community actors' participation, sustainable commercialisation of natural heritage resources, decentralisation of decision making, and development of soft and hard infrastructure. The promotion of LED can be an instrument to enhance local development in such a way that it can ensure a transformation of local government authorities into high performing organisations. Zambia stands a better chance of leveraging the local economic development promotional drive to improve the livelihoods of its citizens, especially those located in rural areas. This could be done by maximising the use of the thermal springs in these places by commercialising them.

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ANNEXURES

ANNEXURE I: QUESTIONNAIRE



MAXIMISING THE USE OF THERMAL SPRINGS FOR LOCAL ECONOMIC DEVELOPMENT IN RURAL ZAMBIA

A CASE STUDY OF CHINYUNYU THERMAL SPRINGS, RUFUNSA DISTRICT

Brief Introduction

This questionnaire seeks to collect primary data on the utilisation of the Chinyunyu thermal springs/ hot springs as a resource that could tackle the poverty levels in the locality and spur local economic development (LED) of Chinyunyu Village.

Anonymity and confidentiality

The data to be obtained from the administration of this questionnaire is intended for academic purposes only and will be treated in strict confidence. The data and information to be gathered will not reflect the views and/or opinions of individual respondents but will be presented in an aggregated manner. No disclosure of individuals' views will be made.

Thank you in advance for your time and interest to participate in this survey.

CONTACT DETAILS OF THE RESEARCHER:

Chibwe Chisala, Email: chisalachibwe@yahoo.com

1.0 GENERAL INFORMATION

Interview Details	Respondents Details
<p>Organisation ID _____</p> <p>Respondent ID _____</p> <p>Enumerator's name _____</p> <p>Data (DD/MM/YY) ____/____/____</p> <p>Respondents phone _____</p>	<p>Age (Years) _____</p> <p>Gender: <input type="checkbox"/> Female <input type="checkbox"/> Male</p> <p>Marital Status: <input type="checkbox"/> Married <input type="checkbox"/> Single <input type="checkbox"/> Other</p> <p>Size of Household _____</p> <p>Level of education:</p> <p><input type="checkbox"/> Certificate <input type="checkbox"/> Diploma <input type="checkbox"/> Degree</p> <p><input type="checkbox"/> Masters <input type="checkbox"/> Doctorate <input type="checkbox"/> None</p> <p>Skill/Profession _____</p> <p>Economic status:</p> <p><input type="checkbox"/> Unemployed <input type="checkbox"/> Self-employed</p> <p><input type="checkbox"/> Salaried employment <input type="checkbox"/> Business</p> <p><input type="checkbox"/> Other</p> <p>Main income source</p> <p><input type="checkbox"/> Employment <input type="checkbox"/> Business</p> <p><input type="checkbox"/> Remittances <input type="checkbox"/> Social welfare</p> <p><input type="checkbox"/> Other _____</p> <p>Length of Stay in Chinyunyu _____</p>

2.0 POVERTY AND UNEMPLOYMENT

2.1 How would you describe your economic status?³

- 1.** Don't know **2.** Extremely Poor **3.** Poor **4.** Rich **5.** Very rich

2.2 What is your income range per month in Zambian kwacha?

.....

2.3 How would you describe the levels of poverty in Chinyunyu (i.e., people living less than ZKW 45 (USD1.9) a day)?

- 1.** Low (1 % – 30%) **2.** Moderate (31% – 50%) **3.** High (51% – 70%)
4. Extremely high (71% – 100%)

2.4 Kindly mention the main three (3) economic activities undertaken by the locals in the area:

.....
.....

2.5 In your opinion what could be your proposals to the develop Chinyunyu Village?

.....
.....

2.6 How would you describe the unemployment levels in Chinyunyu Village?⁴

- 1.** Low (1 % – 30%) **2.** Moderate (31% – 50%) **3.** High (51% – 70%)
4. Extremely high (71% – 100%)

2.7 To what extent do you agree or disagree that the following are the reasons for the current high poverty and unemployment levels in Chinyunyu?

³ living on less than USD 1.90 (ZKW 45) a day.

⁴ Unemployment active people without a job and a living wage.

		Strongly disagree (1)	Disagree (2)	Don't know (3)	Agree (4)	Strongly agree (5)
i	Lack or inadequate support from the local municipal council					
ii	Low educational levels and skills					
iii	Lack of local economic development policies					
iv	Lack of local & community participation in development of policies					
v	Poor infrastructure					
vi	Lack of social amenities – decent shelter, food, water and sanitation, education and healthcare.					
viii	Lack of local support institutions					
ix	Lack of entrepreneurial activities					
x	Inadequate government social grants					
xi	Thermal springs are not fully utilised to benefit the locals.					

3.0 THE CHINYUNYU THERMAL SPRINGS

3.1 How often do you visit the Chinyunyu thermal springs in a year?

1. Never 2. > 5 times 3. 6 – 10 times 4. > 5 times 5. Uncountable

3.2 For what purpose do you visit the Chinyunyu thermal springs?

1. Leisure 2. Health 3. Religious 4. Spiritual 5. Farming

Other (*specify*) _____

3.3 Do you pay to visit the site?

- Yes No

(If your answer is Yes, please continuing to answer 3.4 otherwise skip and answer 3.5.)

3.4 How much do you pay at the entrance?

.....

3.5 What is your opinion on the current development status of the Chinyunyu thermal springs?⁵

1. Very underdeveloped 2. Underdeveloped 3. Neutral 4. Developed
5. Very developed

3.6 How do you think the Chinyunyu thermal springs are currently being utilised?⁶

1. Highly underutilised 2. Underutilised 3. Neutral 4. Well utilised
5. Highly utilised

3.7 In your opinion, what are the suggestions you would make to fully benefit from the thermal springs?

⁵ i.e., gauging from the existing recreational facilities and infrastructure, or any other - industrial, geothermal energy, aquaculture and agriculture?

⁶ Is the utilisation of the thermal springs being maximised in its current form to the benefit of the local community members?

1. Geothermal energy
2. Tourism hub
3. Agriculture
4. Industrial
5. Maintain status quo

Other (*specify*) _____

4.0 LOCAL ECONOMIC DEVELOPMENT

Local economic development (LED) is a development approach where the community members, businesses and non-governmental sector partners work collectively to create better conditions for economic growth, employment generation and improvement of livelihoods in the municipality.

- 4.1 Are the locals in Chinyunyu participate in policy making, project formulation and implementation?

Yes No Unsure

(If yes, answer 4.2 otherwise skip to 4.3)

- 4.2 Are your proposals and suggestions taken on board in policy making, project formulation and implementation?

1. Never
2. Occasionally
3. Neutral
4. Well
5. Very well taken on board.

- 4.3 Are there specific local programmes targeted to uplift the standards of living for the locals?

Yes No Unsure

(If Yes answer No. 4.5)

- 4.5 In your opinion how has the impact of the existing LED programmes to alleviate the poverty levels in the locality?

1. Very Low
2. Low
3. Don't know
4. High
5. Very High

- 4.6 Is the local municipality supporting or funding any local development programme in the area?

council to make their independent decisions would contribute to local economic development of Chinyunyu Village?

Yes

No

4.14 Do you think local economic development is the ideal and effective strategic model for developing Chinyunyu Village?

1. Strongly disagree 2. Disagree 3. I don't know 4. Agree
5. Strongly agree.

4.15 In your opinion, what are the low-lying programmes that could improve the livelihood of the locals?

.....
.....

Thank you for your participation!

ANNEXURE II:
KEY INFORMANT INTERVIEW GUIDELINE –
NATIONAL HERITAGE CONSERVATION COMMISSION



Date:

Place:

Interviewer:

Interviewee:

Position:

This interview is based on the researched carried out in partial fulfilment of a PhD in Development Studies at the University of South Africa. The main aim of this study is to explore opportunities of maximising the use of Zambia's thermal springs to promote local economic development (LED) and fight poverty in the rural areas, in particular, this study focuses on the Chinyunyu thermal springs. As such, this interview will give a broader understanding to the researcher of the various issues surrounding the thermal springs and the prevailing local economic development initiatives in the village.

Questions:

1. As the custodians of the Chinyunyu thermal springs, kindly share with me a brief history of the Chinyunyu thermal springs?
2. Could you tell me the main activities that take place at the Chinyunyu thermal springs?
3. Are there any ritualistic and religious activities performed at the site?
Please share your experience.
4. What are the charges per entry to view the Chinyunyu thermal springs?

5. What is your role in promoting the Chinyunyu thermal springs?
6. How many workers are employed to manage the Chinyunyu thermal springs?
7. How much is the salary of an average worker employed at the Chinyunyu thermal springs?
8. What is the trend of visitors that come to visit the Chinyunyu thermal springs?
9. What is the duration on average spent by the visitors at Chinyunyu thermal springs?
10. What are some of the challenges faced by managing this cultural heritage?
11. How is your relationship with the local people?
12. What benefits accrued to the local people as a result of the Chinyunyu thermal springs?
13. When was the fencing, construction of the reception and toilets done?
14. What are your plans of expanding the use of the Chinyunyu thermal springs?
15. Do you have a commercial or business model that you follow in operating the thermal springs?
16. What model do you use to analyse and evaluate your business?
17. What proposals can you make on maximising the utilisation of the Chinyunyu thermal springs for local economic development in Chinyunyu Village?
18. What are the limitations and shortcomings that could hinder the commercialisation of the Chinyunyu thermal springs as an agent for LED/ rural development?

THANK YOU FOR YOUR PARTICIPATION!

ANNEXURE III:
KEY INFORMANT INTERVIEW GUIDELINE –
AREA COUNSELLOR AND MEMBER OF PARLIAMENT



Date:

Place:

Interviewer:

Interviewee:

Position:

This interview is based on the researched carried out in partial fulfilment of a PhD in Development Studies at the University of South Africa. The main aim of this study is to explore opportunities of maximising the use of Zambia's thermal springs to promote local economic development (LED) and fight poverty in the rural areas, in particular, this study focuses on the Chinyunyu thermal springs. As such, this interview will give a broader understanding to the researcher of the various issues surrounding the thermal springs and the prevailing local economic development initiatives in the village.

Questions:

1. Could you give me a brief history of the locality?
2. What are the socio-economic development trends in the locality? (i) what economic activities that drive the local economy? (ii) what are the development problems encountered? (iii) what causes the problems? (iv) how can these problems/challenges be resolved?
3. What role do political leaders play in development of the communities?
4. Are there any projects you have been promoting in Chinyunyu Village?

5. To what extent have the local community in Chinyunyu participated in developing local development programmes? Are there any community groups involved in local economic development?
6. What are your suggestions on maximising the use of the thermal springs in Chinyunyu?
7. What are the limitations and shortcomings that could hinder the commercialisation of the Chinyunyu thermal springs as an agent for LED/ rural development?
8. Any other information on the Chinyunyu thermal springs and any other development initiatives in the village?
9. What is your opinion on local economic development? (i) what instruments are in place for developing the local areas? (ii) how effective have these instruments been towards the development of the local area?
10. In your view to what extent has the local authority contributed to local economic development?
11. What can be done to enhance your involvement in local economic development?

THANK YOU FOR YOUR PARTICIPATION!

**ANNEXURE IV:
KEY INFORMANT INTERVIEW GUIDELINE –
LOCAL TRADITIONAL LEADERS**



Date:

Place:

Interviewer:

Interviewee:

Position:

This interview is based on the researched carried out in partial fulfilment of a PhD in Development Studies at the University of South Africa. The main aim of this study is to explore opportunities of maximising the use of Zambia's thermal springs to promote local economic development (LED) and fight poverty in the rural areas, in particular, this study focuses on the Chinyunyu thermal springs. As such, this interview will give a broader understanding to the researcher of the various issues surrounding the thermal springs and the prevailing local economic development initiatives in the village.

Questions:

1. Could you give me a brief history of the locality?
2. What are the socio-economic development trends in the locality? (i) what economic activities that drive the local economy? (ii) what are the development problems encountered? (iii) what causes the problems? (iv) how can these problems/challenges be resolved?
3. What role do traditional leaders play in development of the communities?
4. Are there any projects you have been promoting in Chinyunyu Village?

5. What has been your relationship with the local authorities in implementing developmental projects? How can these relations be enhanced?
6. To what extent have the local community in Chinyunyu participated in developing local development programmes? Are there any community groups involved in local economic development?
7. What are your suggestions on maximising the use of the thermal springs in Chinyunyu?
8. Any other information on the Chinyunyu thermal springs and any other development initiatives in the village?
9. In your view to what extent has the local authority contributed to local economic development?
10. What can be done to enhance your involvement in local economic development?

THANK YOU FOR YOUR PARTICIPATION!

**ANNEXURE V:
KEY INFORMANT INTERVIEW GUIDELINE –
LOCAL AUTHORITY**



Date:

Place:

Interviewer:

Interviewee:

Position:

This interview is based on the researched carried out in partial fulfilment of a PhD in Development Studies at the University of South Africa. The main aim of this study is to explore opportunities of maximising the use of Zambia's thermal springs to promote local economic development (LED) and fight poverty in the rural areas, in particular, this study focuses on the Chinyunyu thermal springs. As such, this interview will give a broader understanding to the researcher of the various issues surrounding the thermal springs and the prevailing local economic development initiatives in the village.

Questions:

1. Could you give me a brief history of the municipality and the size of the municipality?
2. What are the socio-economic development trends in the municipality? (i) what economic activities that drive the local economy? (ii) what are the development problems encountered? (iii) what causes the problems? (iv) how can these problems/challenges be resolved?

3. Specifically, what is the socio-economic profile of the people of Chinyunyu Village?
4. What is your role in promoting local economic development initiatives and rural development initiatives in Chinyunyu Village?
5. What community development programmes are you implementing for Chinyunyu Village?
6. To what extent have the locals in Chinyunyu participated in developing local development programmes?
7. What are the limitations and shortcomings that could hinder the commercialisation of the Chinyunyu thermal springs as an agent for LED/ rural development?
8. Is there a structured process of receiving proposals and suggestions from the locals? Kindly share.
9. In your opinion, do you think the local community is fully engaged or participate fully in decision making of the local programmes and projects?
10. In your opinion, how best can the locals be fully involved in the formulation and implementation of local programmes and projects? Kindly give suggestions.
11. How are your local programmes in the municipality funded?
12. What efforts have been put in place to develop the Chinyunyu thermal springs over time?
13. What are your suggestions on maximising the use of the thermal springs in Chinyunyu?
14. Any other information on the Chinyunyu thermal springs and any other development initiatives in the village?
15. Could you rank the main functions carried out by the municipality (1 to 5; 5 being the highest)?
 - a) Day to day operations

- b) Implement projects
- c) Maintenance of local infrastructure
- d) Improve human settlement
- e) Others

16. What is your view on local economic development?
17. Does the municipal council have a Local Economic Development (LED) Strategy or a National Local Economic Framework it follows when LED activities? (If yes skip to No. 28)
18. In the absence a LED Strategy, what does the local authority have/use? Any strategy, plan or framework or other?
19. What is your view on the country's implementation of decentralisation measures i.e., devolving responsibilities and fiscal authority to the local government authorities?
19. Do you think of full implementation of the decentralisation policy as an instrument to enhance local economic development? Kindly explain.
20. In your view to what extent has the local authority contributed to local economic development?
21. What can be done to enhance the local authority involvement in local economic development?
22. Any other comments on local economic development?

THANK YOU FOR YOUR PARTICIPATION!

**ANNEXURE VI:
FOCUS GROUP GUIDELINES**



**MAXIMISING THE USE OF THERMAL SPRINGS FOR LOCAL
ECONOMIC DEVELOPMENT IN RURAL ZAMBIA
A CASE STUDY OF CHINYUNYU THERMAL SPRINGS, RUFUNSA
DISTRICT**

Date:

Place:

Facilitator:

Participants:

1.0 Introductions (5 mins)

Facilitator introduces the topic, its aims and objectives and gives out his expectations of the focus group interview.

Facilitator give basic rules of the focus group interview.

2.0 Discussion Topics (30 mins)

- What are the socio-economic development trends in the locality?
 - o what economic activities that drive the local economy?
 - o what are the development problems encountered?
 - o what causes the problems?
 - o how can these problems/challenges be resolved?
- What is the level of participation of the local people in the village in the development and implementation of community-based programmes and projects?

- What suggestions would you have to enhance the involvement of local people in development and implementation of community-based programmes and projects?
 - How are the cultural and heritage resources in the village such as the Chinyunyu thermal springs being utilised currently?
 - How best can the Chinyunyu thermal springs be maximised for the benefit of the locals?
 - How can you describe the developments or evolution of the thermal spring in the past five (5) years?
 - What could be the challenges of maximising the use of the Chinyunyu thermal springs as a commercial model for LED and rural development?
 - What are some of the sustainable models that could be developed to assist the community in Chinyunyu to commercialise the use of the thermal springs without disrupting the socio-cultural values of the local people?
 - Any other issues?
- 3.0 Conclusion and recap of issues discussed (10 mins)
- 4.0 Tea/drinks and snacks.

ANNEXURE VII:
RESEARCH ASSISTANT CONFIDENTIALITY AGREEMENT



Title: Maximising the use of thermal springs for local economic development in rural Zambia: A case of Chinyunyu thermal springs, Rufunsa District.

Please read through the entirety of this form carefully before signing.

This is a University of South Africa (UNISA) PhD study research in Development Studies aiming at researching on ways of maximising the use of thermal springs for local economic development in rural Zambia. The study will be conducted in Chinyunyu, Rufunsa District.

After signing this confidentiality form, it should be given back to the Researcher. The enumerator should keep a copy of the *Research Assistant Confidentiality Agreement* for their records.

Confidentiality of the Research Study

Confidentiality is the treatment and maintenance of information that an individual has disclosed in a relationship of trust and with the expectation that it will not be divulged to others in ways that are inconsistent with the understanding of the original disclosure (the consent form) without permission. Confidential information relating to human subjects in a research study may include, but is not limited to:

- Name, date of birth, age, sex, address, and contact information;
- Current contact details of family, guardian etc.;
- Educational records
- Field notes
- Audio records
- Political opinions, religious or philosophical beliefs.

As a research assistant you will have access to confidential information of the respondents. Therefore, it is of the utmost importance to maintain full

confidentiality when conducting the interviews or administering the questionnaires.
You are expected to adhere to the following:

Expectations for Research Assistants

In order to maintain confidentiality, I agree to:

1. Keep all research information that is shared with me (e.g. flash drives, notes, transcripts, data, etc.) confidential by not discussing or sharing this information verbally or in any format with anyone other than the principal investigator of this study;
2. Ensure the security of research information while it is in my possession.
This may include:
 - Keeping all the questionnaires secured if possible locked in a filing cabinet;
 - Permanently deleting any digital communication containing documents and/or data related to the research study.
3. Not make copies of documents and/or data related to the research study unless specifically instructed to do so by the principal investigator;
4. Give all research information/questionnaires back to the Researcher upon completion of my duties as a research assistant;
5. After discussing it with the researcher, erase or destroy all research information that cannot be returned to the researcher upon completion of my duties as a research assistant.

By signing this form, I acknowledge that I have reviewed, understand, and agree to adhere to the expectations for a research assistant described above. I agree to maintain confidentiality while performing my duties as a research assistant.

Signature of Research Assistant

Date

Print Name

**ANNEXURE VIII:
PARTICIPANT'S INFORMED CONSENT LETTER**



PARTICIPANT INFORMATION SHEET

17.11.2020

Title: Maximising the use of thermal springs for local economic development in rural Zambia: A case of Chinyunyu thermal springs, Rufunsa District.

Dear Prospective Participant

My name is Chibwe Chisala and I am doing research with Prof. Mavhungu. A Mafukata, a Professor, in the Department of Development Studies at the University of South Africa (UNISA), towards a PhD at the University of South Africa. The study is funded by ourselves. We are inviting you to participate in a study entitled *Maximising the use of thermal springs for local economic development in rural Zambia: A case of Chinyunyu thermal springs, Rufunsa District.*

WHAT IS THE PURPOSE OF THE STUDY?

I am conducting this research to to explore opportunities in the commercialisation of Zambia's thermal springs to promote Local Economic Development (LED) and alleviate poverty levels in Chinyunyu Village.

WHY AM I BEING INVITED TO PARTICIPATE?

We are selecting participants at random for persons between 18 years to 55 years to assist us with information and data on how best we could utilise the cultural and heritage resource in Rufunsa, the Chinyunyu thermal springs.

The study will have 139 participants in total. We believe that you would be of assistance to offer some ideas.

WHAT IS THE NATURE OF MY PARTICIPATION IN THIS STUDY?

The study involves a combination of a questionnaire and semi-structured interviews that you would be required to fill in with the assistance of the enumerator and also respond to some general questions on how the locals could participate in developing the thermal springs. This activity will take you not more than 15 minutes.

CAN I WITHDRAW FROM THIS STUDY EVEN AFTER HAVING AGREED TO PARTICIPATE?

Participating in this study is voluntary and you are under no obligation to consent to participation. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form. You are free to withdraw at any time and without giving a reason. However, since the questionnaires will be anonymous, it will not be possible to withdraw once they have submitted the questionnaire.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

The benefit of your participation will be to develop a good model that would be implemented to benefit the local community of Chinyunyu through employment creation and improvement of the local livelihood.

ARE THERE ANY NEGATIVE CONSEQUENCES FOR ME IF I PARTICIPATE IN THE RESEARCH PROJECT?

The research does not envisage any adverse effects on the potential participants.

WILL THE INFORMATION THAT I CONVEY TO THE RESEARCHER AND MY IDENTITY BE KEPT CONFIDENTIAL?

The information provided will be kept with the strictest confidentiality and anonymous. Your name will not be recorded anywhere and no-one will be able to connect you to the answers you give. Your answers will be given a code number or a pseudonym and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings.

Please note that your anonymous data may be used for other purposes, such as a research report, journal articles and/or conference proceedings, again here, your anonymity and confidentiality will be protected in any publication of the information.

HOW WILL THE RESEARCHER(S) PROTECT THE SECURITY OF DATA?

Hard copies of your answers will be stored by the researcher for a period of five years in a locked cupboard at the researcher's residence in Lusaka, Zambia for future research or academic purposes; electronic information will be stored on a password protected computer. The information will be destroyed five years. The hard copies will be shredded and electronic copies will be permanently deleted from the hard drive of the computer through the use of a relevant software programme. The audio recording will also be deleted after the expiry of the aforementioned period.

WILL I RECEIVE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

No payment will be paid out for participating in this study.

HAS THE STUDY RECEIVED ETHICS APPROVAL?

This study has received written approval from the Research Ethics Review Committee of UNISA. A copy of the approval letter can be obtained from the researcher if you so wish.

HOW WILL I BE INFORMED OF THE FINDINGS/RESULTS OF THE RESEARCH?

If you would like to be informed of the final research findings, please contact Chibwe Chisala on +33 760 735 242 or email: chisalachibwe@yahoo.com. The findings are accessible for a period of five years.

Should you require any further information or want to contact the researcher about any aspect of this study, please contact Prof. Prof. Mavhungu. A Mafukata, tel: + 27 79 103 1698 or email: mafukma@unisa.ac.za.

Should you have concerns about the way in which the research has been conducted, you may contact contact Prof. Prof. Mavhungu. A Mafukata, tel: + 27 79 103 1698 or email: mafukma@unisa.ac.za.

Thank you for taking time to read this information sheet and for participating in this study.
Thank you.



Chibwe Chisala