

An integral ecosystem: A case study to holistically establish sustainable socio-economic development for smallholder farmers in Zimbabwe

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At

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2023



DECLARATION OF AUTHENTICITY

I, **Patience Magodo**, declare that the project, ***An Integral Ecosystem: A Case Study to Holistically Establish Sustainable Socio-Economic Development for Smallholder Farmers in Zimbabwe***, is my work. Each source of information used has been acknowledged through complete referencing. This thesis has not been submitted for any other university research's project, degree, or examination.

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DEDICATION

The project is dedicated to Jesus Christ, my Lord and my family, who allow me to be the best I can be. It is hoped that, by God's grace, the project will impact the poor among us and facilitate the long-awaited social change transforming the lives of smallholder farmers at the bottom of the pyramid whilst we are still in the land of the living.

My late father was not a person of considerable means, but he impacted many people's lives. During his funeral, a queue of vagabonds would form at meal times, with many crying that it could be their last meal as their food provider was no more.

The social innovations are posthumously a dedication to a father who puts other people's needs first.

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Lastly, I got insights from co-researchers in different countries in the Trans4M research group. I am not able to mention everyone by name as they are many. Colleagues from many other socio-economic fraternities impacted the trajectory through social work and innovations they attained in their various life cycles. Such who deserves special mention is Horace Clemmons, who, through his entrepreneurial spirit and kind heart, strengthened the innovative ecosystem established during the research journey. He

transformed it into a network that can and is now concretising innovations in our national educational, vocational and industry sectors. Social innovations are being turned into goods and services usable by the people experiencing poverty, closing off the economic divide caused by technology injustices.

This journey was enabled by God the Almighty, and all praise and honour are returned to Him. May the good Lord richly bless all who rendered their sincere encouragement and support, making this inevitable journey a humbling success.

ABSTRACT

Integrality refers to the circumstance or place of being total and complete. Integral research investigates approaches to interventions and produces social transformation. In pursuance of that viewpoint realising the ability and potential of individuals, enterprises and societies to impact communities, a southern integral research trajectory is pursued in quest of social transformation of smallholder farmers in Zimbabwe. Integral research seeks to unify various researchers and, through its multiplicity, holistically impact the various aspects of farmers' lives. The research is founded on the principle that 'Integral Development' as a theory can be adopted and can significantly and sustainably transform not only individuals, organisations and communities but also the agricultural sector with the agenda of alleviating imbalances in diverse contexts and worlds.

Through an Inner Calling of the Researcher driven by a passion for changing the circumstances of an identified community of small-scale farmers, an outer call culminates in establishing a social enterprise. The latter engages other stakeholders through innovative social collaborations, all bent on inclusively co-creating solutions to long-standing challenges and gaps. Challenges are dire as poverty is taken as a matter of fact among the smallholder farmers at the bottom of the pyramid. The literature review of a relational Southerner pointed to a host of known challenges. The research led to why foreign support only categorised poverty and consistently rated poverty among African farmers. Compartmentalised aid and partial humanitarian strategies are repeatedly crafted to deliver short-term assistance, handed down to the communities in ways aloof from the reality and gravity of poverty. The Researcher is disturbed and seeking an ecosystem approach to resolving the long-standing gaps and challenges. The project uses integral approaches like the GENE model complemented by the 4Cs and CARE approaches to activate the community, awakening consciousness by holistically interrogating the southerner's relational approach. It entails using descriptive and feminist phenomenology. They culminate in a participatory action approach to establish a context the way it is felt, articulating the daily experience to facilitate a transformative process that capacitates the community of farmers. Embracing Da Vinci's TIPS model, which centres on Technology, Innovation, People and Systems, TIPS guides the research and how

relationships could help the flow of energy towards the desired transformation. Challenges are turning into opportunities and solutions attained through the inclusive social innovation process. Community participation led to the ownership of the issues and innovation of goods and services that speak to problems and gaps as they were felt. The solutions, especially technology justice, were profound as simple tools and integral knowledge exchange from a consultative process resulted in integrally research-based innovations. The learning mode changed from 1 to 2, and social learning skills were adopted.

Frugality was central to co-creation, and the urgency of the matter was responded to using an open-source platform that hastened the effecting and embodiment of various innovations. The local social innovators stood on the shoulders of global giants in areas of technological innovations, resolving challenging poverty with a stubborn rural face.

The GENE Model central to the research was epitomised as the four worlds of the smallholder farmers' life were holistically revisited. A Heritage Communiversity was established to enhance inclusion through social learning. With the Idea of Communiversity, the Four Worlds Approach provided an interpretive lens; technology was delivered from the north, and conscious evolution and inspiration in the east. The South brought about community learning, healing and restoration, and the West re-established social enterprises that were refurbished into social laboratories and enterprises. This vital response transformed the local education systems as integral knowledge is exchanged, transforming farming into viable businesses (integral enterprises) that take cognisance of the size and needs of the smallholder farmer.

Keywords: Knowledge-based ecosystem, holistic delivery of solutions, liveable incomes, ecosystem-based approach, Heritage-based Communiversity, learning communities, integral knowledge exchange, social learning and institutionalised social innovations.

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LIST OF ACRONYMS

SME – Small and Medium Enterprises

OECD-FAO – Organisation for Economic Co-operation and Development and Food
Agriculture Organisation

FAO – Food Agriculture Organisation

TnC – Tafadzwa Ne Chiedza Development Trust

ESAP – Economic Structural Adjustment Programme

IMF – International Monetary Fund

USA – United States of America

LCDs – Least Developed Countries

GoZ – ZUNDAF Government of Zimbabwe - United Nations (UN) strategic
programme framework to support national development priorities

GoZ – Government of Zimbabwe

GDP – Gross Domestic Product

HIT – Harare Institute of Technology

UZ – University of Zimbabwe

SDGs – Sustainable Development Goals

GMO – Genetical Modified Organisms

GLOSSARY OF KEY UNFAMILIAR WORDS/TERMS

CARE – Community Activation, Awakening Awareness, Institutionalised Research and Embodiment

4Cs – Call, Context, Co-Creation and Contribution

GENE – Grounding, Emerging, Navigating and Effecting

TIPS – Technology, Information, People and Systems

PAR – Participatory Action Research

ASTS – AFRO-Centric Strategic Transformational Structures

INGOs – International Non - Governmental Organisations

CHAPTER 1:

THE BEGINNING OF THE JOURNEY

1.1 Introduction

This research concerns is the need for a holistic approach to delivering an enabling environment in Zimbabwe's smallholder farming sector. The fragmented approach to development has left most small-scale producers in abject poverty. The missing ingredient is holistic approaches to using God-given resources to solve poverty and challenges.

Guided by a concept mapping framework, the research will follow an ecosystem-heritage-based approach for the common good of all. The journey will pursue cues from nature that do not commune to work. Science Direct.Com (11 May 2023) defines an ecosystem-based approach as the application of ecosystem techniques, resources, and strategies based on the convention's three objectives: conservation, sustainable use, and the fair and equitable sharing of the benefits arising from utilising inherited resources.

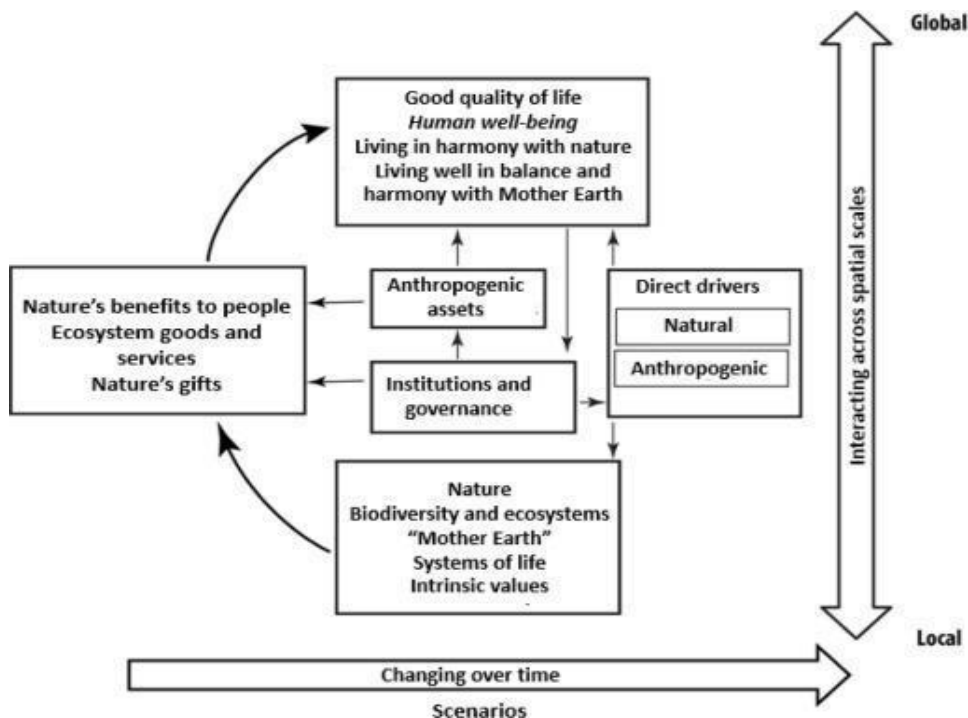


Figure 1.1: An ecosystem-based approach

(Adopted from ScienceDirect.Com)

Getting cues from the above, Africans endowed with plenty of natural resources, especially Zimbabweans, need to stay in their countries for sustainable livelihoods. Better still, nature does not borrow to complete its ecosystem; hence processing and value addition of natural resources should be in the country of origin. Solutions to be proffered should per-adventure get cues from nature in self-sufficiency. The smallholder farmers in Zimbabwe have access to land and need more essential resources to produce their household food consumption and dietary needs. Production should be more than household requirements, enabling trade to earn a liveable income. An ecosystem-based approach will probably solve these socioeconomic and technological problems.

1.1.2 Main aim and objectives of the study

The research topic is - **An Integral Ecosystem – a case study to holistically establish sustainable socio-economic development for smallholder farmers in Zimbabwe**. The research investigates and develops all vital aspects of a socio-economic ecosystem for locals in Zimbabwe to attain liveable incomes. The researcher is alluding to the possibility that there could be pillars currently lacking in the socio-economic, even educational, developmental space for the smallholder farming sector in Zimbabwe. Smallholder farmers' success and economic well-being are not evident, and most farmers live below the poverty line. According to the United Nations Manifesto (1978), the poverty datum line is the standard of living a household must attain to afford essential commodities like food, decent shelter, education and health for it not to be counted as poor.

1.2 Research Philosophy

1.2.1 The integral development theory

According to Tamminen and Poucher (2020, p.15), A research philosophy is a set of basic beliefs that guide the design and execution of a research study. Different research philosophies offer different ways of understanding scientific research. With the agenda to alleviate imbalances in the smallholder farmers' environment and their diverse contexts and worlds, the ensuing research design by Lessem and Schieffer (2018) will be followed:

(CARE and 4Cs frameworks will be elaborated under conceptual frameworks later section)

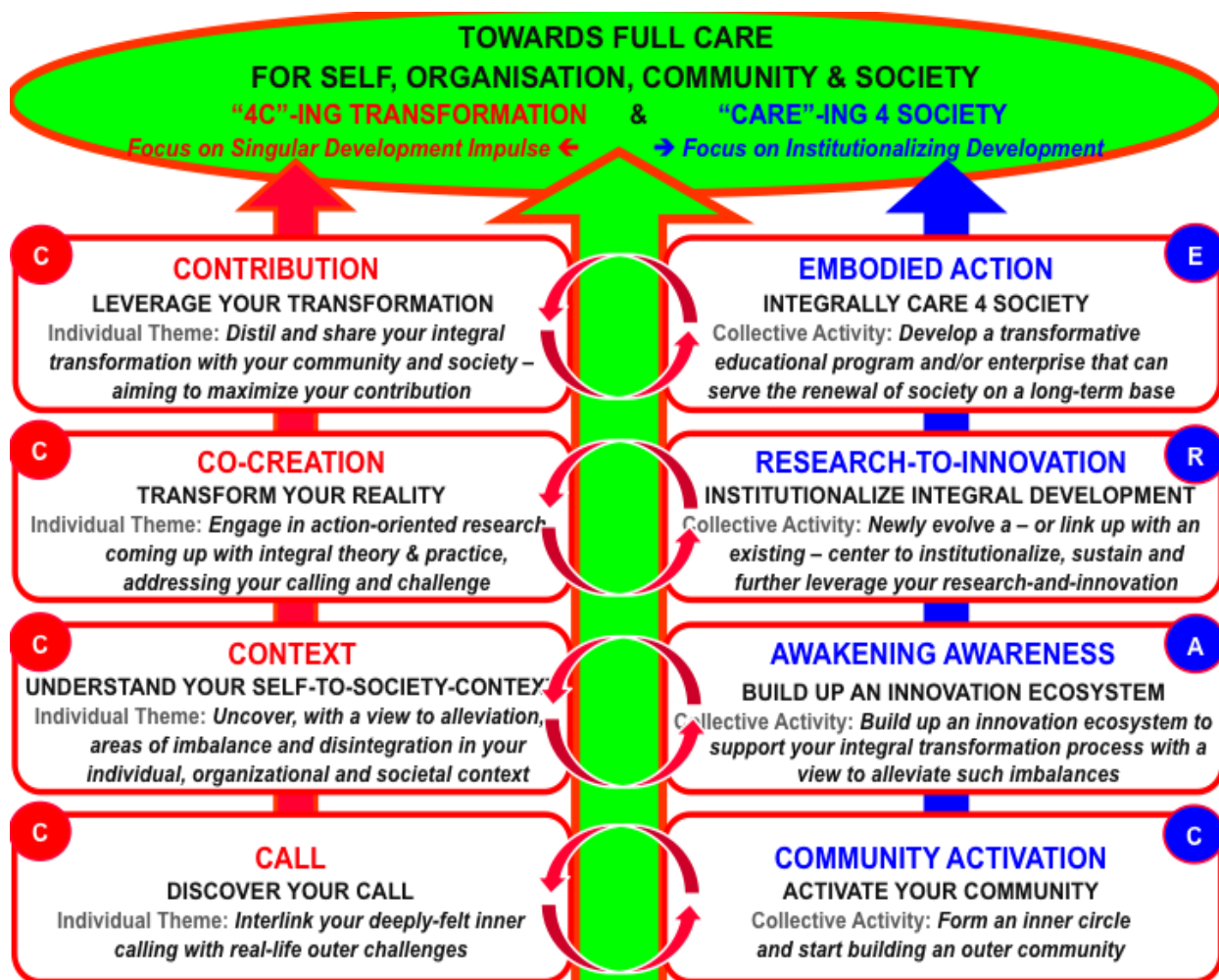


Figure 1.2: Adopted from Lessem and Schieffer lecture notes (2018)

The research design refers to the overall research plan selected to integrate the diverse components of the study coherently and logically, safeguarding that the research problem is successfully addressed. The design chosen is according to Lessem and Schieffer’s 4Cs and CARE models. It guides and provides an integrated data collection, measurement, and analysis blueprint. Being integral research, this study is based on the principle that 'Integral Development' as an option in research, can and has huge potential to significantly and sustainably transform Zimbabwe's individuals, organisations, community in the agricultural sector. Integral development

theory focuses on gathering information and seeing that desired social change is attained through inclusive social transformation.

Information on agriculture and stories from the farmers will be recorded to gather challenges and burning issues. Gatsweiler and von Braun (2015) and FAO (2018) advise that agriculture is intimately linked with food security, health, and nutrition through direct consumption and market linkages. Agriculture also affects other dimensions of development, such as environmental management and sustainability. It is the widening of the agricultural sector through an ecosystem-based approach encompassing manufacturing and infrastructure development of a collective local economy; it pre-positions huge prospect of increasing local opportunities and strengthening the development of locals by locals. This research concerns the missing pillars and ensuring the solutions are locally driven and holistically delivered. Moreover, the co-created solutions are expected to impart different levels to farmers 'lives. Individually, communally, institutionally, and societally giving birth to an integral or Knowledge-based Economy. The new economy should enable smallholder farmers to profitably and sustainably exploit their heritage base for economic well-being.

1.2.2 Is there potential for a knowledge-based ecosystem for the good of all?

In the research context, a knowledge-based ecosystem fosters intentional interactions between various parties for transformational knowledge management and improves local decision-making and local social innovations through collaboration. The British Council (2023) defines transformation management as a leadership style that facilitates and capitalises on organisational/National strategic change where the change is framed as an opportunity. Through the knowledge-based ecosystem strategy, the research is embracing institutionalised research and social innovations to ensure that national productivity is enhanced for the economic well-being of more than 70% of citizens.

According to van Kooten (1993, p462), to overcome the shortcomings of neoclassical economics and cover environmental issues, one has to take cognisance of the intellectual family of land economics. Van Kooten further advises that the land intellectuals, agricultural, production resources, land and economics acknowledge and

are the three components covered under mainstream economics. The background of the economy of Zimbabwe consists of more than seventy per cent of the population deriving their livelihood from agricultural-based activities. Therefore, land economics can guide the researcher as she looks at the diverse issues that cause farmers, operating at a small scale, to live in abject poverty despite full access to land and all the ostensibly hard work they do. Change is minimal even for those few farmers who have received external aid or grants; the question remains why poverty is resonant amongst Zimbabweans with valuable land resources.

Besides the research work being driven by the deplorable state of poverty that most Zimbabweans live under, it was further stimulated by the mantra of a Heritage Based Economy currently occupying the Zimbabwe media fraternity. Through the Government of Zimbabwe Investment Policy, The Doctrine (2019), the current administration of Zimbabwe is preaching the economic gospel of a Heritage-Based Economy where citizens are expected to prosper by exploiting their God-given natural resources. The heritage components are land, fauna, flora, minerals, water, and the natural environment for an upper-middle-class economy by 2030. It means Common and Stagl's (2005) recommendation that agriculture is an occupation and an economic enterprise is valid for most Zimbabwean farmers' scenarios. The research deems that the Government of Zimbabwe must ensure that an all-inclusive enabling environment is available to most citizens. The enabling environment is expected to support an unbroken socio-economic value chain, with appropriate technology complemented by consistent policy support and sustainable market systems.

1.3 Research Context: Background

A preliminary literature review shows that several causes have led to the undesired state of poverty in the small farming sector. Broad-based approaches are needed when tackling the poverty challenge threatening smallholder farming enterprises' holistic community development, sustainability, and viability. Aid has been extended to Zimbabwe and other developing nations for decades, yet the poverty headache lingers.

1.3.1 Research Context and Questions

The burning issue is the abject poverty faced by smallholder farmers in Zimbabwe. The researcher wants to establish the factors that constitute an all-inclusive enabling environment. The main question is:

- What factors are required to create this enabling environment for sustainable development within the smallholder farming sector in Zimbabwe?

The second question is:

- Which pillars should be entrenched in the community for the sustainable socio-economic prosperity of the small-scale producers to take place?

A similar principle has inspired thinkers like Mbeki (1999), Makgoba (1999), and Abigail (2000) to advocate for an African modus operandi and renaissance for Africa to survive. The burning issue is abject poverty caused by a myriad of issues. A preliminary literature review shows that several causes have led to the undesired state of poverty. Stakeholders and researchers agree, as mentioned above, that a myriad of issues has bent Africa and its farmers on its knees, leaving most of the populace in abject poverty. The causes of the burning issue will be specifically broken down into quadrants, as each quadrant cannot be overlooked nor lumped up, as is currently the case. The lack of broad-based approaches threatens smallholder farming enterprises' holistic community development, sustainability, and viability.

More importantly, solutions for all the causes of poverty do not lie in one part of four worlds, as Lessem and Schieffer (2009) advised. However, any of the four spheres metaphorically provides a piece of the solution that can be systematically interwoven with other parts for sustainability. Such a slant allows exhaustive research, a holistic approach, and comprehensive solutions for each household.

1.3.2 Researcher's background

The Researcher worked for an international bank for over twenty-five years. Thirteen years were spent as a credit approver at a regional level in charge of thirteen African countries under the Bank's SME Banking Division. As a policymaker who sanctioned credit approvals for small businesses, she noticed and experienced a trend of small businesses' credit failure or declined approvals across the thirteen African countries under her Credit SME portfolio. More importantly, in Zimbabwe, the researchers' home

country, the agriculture industry, a once-thriving sector of the economy, was seriously under siege. The new smallholder farmers were faced with a challenging business environment. The Bank exited the once-lucrative local business/market segment. Credit failure within SMEs or credit declines appeared primarily due to missing pillars critical to business success and development. Some of the previously approved credits were withdrawn when land ownership changed hands.

With this lens, the researcher looks at what could be missing in the farmers' socio-economic environment to attain socio-economic prosperity. For example, the agriculture sector was once a thriving sector. However, then white commercial farmers conducted farming as a business. Looking at what has happened to smallholder farmer development in Zimbabwe in the last forty years, the sector has yet to be managed similarly.

1.3.3 Smallholder farmers' background in Zimbabwe

According to Thorpe et al. (2006), the African agricultural sector in the sub-Saharan is fragmented and exploitative, which has characterised the industry with persistent subsistence agriculture with low inputs and sub-optimal productivity. Solutions based on the marred Donors' Research have worsened the farmers' inability to convert the region's agricultural potential into wealth creation (Thorpe et al., 2006). It has led to the massive majority of African farmers being trapped in poverty, food insecurity, increasing vulnerability to environmental shocks, and malnourishment. Such a deplorable state often climaxes in poor health and low life expectancy (OECD-FAO, 2006). To Todd (2006), farmers also suffer from the exuberant cost of technologies, low natural and weakening land fertility, and, most importantly, enhanced technologies not built on smallholder farmer operations' bio-physical and socio-economic-cultural state of affairs in smallholder farmer operations. Clemmons (2021) advises that most technologies and innovations from other countries are inopportune introduced to our African farmers. Because they are not motivated by local challenges, they tend to fail in speaking to the smallholder farmers' challenges and issues.

The research trajectory focuses on the importance of smallholder agriculture for ecosystem-based economic development, poverty reduction, and sustainable livelihood enhancement in Zimbabwe. Moreover, the research investigates which

factors are required to guide agriculture development to sustainably end or reduce poverty in Zimbabwe as the nation pursues the ambitious plan to become an upper-middle-class economy by 2030.

It is at the backdrop of a land reform program that put the country on the global map pitying the then-late Mugabe's Black Government as violent against the displaced white farmers after the fallout of the Lancaster Land deal, which correctly captures the predicament of Zimbabwe. If one only compares the current economic snapshot with the country's financial performance in the 1980s. Utilitarian theories would produce adverse pictures supporting that the land should not have been redistributed to blacks. The economic snapshot in the colonial 1970s, given without considering the other factors like political, cultural and social elements, supports that land should be given back to commercial farmers of European descent as they seemingly put the land to best utilisation. The economic snapshot of the 1980s was also way before the full effect of climate change, challenging the black farmer of today. Moreover, property rights then excluded indigenous farmers from owning land. Capital, and any meaningful financial resources, including sustainable markets to engage in commercial farming, were withdrawn after the land reform program. The situation was worsened by the Black Government's failure to fund policy change and establish the new small-scale farmers, educating them to produce and develop livelihoods from farming optimally.

1.3.4 Causes of abject poverty in Zimbabwe

Indigenous business enterprises cry foul due to the lack of substantive support from foreign and local banks. On the other side, commercial banks lament the lack of bankable clients. Zimbabwe has more than sixty per cent of the population unbanked. Since the last decade, more than fifty per cent of the money and foreign currency has been generated and exchanged through the informal sector. The solution has been centred on fire-fighting mechanisms, including the casual and non-governmental sector, which creates dependent and non-productive citizens with food aid. Bull (1977) cites the aid industry as coming in the guise of addressing the threats generated by international inequality and exclusion and economic, political, and humanitarian crises. It has resulted in mass migration and environmental degradation making concessional

transfers from rich to developing countries. However, these relationships and the transfers that sustain aid agreements involve bilateral negotiations between individual states, global agencies, and private donors. The agencies operate as an anarchical system that depends on voluntary but binding agreements. It leads to reciprocal benefits that impose fundamental, albeit unenforceable, obligations on participants to be tacitly agreed on (Bull, 1977). Such a scenario has resulted in the myriad of challenges faced by farmers in Zimbabwe, leading them to live in abject poverty, and these include:

- i) Use inappropriate economic assistance through aid and grants (humanitarian aid is never meant for sustainable development).
- ii) Lack of comprehensive and consistent policies to support the land reform program and agriculture as a productive sector
- iii) Breakdown in economic value chains and predatory business practices by private sector buyers
- iv) Incapacitated rural communities to run rural-based micro enterprises
- v) Climate change challenges
- vi) Lack of appropriate funding within the current commercial banking sector, worsened by inappropriate technology and lack of knowledge for production.
- vii) Export of raw commodities as opposed to value-added products for maximum beneficiation

To the researcher, it then makes aid and development agencies instruments or schemes that perpetuate modern slavery. They are an extension of colonial strategies to sustain the Western countries by funding these foreign-based institutions. They create employment opportunities for foreigners as all senior roles in the developmental fraternity are for foreigners, while smoke screening their activities to help poor smallholder farmers. As developing nations strive to qualify and fit the criteria stipulated in foreign templates, a non-violent way to loot raw commodities that sustain factories overseas is instituted.

Only an insignificant portion of the aid money trickles down to communities as the more significant portion of the fund/budget caters for administration and operational expenses. The researcher has often wondered why aid workers never build factories

in Africa, as that would increase beneficiation. It is cost-efficient to transport finished goods and, in most cases, beneficial to locals in terms of employment creation and strengthening of the local economy. NGO – based solutions to African agriculture are usually markets for raw commodities to overseas countries. The negative effect is depicted by FAO (2017) below:

1.3.5 African exports supporting global industries

Table 1.1: The negative effect of aid

Crop	Africa's Share of Global Production	African Export Value	Global Market Value of Finished Goods	African Export Value as a % of Global Market Value
Cocoa beans	70%	\$ 6.7 billion	\$103.3 billion (chocolates)	6.5%
Coffee	12%	\$1.8 billion	\$100 + billion	<1.8%
Tea	12%	\$999 million	\$49.5billion	2.0%
Tobacco	11%	\$2.1billion	\$816 billion (cigarettes)	0.3%
Natural Rubber	7%	\$22 million	\$26.6 billion	0.1%

Adopted from FAO (2017)

1.3.6 What role does education play in all this?

A closer look might make one realise that learners/graduates are systematically educated to become employees. The education system is not designed to transform learners to solve local problems by becoming self-employed or social innovators. No wonder why Zimbabwe has a high unemployment rate. Graduates contribute significantly to unemployment statistics, leaving them languishing in poverty. The industrialisation of African states, including Zimbabwe, is not part of the modernisation theory or the donor's schedule. College graduates who shun self-employment emerge as another challenge of brain drain when Zimbabweans migrate overseas to provide a human resource base for menial jobs to feed their children and put a meal on the table. Escaping such a trap requires a paradigm shift in mindset and broad-based approaches to tackle the set systems as it has created a systemic risk to Africa.

1.4 Preliminary Literature Review

The initial review was done to answer the question of what causes poverty in the smallholder farming sector, and plenty of literature converges on the same reasons. The preliminary research pointed to the aspect of marred research. Ferreira (1991) noted that substantial research was done over two and half decades, focusing on character, process, and the content surrounding change. Nevertheless, these findings have yet to bring about a tangible impact. The other factor which causes disarray in the country is smoke screened help by foreigners. Following the Modernization theory, which promises that developing countries, which status Zimbabwe is in, must be externally guided towards a developed industrial society. Through Rostow's (1960), prescribed steps Economic developments of underdeveloped nations are guided through the envisaged industrial transformation. External help is the basis for developing countries to catch up with industrialised Western countries. It allows the helper to prescribe the transformative process leading the recipient to socio-economic growth. It is known as the Modernisation theory, which provides a guide to identifying the social variables that contribute to society's social advancement and transformation and seeking to explain the process of social progression.

As we speak, countries like the United States, through their foreign policy, push the same agenda with the help of the Developmental and AIDS industry, presently known as foreign-based Non-Governmental Organisations (NGOs). According to Abuzeid (2009), aid has played a varied role during the modern period, responded to different interests, depended on different policy paradigms, and produced better results in stronger than weak states. On the other hand, conservative critics claim that aid reinforces the power of reactionary regimes and supports wasteful and monopolistic state-led programs Moyo, (2009). The irony is that even when dealing with assistance and foreign funders who come in the form of development funders offering help, aid given to the poverty-stricken bottom of the pyramid was and remained compartmentalised. Most aid agents give these farmers half or less than the required solutions/pillars in a fragmented structure. They do it knowing that as long as people experiencing poverty remain with some missing elements in the help they offer, development becomes maimed or short-term. International helpers constantly excuse their non-holistic approach to aid with the excuse that it is not part of the call they offer. Alternatively, they say some farmers' needs are outside their mandate. Their

organisational policies do not allow them to cater to or help beyond their assignment. To restrain aid officers, the mandate from the head office often comes in the form of donor templates that must be strictly adhered to.

1.4.1 The world of donors and humanitarian aid

The same fate has occurred over decades despite repeated failure to help the 'intended' beneficiaries leaving them worse off. Radicals accuse donors of intentionally transferring inappropriate technologies and organisational systems, Burch (1987). Donors impose neoliberal policies on weak states that have increased inequality and marginalised people with low incomes (Manyaya, 2002). Technical policy analysts attribute failures to inappropriate processes, and unrealistic models and expectations among donors. Andrews (2014), with over 50 years of African fieldwork and consultancy and Levy (2014) alluded to the reality that donors often favour their own rather than local interests. They ignore local conditions, values, and needs and insist on inappropriate procedures and structures that make unreasonable demands on implementing agents and beneficiaries.

Simply put, donor aid and donor templates adversely affect African communities. As a critique of the Modernization theory, Ferraro (2008) developed the Dependency theory in the late 1950s. He was concerned with the trend that economic growth in developed countries, when copied and pasted, resulted in poorer, underdeveloped, resourced countries. The Dependency Theory blamed capitalism and exploitative economic activities of the more affluent/developed countries, which led to severe financial difficulties in the poorer countries. The proponents of the Modernisation theory defended their model, stating that the underdeveloped nations needed to improve due to their lateness in catching up to the concrete economic developments of modern economics. Nevertheless, on the other hand, Marxist theorists bolstered the Dependency Theory insisting that the persistent poverty resulted from capitalist exploitation. The research context obliged the researcher to coin the research problem that would touch on components listed in the context.

1.5 Research Problem

The research problem is centred on the frail agriculture that is due to inappropriate systems and lack of Afrocentric technologies resulting in sub-optimal production within the smallholder farming sector.

Looking at the current local agriculture sector and the farming environment in Africa, various researchers have outlined how African agriculture remains insubstantial due to the non-adoption of Afro-centric enhanced technologies and systems. These are fundamental to improving productivity and agricultural systems' economic benefits (IAC, 2004). The agrarian system is characterised by aggressive and inadequately implemented policies, poor infrastructure, and excessive rivalry from open market functions Brown and Ainley (2005). Smallholder farmers in Zimbabwe have fallen victim to micro-lenders and unscrupulous corporate buyers. Furthermore, frail associations and relationships between researchers, stakeholders, and input and output markets are present. Against this background, integral research such as by Lessem and Schieffer (2009) gave insight into a different path of transformation. In their literature, Lessem and Schieffer (2010) argued that research and interventions have to be transformative rather than informative if they are meant to contribute usefully to building integrated and sustainable enterprises, communities, and societies. Therefore, there is a quest to establish a supply chain that goes beyond an economic value chain operated by capitalistic traders by encompassing the cultural and social issues currently inhibiting smallholder farmer development in Zimbabwe and the rest of Sub-Saharan Africa.

1.6 Aim of Research

The research would want to ensure that, through integral means, sustainable and inclusive ways of identifying gaps and responding to burning issues from small-scale farmers are employed. Upon identifying the challenges, transformation occurs, and the research goes beyond being informative. An inclusive approach is encouraged when seeking developmental pathways whilst working with the community instead of shoving foreign solutions down to communities. Previously imposed approaches have failed to solve local issues. As the selected blueprint and research design culminates into Participatory Action Research, it is hoped that the oppressed and exploited will be given a voice and participate in the transformational journey to bring social change.

1.6.1 Are prospects for a knowledge-based ecosystem for the good of all?

Due to the above realities, the study further looks at whether there is a need for an integral or knowledge-based ecosystem that encompasses aspects like institutionalised research and social innovations to ensure that national productivity is systematically enhanced for the economic well-being of more than seventy percent of citizens. Building a collective local economy presupposes the considerable prospect of increasing local opportunities and strengthening the development of locals by locals.

The research topic discusses the importance of smallholder agriculture for economic development, poverty reduction, and livelihood enhancement in Zimbabwe. Moreover, various factors are required to sustainably guide agriculture development to end or reduce poverty in Zimbabwe. As the nation pursues the ambitious plan to become an upper-middle-class economy by 2030, farmers' holistic development must be considered.

1.7 Research Objective

The research objective is to *identify the causes of poverty for small-scale farmers across all facets of Zimbabwe*. It is envisioned that through solutions and co-creation of social innovations, land utilisation will be responsibly intensified to the optimal levels of economic productivity for climate-proofing and prosperity.

There is a strong belief amongst local farmers that socio-economic well-being can be experienced by taking advantage of Afro-centric technology advancement, integral knowledge exchange and market opportunities as global demand for food increases due to global population growth. However, the country still imports essential food components that local farmers can profitably produce, making the local market the first port of call. Furthermore, the global village faces ever-increasing food costs, and more than a billion people go to bed hungry every day, as reported in various FAO conferences.

Zimbabwe has an agro-based economy. More than seventy per cent of the population is sustained through agricultural activities making agriculture an opportunity to turn poverty-stricken farmers into wealthy citizens through technology-intensified

production and value addition of agro-products. This development will make the Government's ambitious goal a reality as the economy is turned into an upper-middle-class economy by 2030.

1.7.1 Research sub-questions

The research on innovation will attempt to answer the following burning sub-questions:

- A. How can the researcher activate smallholder farmers to produce above subsistence levels optimally utilising their God-given heritage, appropriate technology, and skills?
- B. Can the concept of Integral farming release the “GENE-uis” in small-scale farming communities and eradicate poverty?
- C. Can localised-inclusive funding templates improve farmers' access to credit and optimise productivity?
- D. How can a rural community (small-scale farms) take charge of their destiny, creating viable enterprises and meaningful production and live happy lives?
- E. How will farmers benefit from inclusive research and institutionalised innovation endeavours', sharing indigenous and exogenous knowledge through learning communities for economic prosperity?

1.8 Theoretical and Conceptual Frameworks

The researcher's theory is determined a priori as the research philosophy suggests. However, it is within the trajectory of the Southern Relational Path (Lessem & Schieffer (2010), which depicts the research path forming the concept map for the research methodology—the Southern relational path, which starts with rich descriptions of being centred on identity. The originating method is empirical phenomenology lodged in the South, Lessem and Schieffer (2010).

1.8.1 The theoretical framework for the research journey

The researcher has selected CARE and 4Cs, including the integral Four Worlds integral Approach by Lessem and Schieffer (2010), to provide a floor plan for the Theoretical Framework. The trajectories will be weaved through using the TIPS Da

Vinci seven-layered Framework. The CARE and 4Cs frameworks are elaborated on below:

CARE stands for Community activation, awakening integral consciousness, innovation-driven -institutionalised Research, and Embodying integral development. 4Cs stands for **C**all, **C**ontext, **C**o-creation, and **C**ontribution trajectories.

The pair will be employed for community activation and engagement, guiding the integral research journey in pursuing social innovations for transformation.

1.8.2 TIPS seven-layered framework

As the journey will involve a broad base of stakeholders, TIPS embracing the systems theory by Da Vinci will be used to dynamically bring together multiple collaborations and establish systemic thinking at the onboarding of collaborative stakeholders. TIPS connects people to technology and information, providing a framework to work in. The seven-layered Framework brings about systems thinking, agility, alignment and an engaged workforce/group. According to McTaggart (1991), an ecosystem is a group of activities whereby individuals with differing power, influence, and status participate in changing and designing a collaborative thematic theme to solve their challenges. The researcher considered this viewpoint relevant to the study as it is a fact in the smallholder's working life.

To establish the collaborative thematic theme, which eradicates poverty in the smallholder farmer's life, systemic thinking, which glues all the core elements of the TIPS framework, brings sanity and a thread to weave through as the different individuals with differing power and status are aligned to co-create solutions in a world governed by stronger muscles economically and even politically. Cohesive human interface and cooperation are expected to bring meaning and impact in the Context outlaid by the 4Cs and CARE social innovative models.

1.8.3 Mapping the floor plan

In line with Trifiletti et al. (2005), the integral research path, and advice on using the conceptual Framework will help the researcher whose orientation is a robust southern *relational* grounding. A combination of the following four fundamental theories/approaches will underpin the researcher's design forming an explicit Framework:

- I. Da Vinci Seven Layered TIPS theory with its Systems Theory
- II. CARE/4Cs Framework
- III. GENE (Grounding, Emergence, Navigation, Effect) theory and the Four world approach as identified by Lessem and Schieffer (2010)
- IV. Southerner's *Relational* Research Methodology

Part of the blueprint elements is the TIPS Seven Layered Model focusing on systems thinking by Da Vinci (2019) will be used in the current developments and modifications in economic and social fields in Zimbabwe. Implications reflect that the role of heritage has been altered, seeing that the heritage process is now considered essential in establishing livelihoods. Knowledge and ingenuity have been increasingly recognised as fundamental strategic assets and potent engines in motivating economic growth. The Four Worlds approach and GENE process will provide the tapestry to weave the research process into usable tools. The GENE model's trajectories 4Cs and CARE underpinned mutually reinforce each other whilst TIPS brings on board systemic thinking allowing positive energy flow.

Some envisaged stakeholders are Government institutions and Policymakers required to create the enabling environment through policy change. The smallholder farmers will need a system that works for them, and TIPS provides the engagement framework.

For Escobar (1995; 1999; 2000), the development discourse expresses knowledge and authority through which particular concepts, theories, and practices for social change are generated and replicated. Development seeks to achieve progress in all facets of human life, encompassing socio-cultural and economic issues at local and global levels. It contradicts the *Modernisation theory*, which explains *societal transformation* based on financial and material gain. For the proponents of modernisation, the idea entails a progressive transition from an outdated to a modern society, Rostow (1960). Before Rostow, approaches to development were based on

the assumption that modernisation was categorised by the Western worldview that progressively changed from the initial stages of underdevelopment. Rostow, because of the office he held as part of the administration of President F Kennedy, politicised the theory pushing a political agenda. Western countries have adopted the modernisation agenda, meaning individuals in developing countries cannot fight this system alone. It makes TIPS by Da Vinci more valuable as it guides this research to weave systems and technology into the innovation journey. Energies galvanised ought to be directed into life by providing the systemic critical thread in the transformative journey. The research will unfold through this methodical plan.

Related literature will surface issues pointing to areas that can generate social innovations—Lessem and Schieffer's approach guides how the community will be engaged. A participatory manner will be employed to establish adequate transformative pathways. The journey focuses on establishing all agricultural developmental determinants for farmers to attain liveable incomes and establish economic structures that maximise local beneficiation. As the envisioned livelihoods are heritage-based, the researcher must look at heritage-based theories and liveable income determinants and is covered in the literature review. Historically, heritage was understood and confined as the inactive custodian of history and frequently perceived as a burden hampering development—the view still resonates with traditional conservation attitudes, and the research challenges such positions.

1.8.4 Research Methodology and Chapters' Framework

The researcher's theory is determined prior and is within the trajectory of the Southern Relational Path by Lessem & Schieffer (2009), which depicts the research path forming the concept map for the research methodology and is summarised below:

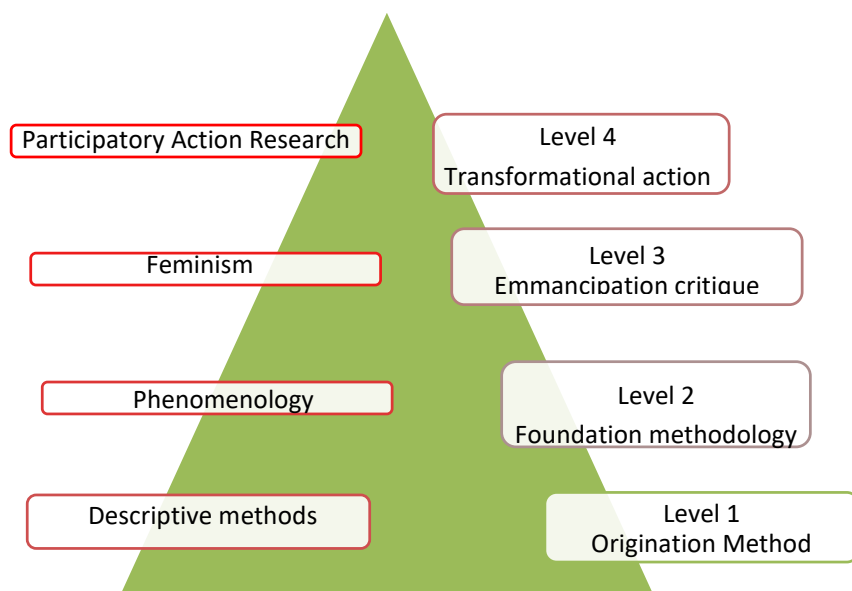


Figure 1.3: The concept map diagram
(Adopted from Lessem & Schieffer, 2009)

As a Southerner, the research path is relational following the GENE model by Lessem and Schieffer (2010); the researcher will use the descriptive method in level one discourse originating her story with meaning to change the status quo of abject poverty. Poverty is caused by imbalances at the bottom of the pyramid, mostly in rural Zimbabwe. In line with Randall's (1995) standpoint, story-telling affects the shape and direction of 'my-self creation. He further advises that what others converse about 'me helps create the social climate by which I live my life by determining the range of opportunities that governs my life. Lessem and Schieffer (2010), in Randall's story of my life, integrally call it releasing global GENE-us from the ground up, as people are a product of the environment they have lived in. The inner and outer calls are a means to create an environment that will result in social change. One uses individual and communal stories to surface imbalances that transcend into social innovations after integrally researching with the affected community to co-create practical and sustainable solutions. As these farmers are grounded in the south in nature and society, following the southern relational path becomes a walk in the park as farmers derive their livelihood from the land and nature, especially rains and other environmental factors like climate impact on their being. As alluded to by Scoones (1988) in his five factors that affect heritage-based livelihoods, together with the GENE theory, provides a floor plan and issues that require being looked at to tackle the problems of poverty challenging smallholder farmers in Zimbabwe.

The second level is phenomenology. The methodology will be used for this transformative journey to impact self, enterprise, society, and the globe. The journey progresses to Feminism which occupies the third level of the research path. One will find that feminists aim to directly speak of changes in the conditions of women having social change as the foundation of their goals. Many feminists today regard Feminism as a grassroots movement seeking to bridge boundaries based on sex, social class, race, culture and religion. On the other hand, Moustakas' (1994) position includes a description of perspectives and qualities that these models hold in common, arguing that Feminism offers more solutions when mixed research methods/methodologies are followed.

Moustakas's position will avoid the pitfall of overvaluing numbers through surveys and prescribed methods regardless of the situations and environment of study. Moustakas' work on phenomenology distinguishes phenomenological models from other primary human science methodologies. It conforms to the integral way of conducting research; in this research, seventy per cent of the farmers are women. Feminist epistemology, moreover, substitutes women's experiences for men's, or more generally, that of marginalised or oppressed peoples. According to Mignolo and Escobar (2010), conventional dualisms include fact/value, objective/subjective, and reason/emotion. He further advises that separating the knower and the known is rejected as part of androcentric epistemology.

Participatory action research is at the fourth level, effectively culminating in transformative action of the relational southern research path. PAR will guide the integral ecosystem to evolve the integral process as outsiders are engaged to form an ecosystem and share their expertise through open-source platforms to hasten the technological-social innovations needed by the communities.

1.9 The Southern Research Trajectory

The literature review and initial engagement with the community of farmers depicted the need for the research to be broad-based and use a multi-faceted approach to investigate the myriad of issues that have challenged the community over time.

The ethos of integral research positions the GENE theory right in the centre as it can be used metaphorically and geographically to speak to multiple issues in any economy and, more significantly, smallholder farmers' lives. The GENE theory provides the foci and link to various research methodologies proffered by Lessem and Schieffer. It stands for Grounding, Emerging, Navigating and Effecting. It is placing the need for an integral economy right in the centre and using the GENE theory to evolve the four worlds' ushers in holistic development sought by the research for the bottom of the pyramid.

1.9.1 The descriptive method

The integral research method involves a close relationship between the researcher and the researched, as trust has to be gained. For the researcher, whose objective is to be the voice of the disadvantaged farmer, it is such a critical issue as she needs to enter into that social and intimate space and hear even the unsaid words. The descriptive method is the origination method at level one of the southern relational paths the researcher has adopted. It is an originating methodology in research focused on co-creating solutions with smallholder farmers and their ecosystem participants. According to Lessem and Schiffer (2009), modes of expression are essential for the descriptive method, and a great emphasis is put on them. Through language, people engage in the construction of a social world. The descriptive method then dovetails with feminism at the third level of the same research trajectory providing the emancipation critique that will evolve into transformational action.

1.9.2 From the descriptive to phenomenology

The second level in the research path is phenomenology, in this case, turning from grounding to emergence. Phenomenology was established in a "relational-southern" guise. The methodological foundation needed to contextualise research to innovation so that research under mode 2 differs from conventional research under mode 1. The researcher's relational orientation then applies at the community and enterprise levels. Langridge (2007) explains that, as a research methodology, phenomenology centres

on understanding a lived experience, in this case, the everyday lives of the Zimbabwean farmers engaged in this research.

The researcher has spent most of her adult life with smallholder farmers, so she can relate to the complex life they live and experience. In the Stanford Encyclopaedia (2010), Langridge advises that phenomenology "studies are concerned with the structure of various types of experience ranging from perception, thought, memory, imagination, emotion, desire, and volition to bodily awareness embodied action, and social activity, including linguistic training". Lessem and Schieffer (2010) allude that one's world is 'co-constructed and multi-dimensional. It is simultaneously transdisciplinary, thereby connecting the integrated realms. Such an approach enables one to engage the community inclusively. As the community is aware and conscious of its state and challenges, emancipation is required. It is through feminism that energy is focused on what has been uncovered to alleviate.

1.9.3 The feminist critique

1.9.3.1 The nature and scope of feminism

The developmental compass leads onto the third stage, the so-called emancipatory critique, on the relational path, which is feminism. According to Gudeman (2016), the feminist movement began in the late 19th century and initially focused on liberating women by improving their material condition. The campaign revolved around taking the "burden" off women regarding housework, cooking, and other traditional female domestic jobs. The Zimbabwe farming population consists of seventy per cent of the population, of which seventy percent are women. As feminism is applied, removing drudgery and making labour easy are essential elements against rural-urban migration challenges.

1.9.3.2 Pre-conditions of feminist science

According to Moustakas (1994), the ontological claims of feminism are that both the natural and social worlds are socially constructed. The worlds are differently built by people who, in different locations, have different life experiences, for example, men

and women, Asians, Africans and many other varied differences. An expert in phenomenological research methods, Moustakas provides practical guidance to conduct human science research and inspires researchers and studies that lead to significant new knowledge of everyday human experiences, human behaviour, and human relationships. Moustakas proposed human science perspectives and models, illustrating five human science research approaches utilising qualitative methodologies. The models include ethnography, grounded theory, hermeneutics, empirical phenomenological, and heuristic research. The critique by feminism offers self-reflection and calls for emancipation, thus transcending to the next and last level in the research part. The research concerns the oppression and poverty experienced, making emancipation necessary for the research to become integral and go beyond just being informative like classic research.

1.10 Participatory Action Research (PAR)

The research aims to attain transformational action through technological advancement, which is researched on Zimbabwe's farmers and agro-based economy. As such, open-source networking has been incorporated to establish a technological-savvy ecosystem and community of practice with technological expertise and innovation of simple equipment for the local sector. The ecosystem players operate as social enterprises; hence profit is not the paramount aspect of their operations but improving the lives at the bottom of the pyramid.

The journey becomes a sustainable reality through authentic collaboration manifesting through self, community, organisation, and society. The development becomes integral in agreement with Rudolf Steiner's social three-folding, culturally, politically, and economically (Large, 2018). Steiner realised that the state was too big for minor problems and too small for significant challenges, differentiating between an associative, fraternal, and world economy without borders. The threefold social order emerges from the interaction between business, government, and civic society. The Trans4m CARE process informs the steps, adding nature/ecology to the integral mix. The aim is to make development sustainable through integral research and resolve poverty issues through social innovations to benefit the economy and enterprises.

The Da Vinci TIPS Framework and Trans4m "integral four worlds" approaches suggest that such integral work is discursive. Contextual and ineffable experiences have the right place in all such questions and relationships. This help provides a meaningful linkage between existentialism and spirituality. The research aimed to establish a foundation to promote the cultural, social and financial inclusion of rural communities in Zimbabwe. Borda and Rahman (1991) assert a breakup of the subject-object relationship into a subject/subject framework when research is participatory. It creates asymmetric binomial, bringing participation and onboarding of all the issues and constraints that challenge the communities.

1.11 Research Supporting Innovation and Relationships

To Gudeman (1998), development is not primarily about capital accumulation but rather about innovation in relationships with one's immediate learning community, external community, organisations and society. The community offers a reservoir of possibilities, and the key to sustainable development is unleashing the innovative potential within. One vital dimension is releasing such potential in what Arturo Escobar calls the "vitality of place " (Schieffer & Lessem, 2015). To reverse the local-global imbalances and refocus Zimbabwe's vitality, the potential lies in regenerating the force within our smallholder farmers, transforming them through social innovations to become productive and self-sufficient. The industrialisation of the agriculture sector becomes imperative for enhanced beneficiation from the country's raw materials. However, agricultural commodities do not commune to work following the natural ecosystem and Escobar's principle of the vitality of a place needing emulation.

1.10.1 The integral research method

The inclusive trajectory conforms to the integral way of conducting research. Feminist epistemology, moreover, substitutes women's experiences for men's, or indeed, more generally, that of marginalised or oppressed peoples. According to Mignolo and Escobar (2010), conventional dualisms include fact/value, objective/subjective, and reason/emotion. The separation of the knower and the known are rejected as part of this androcentric epistemology. For the researcher's journey, using a participatory

action approach (PAR), the researcher already determined a priori to adopt the relational research pathway as the blueprint for this research. The research was aware that the aid sector had left communities over-researched with a vast body of information that has yet to transform or work to benefit the researched populace. PAR forces one to work in communities instead of attending workshops or seminars. The research combined PAR to augment PAR to move from rhetoric like foreign aiders. To hasten the implementation of some social innovations co-created with global innovators. The use of open-source systems bridged the technological gap, ensuring that the new technologies are researched on the farmers and the community's voice is carried on without losing sight of the advancement in global technology. The balance was achieved through the ecosystem-based approach, ensuring that the inclusion of farmers' participation is subject to subject, with no one superior to the other.

1.11 Data Collection and Analysis Methods

Using the Southern relational research journey and dealing with semi-illiterate participants and phenomenology, data collection included interviews and focus groups. Low-income people are already over-researched through demeaning surveys and questionnaires, Lessem and Schieffer (2010). These instruments give no room for one to narrate their experiences freely without prejudice and deny the community the opportunity to suggest solutions to their problems. The data collection methods previously used have resulted in information gathering, which does not result in impact as it excluded community participation and eschewed issues on the ground. Therefore, in this research, a mixed-method approach was deemed appropriate. Lester (2005) advises that there is only data collection with a framework. The methodology ascribes collecting data through stories, interviews and focus-group meetings. The main aim is to realise the transformative potential of individuals, organisations, and societies; hence, the research journey envisaged an inductive discovery rooted in the lives of the researcher and smallholder farmers in Zimbabwe. Lodged in the south, focus groups, interviews, and storytelling allow co-engagement with the affected.

1.12 Layout of the Chapters

1.12.1 Chapter 2: My inner calling

According to Lessem and Schieffer (2016), southern identity is metaphorically found worldwide because of its deep roots in humanity's place of origin, Lessem. It is where nature and religion continue to exercise a significant influence. The inner call is part of the first C of the 4Cs trajectory. My inner call is to be the voice of the poor smallholder farmer in Zimbabwe. As much as it begins within, its purpose affects both mind and spirit, demanding that an outward action fulfils this purpose. My experience and suspicion are that a hidden hand governs the economic system that intentionally oppresses black people. The researcher's inner call is to be the voice of the voiceless smallholder farmer in Zimbabwe. Ships do not sink from the water around them but from what is within (Jain, 2021). From that perspective by Jain, I must take an inclusive and holistic approach that ensures that the burning issue of abject poverty is solved through transformation and mindset change of those at the bottom of the pyramid.

Transformation should be systematic through equity in economic and social justice, encompassing the four-fold world for sustainability (Schieffer & Lessem, Integral Development, 2015). Integral Development was published in 2014. The farmers cry out that they lack the tools and skills to work hard and escape poverty. The religious grounding immensely nurtured in me during my early childhood said otherwise and contributed towards my inner call. A mindset to use what one has and maximise the benefits that can be realised provides a pedestal for self-reliance. The impact confirms how such an indigenous world is lodged in nature and the power of influence religion possesses in socialisation, how my story is expressed attempts to satisfy the theory of empirical phenomenology. A detailed description of my everyday experience during my childhood is given. We had to grow some of the family's food requirements for household self-sufficiency, supplementing my father's meagre salary by providing organised family labour. The ship did not sink because, from within, self-will propelled the design to work against adversity and poverty.

1.12.2 Inner Call as a driving force

The researcher's journey started with identifying an inner call leading to a driving force. One has to have a purpose of fulfilling to get the drive required to accomplish this noble journey of being the voice of the voiceless smallholder farmers. This inner call and ambition propel the entire research journey, targeting a contribution that transforms social lives. The desire to impact made Patience Magodo (the Researcher) leave the corporate world of banking, go into the community, and build it through community banking. She wanted to relate and learn more about the burning issue of abject poverty experiential and not just how it is reported. As Zimbabweans in Zimbabwe, knowledge is present amongst us; it needs elevating through related integral research and appropriate transformational action.

The inner call of the researcher is to give the exploited farmers a voice. They have been socialized into dependents, living on handouts. There is a need to restore confidence through meaningful work in the farmers to avoid extending a begging bowl to outsiders. Pleading and unsuitable aid have led African countries to be stripped of all their production benefits by exporting raw commodities undervalued, allowing transfer pricing to rip off the continent of jobs and value-added wealth from their resources. Zimbabwe is not spared, leading to the researcher's quest for social and economic justice. This demands social innovation by locals founded on authentic local knowledge obtained from integral research to create solutions that address the burning issues causing poverty in the Zimbabwe farming sector.

1.12.3 Chapter 3: The outer calling

As the inner call blossoms beyond the heart, the outer call unfolds, and meaningful steps toward change are taken to impact other people's lives through an enterprise. According to Lessem and Schieffer (2009), one starts with the self, and then the enterprise progresses to the community until the local and global communities are impacted. The result of actioned inner and outer calls is transformed communities living on life-based economies. The outward call is a twin to the internal call and is part of the first C out of the 4Cs. Several tools and events around us help determine one's calling, including inward endowments and inclinations, outward circumstances, and

the advice of others (Ryken, 2005). My background in banking as a Regional Credit Officer and Policy Maker in Africa for an international foreign bank created a setting that allowed me to oversee policies crafted for my continent Africa. Through work peer review, I could compare the credit policies with those for other continents like Asia and countries in the Middle East. This exposed me to real-life issues in the financial sector, and I experienced the segregation of my continent through policy and smoke-screened financial solutions. To that end, following the research philosophy and design guided by the conceptual framework by Lessem and Schieffer discussed above, the following diagram summarises the ten chapters on my integral research journey, the outcome and the outputs:

Table 1.2: The 10 chapters of my integral research journey including their outcomes and outputs

Chapters		Research Method	Contribution	Embodied Action
1 -	Summary of the Thesis	-	-	-
2 –	The Inner Call	Descriptive Method	-	Tafadzwa Ne Chiedza Development Trust (TnC)
3 –	The Outer Call	Descriptive Method	Form an inner circle.	Farmer groups led by lead farmers and supported by Agritex.
4-	Community Activation	Phenomenology	Integrate self, Organisation and society.	Distinct farmers' voice
5 -	Research Context	Feminism	Uncover to alleviate	Context made known
6 -	Awakening Awareness	Feminism	Build an Innovative Ecosystem and support your transformation.	Nhimbe Ecosystems and CARE Learning Circles
7 -	Co-Creation	PAR	Transform your reality – action-oriented research.	The University of Zimbabwe was established as a centre of enterprise development.
8 -	Research to Innovation	PAR	Institutionalise your collective activity and link up with an existing Institution.	Heritage Community and Bountiful Foods Processing Company
9 -	Contribution	PAR	Level your transformation	TnC Theory of Change and Community
10 -	Embodied Action		Distil and share your transformation	New learning processes to improve farmers' integral knowledge exchange and increase tertiary students' minimum body knowledge through open-source architecture and systems

1.13 Conclusion and Effecting of the GENE Theory

1.13.1 My integral journey in answer to the burning issue of abject poverty

As a grounded Southerner in nature and community answering her inner Call, the researcher embarked on a societal journey. She sought to deepen relationships with her community and establish an ecosystem that would see rural households transform through teaching and learning communities in integral entrepreneurship and producing beyond subsistence levels. The quest sought to establish an enabling environment for smallholder farmers living in abject poverty yet having access to land and other resources which can be used to become gainfully productive and optimally utilise the ground as a critical resource in rural areas. The da Vinci TIPS seven-layered framework and I-CARE/4Cs developed by Lessem and Schieffer guided the research trajectory. The two models are summarised below as customised to the researcher's southern relational path:

1.13.2 An innovative healing system

These processes support the full activation and healing of a living system supported by the GENE theory, which stands as the nucleus in the integral journey. The researcher incorporated the 4Cs and the integral CARE process for this journey to be integral and holistic. Like a Da Vinci Institute of Technology Management scholar, the researcher also ingrained the TIPS (Technology, Innovation, People and Systems) framework into the integral research and innovation journey. Lessem and Schieffer (2014) assert that from a Trans4m perspective, social innovation remains left out in the cold, whilst technological innovation gathers pace whence, in their view, social business, entrepreneurship and innovation are falsely seen as in effect transposable. The Da Vinci Institute is focused on creating trans-disciplinary, socially relevant knowledge. Solving practical problems and facilitating a journey of self-discovery, considering that it is a Mode 2 institution as a researcher sought the co-joining of TIPS with the Trans4M four worlds approach and all the contributions extended to the bottom of the pyramid. It means people relationships, technology, community, strategy, research, and everything else are part and parcel of the integral transformation.

1.13.3 TIPS systemic guide to social innovation

The Da Vinci TIPS pathway guided the social innovations to be systematically institutionalised, not to remain local but to become scalable and global. The socio-economic laboratory, The Nhimbe Ecosystem, and the 5 to 11 strategies were expected to be transformational. Smallholder farmers possess all these functions and skills and operate in an integrated manner with strength in numbers. Mengisteab (2001) advises that small is beautiful. However, according to Schieffer (2016), what is crucial is that the functions operate in an integrated manner, thereby transforming results. In many private sector enterprises, it has been noticed that four significant interconnected shortcomings inhibit continuous transformation processes necessary for fast and purposeful inner development.

The integral smallholder enterprise was guided to overcome shortcomings. At the three levels of self, organisation, and society and through learning communities, all acquire the amplified stacked life skills and learn organisational skills adequate to make them operate professionally.

1.14 The Contribution

Delivery, after this PhD research journey was completed, edited included a journey towards poverty-free smallholder communities through enterprise development supported by technology justice emanating from social innovation as follows:

- A. Establishment of a Heritage Based Communiversality to augment communal learning through the manufacture of co-created technologies and machinery
- B. Establishment and adoption of the *Nhimbe* Ecosystem model for farmers to receive integrated pillars required for one to operate in an ideal business environment
- C. Community-based credit models adopted to make the 5Cs of credit tailored to beneficial good community values
- D. An all-year-round production model called *Nhimbe-Gorerose*, capacitates farmers to be all-year-round producers for sustainable income.

Post the PhD journey, what would have been institutionalised, like integral research, learning communities and working models, are expected to withstand the test of time as communities adopt them, finding them valuable and impactful.

1.15 Delimitation and Scope of the Research

The research focused on farmers and agriculture to the present-day smallholder farmer after the land reform program. Kubatana archives record that "Nearly two decades ago, the government of Zimbabwe pioneered the second phase of the land redistribution and resettlement programme in the form of the fast-track land reform programme (FTLRP) in 2000". It expanded the number and array of small, medium, and large-scale farms and effectively transferred ownership from the minority, white farmers to new indigenous farmers. According to Moyo (2004), a significant drop in agricultural production, food availability, and economic activity accompanied this change. An economic meltdown characterised the decade that followed immediately after the (FTLRP). Scholars have calculated that in this decade, Zimbabwe's real GDP declined by more than 71% (Robertson, 2011). Other scholars also noted that the country's agricultural production declined by thirty per cent over the hyperinflationary era (Sukume & Guveya, 2009). Formerly renowned as the breadbasket of the Southern African Development Community (SADC) region, Zimbabwe was now distinguished by unadulterated food insecurity and became reliant on global assistance, chiefly food aid (Makumbe, 2009).

Simply put, there was a need to revisit policies since inherited ones were crafted to serve mainly the minority few, and the landscape of landownership has since changed. Furthermore, global traders' treatment of the new Zimbabwe farmer is different. The agrarian reform is another cause of the burning issue of poverty in Zimbabwe. Around 71.7% of the population in Zimbabwe lives in rural areas. Of this population, seventy-five to eighty-five are active producers of staple grain crops (i.e., maize, beans, and sorghum) (World Bank, 2010). Various findings have also asserted that the non-urban economy has collapsed due to the economy's dire state and irregular interventions by the government and humanitarian aid donors. Government and donors have, over the decade, used what can be termed an assistance-aid approach which became detrimental to the initiative of development in the rural areas. It contributed to the

dependency syndrome of the rural population and the collapse of input and output markets and efficient price-setting mechanisms, among other outcomes (Esterhuizen, 2010).

1.16 Summary of the Chapter

Chapter one summarises the research journey which is envisioned and how the various chapters unfold. It highlights the theoretical and conceptual framework and the tapestry of the thesis. Key theories are briefly discussed as they impacted the research framework and guided the researcher during the journey which is unfolding.

CHAPTER 2

THE INNER CALLING

2.1 Introduction

This chapter frames the first level of this research to innovation journey: the origination of my social innovation. In this chapter, I will describe my inner calling using the relational path, which entails a thorough description of phenomena in intimate detail (Lessem and Schieffer, 2010). Through the description of my inner calling, I will demonstrate how throughout this journey, I have rooted myself in the world of the farming communities that I am not only part of but also represent. Unlike conventional research, which is either qualitative, quantitative, or mixed, the research emanating from the southern relational path calls for the researcher to engage with their inner self, opening to phenomena without pride, prejudice, premise, or preconception (Strauss and Corbin, 1998).

The tenets that will be predominant in this chapter include:

- a) Seeking to reveal more fully the essence and origins of human experience.
- b) Uncovering qualitative and quantitative factors in these factors and origins
- c) Engaging my total self as a participant in a state of passionate involvement
- d) Deliberate refrain from predicting or determining causal relations.

- e) Illuminating relationships through careful, comprehensive descriptions, vivid and accurate renderings of experience rather than measurements or ratings

These tenets will be used as I describe my inner calling.

2.2 The Essence and Origins of my Human Experiences

My inner call is central to this whole PhD journey and what I do in life. Its core had blossomed beyond the heart, demanding that I develop a structured outer call to change people's lives when fully unfolded. (Ryken, 2013) advised that several tools and events around us help determine one's calling, including inward endowments and inclinations, outward circumstances, and the advice of others. My life was positively impacted by the bravery of a father who fought against all the odds. I was born in a family deeply rooted in Christianity and had five siblings: one brother and four sisters. The delay in having a son is central to who I am today. The boy child came much later in my father's life as he was the fifth born. I was born on New Year's Day as the first baby of that year in the then Rhodesia. The Government of Rhodesia heralded my birth in the daily newspaper as the first amongst the new-year babies. My father, who valued that, kept the journal nicely folded to give me later in life. Then there was no technology to foretell my sex before birth, and when I came out a girl, my father called me Patience, a name that I carry up today. The background to the name is that the firstborn to my father was a son called Gift, who succumbed to some strange sickness and died at the age of two. Then my father got another child, a girl who became the firstborn. The child was so beautiful, so my father's employer named her Pretty. Then I came along in style on the first day of 1970, a girl though my father was expecting a baby boy hence my name Patience.

My following three siblings are females, and we were blessed with a positive-minded father who gladly re-arranged his life to reality instead of dwelling on things he had no control over. In his heart, I took the place ordinarily given to sons though a woman. My call was influenced by events my father experienced earlier in his life as a teenager. My father was a Christian and trained to believe in God at a tender age. He lost his entire family in a day at eleven and a half years old. He remained with the values of his Christian belief system, which sustained him until he had his own family. The Renamo bandits bombed his whole village in a matter of seconds. Nature had called my father aside, and as he was busily relieving himself; someone was wiping out his

entire family. When he returned home, he returned to bodies all over the homestead and the perpetrators had disappeared. He then decided to go to the next village for help, but it was the same story. It suddenly dawned on him that he was alone with dead bodies, and he had to act fast, dig shallow graves, and bury his loved ones as many as he could before taking off. Because he was young and scared, he could not recall the exact number of bodies he had to bury at such a tender age. He remembered that he started with his mother, father, and other close relatives in his compound. Tired and weary, he moved away from the deserted and lonely place he could no longer call home. Even these resolute things, disappointments, and regrets prepare us for our calling (Ryken,2013).

From my father's early struggle and how he narrated his life's story to me, it became apparent to me that the various situations in life that would now unfold in my own life, including poverty, dismissal from work, death of a loved one, failure and rejection, is all just school; teaching one the lessons their soul need to learn, (Dewey, 1949). To be what they are called to be and to discover a strengthened inner call.

2.3 Qualitative factors in my Story: Drawing from a Hero

One cannot help but marvel at my father's life, full of drama interwoven in creative origination (He was saved from death by nature's call). His life and mine were similar in many tremendous stories in which my call is established. Both experiences are fulfilling as we have a legacy to leave for our children, being the executor of his estate after immensely benefiting from real life. I am not waiting until I die for my children to know I am their benefactor. I have actively sponsored them to change their mindset in this transforming journey. I would not want them to think I am giving them good academic education to become high-performing employees of some big foreign firm. I want them to have self-worth and believe in themselves and grow to become their own masters and social entrepreneurs.

Now an orphan and had also grown up an only child, my father decided to migrate to Zimbabwe from Mozambique a few hours after the grievous bombing. My father was a child, a dependant, and became an orphan in the same place and compound he used to call home. On the morning of that fateful day, he had looked for his mother to

give him breakfast. Someone had robbed him of this innocence and childhood in split seconds; he became a man overnight and had to become responsible for his survival. There were no rituals or initiation passages; fate had made him a man in one day. He had to trust in God and live out the faith he had been taught. For fear of the bandits coming back for any survivors, his survival instincts kicked in. He needed to go away and start fending for himself to survive. The decision to go to Rhodesia, now Zimbabwe, was made based on stories that he used to eavesdrop from adults talking about other people who would run away from the war-torn zone and go to Rhodesia. For directions, my father returned to the teachings imparted to him.

First, he had to pray and trust God. Like Jacob in the Bible, in Genesis 28, verses 20 to 22, running away from his brother Esau after stealing his birthright, Jacob sought the presence of God and made covenants in exchange for protection and God's blessings: "Then Jacob made a vow, saying, if God will be with me and will watch over me on this journey I am taking and will give me food to eat and clothes to wear so that one day I return safely to my father's household, then the Lord will be my God" (Genesis 28 verse 32, NKJV Bible, 1982). My father did the same thing as Jacob; he requested and prayed for God to protect him and keep him company to get to Zimbabwe. After a day's walk, my father met four more boys of similar ages along the journey to Zimbabwe. He ranked third in age amongst the whole group of five. They were survivors from different villages looking for company and support. After a day's journey, they got accustomed to each other and established that they had one burning issue, thus crossing the border alive. This, their common cause, brought them together. Ubuntu was at play, as Mugumbate and Nyanguru (2013) asserted. Ubuntu relates to bonding with others. As Tutu (1999) said, "It is all linked; we have this communal sense and the deep harmony within a group being the prime attribute." On this physical and new life journey, my father had to recondition his mind and adjust to his new family makeup of new siblings, but there were no parents this time. The informal adoption process instinctively happened, and my father accepted another family of the other four survivors. They had just been together for one full day at most and were ready to become brothers for life. These young people demonstrated Ubuntu by choosing new brothers from the other survivors to survive.

2.3.1 Integral ecosystems and ubuntu

It is against Ubuntu and integral ecosystems that my research to innovation journey is premised. The burning issue in the Zimbabwean farming communities is attributed to the injustices against farmers by donor institutes that purport to help. Yet, they are creating nothing but donor syndrome. Aid has been defined by (Ajayi, 2000) in her contribution to the interrogation of foreign aid forums: "a form of assistance by a government or financial institutions to other needy countries, which could be in cash or kind". On the same forum, Stevenson (2006) contends that the modern concept of foreign aid or assistance from mainly rich industrialised countries to less economically developed countries has its roots in the post-Second World War reconstruction era. Stevenson (2006) further argues that most of the aid received by poor developing countries, however necessary, is "tied aid" and very expensive. In this tied aid because the donor nation benefits economically from that same aid at the expense of the recipient country; therefore, a colossal need to think of other sustainable development strategies beyond/besides aid. Using Western templates for farmers to access lines of donor funding and farming activities will end up like the same scenario my father found his village in-bombed down beyond repair whilst no one sees it coming.

2.3.2 The origins of my relationship with self-sustenance

No matter the circumstances, time and chance will come everyone's way. My father was an orphan subjected to child labour, which did not discourage him. While still a child, his employer gained his trust and promoted him into a white-only employment zone. He then became the first black fireman in Zimbabwe. Despite living in an urban setting, our family had big corn fields where we grew maize, sweet potatoes and groundnuts for food security. To avoid subjecting us to child labour, a situation he was subjected to, my father would hire labourers to do the hard stuff like weeding and harvesting. We undertook processes like planting after the borrowed tractor had prepared the land and exposed us to planting the seeds, thereby training the hand. We planted to make excess which we sold to augment our household income with his small paycheck. Our little backyard garden afforded us organic vegetables as we used manure from my mother's chicken business for a living. She is still operating the same business as she is still alive. We have no family history adulterated with lifestyle

diseases like diabetes and hypertension, as we eat healthily and do not shy away from hard work.

As children, each child took turns to keep the ecosystem healthy by contributing to the execution of household chores available. Though we worked harder than most average families, we did not own the means of production. Most of our family's financial decisions outside of food production were centred on the small pay check my father brought home after spending 24 hours at the fire station. My father ensured that the "head, hands and the heart" were cared for at the missionary boarding schools as he sent us for academic schooling. No one in our family skipped church every Sunday then. He supported church activities, and this side was consolidated while attending mission schools. To illustrate his kind-hearted spirit, he displayed acts of kindness by even caring for my mother's relatives and going beyond by helping people experiencing poverty in our suburbs. He shared with strangers. Besides having us his children as his only bloody relations, he knew no other blood relatives. His world was based on humanism and not only on blood ties. Working together shaped us into a stable family nucleus, a good ecosystem. This interconnectedness has resulted in us becoming a very closely-knit family that looks out for each other.

From my father's life story and how he raised our family, I derived my inner call as he nurtured it through daily interactions. His background had a significant bearing on him first; then, he lovingly deposited the humanistic traits into my life. My life would not be complete without his influence and the sacrifices he made; I am who I am today because of a kind and humane father. From my father's story, great courage and self-directed learning to survive, basic human competence was displayed. Knowles (1975) alludes to these adaptations as a prerequisite for living in this world. I am a product of my father's bravery; he could have given up on life but did not preserve his tribe.

2.4 Qualitative Factors in my Story: Lessons Learnt

Randall (2014) asserts that "the inside story of life, issues of human dignity, promotion of human and social welfare, incorporating the arts and humanities" reside and are explored in the southern hemisphere. The South fosters self-fulfilment in the context of collective and community relations, for example, a man in close relationship with others and nature ultimately shaping the type of social contributions one makes

towards community development (Randall, 2014). For each of us, the real purpose is personal, and most people are passionate about “what we are here to do on earth and the why”. The individual purpose then transcends into an enterprise, impacting the local community before it becomes global.

Though I can think of myself as highly northern, given my background as a successful banker and credit policies developer, the fact that I have worked with communities all my life and my upbringing keep me grounded within the southern hemisphere. It is these communities that form the burning issue of this research-to-innovation journey. The poor farmers and the injustices on them by foreign donor aid are exacerbated by a legacy left by the colonial system that seems to cause a perpetual vicious circle and cycle of poverty. Post-World War 2 organisations such as the World Bank, World Food Program and IMF have brilliant reports of how they have helped Africa rise out of poverty for decades, yet Africa is still one of the poorest continents. My heart bleeds at this disparity.

The purpose of my journey then became to understand and be the voice of the voiceless through intimate and deliberate resonance with their life experiences, stories, sighs, and unsaid sorrows. My research departing from the south, lodged in nature and community, grounded my inner call in the farming community with an Afrocentric agenda seeking to co-create ecosystems that deliver contextualized solutions. As I manoeuvre in this research journey, I envisage, together with the farming communities I work with, Purpose-driven interactions seeking solutions that speak to challenges deliberately ignored by foreigners. Peradventure poverty resolution to foreigners means losing power and the link to continue looting in the name of aid.

Looking at my own life as it unfolded, it was of imperative importance to note how my father related to me, as it had a strong bearing on who I am today and my inner call and purpose. With hindsight, I remember how I learnt a good work ethic from him. In one of the instances, I sought permission to extend our homestead, and he gave his blessings. Part of the money to extend the house would come from my backyard business of sewing and selling pleated skirts and baking birthday cakes after work. The hard-working experience resonated well with the extension of my parent's home, and it was excellent. My father did not intentionally join in the funding of the construction, which was going on very well. However, the drama came back into his life. He was involved in a road accident while driving to an accident zone during work.

A mysterious fire had broken out, and being a fireman, they were urgently required to attend the scene. The driver who took them there was speeding using the shortest route to the location of the accident, when some stubborn public driver refused to give way to the fire brigade even after sounding the siren. When the fire brigade driver realised they would be involved in a fatal collision, he swerved into a pole, sacrificing my father's side. Realising what was happening to him, my father jumped out of the moving vehicle to save his life. His survival instincts were always on the spot. He survived with fractured ribs due to the fireman's regalia which minimised the bodily damage.

His bosses got the whole story, and being a good, hard-working employee was sent for the best medical treatment, and he recovered well. He was compensated just enough to cover what was then outstanding on the house construction bill. Humorous as he was, always turning ashes into beauty, he took it as God's providence, trusting me he gave me the compensation cheque and asked me to finish off the extension of the house. We finished building the house extension without debt in precisely six months. I furnished the home with new furniture, which was one of my father's most memorable experiences. He could now verbally confirm and thank God that he had always thanked God for all children, whether female or male, despite the pressure he got from his male counterparts because of their gender orientation. God blessed him with a male child who was later blessed with a male child to fulfil his legacy wishes of continuing his tribe in his own time.

Despite my being female, my father, with his humanistic psychological attributes, decided my worth at a very young age and gave me a role ordinarily bestowed on male children. He even called me "mukoma", meaning big brother, from a young age. He had a way of turning complex situations or events into what they should have been. Like God's promise in Isaiah 61 verse 3, "to give them beauty for ashes....", my father was positive. Nature and life experience taught him to use the resources and treasure available for maximum benefit in and out of season. My childhood journey and his life as a Christian make me value and believe in God first and then hard work. My father was an orphan, but we lived a comfortable life full of dignity and admired by many through hard work. His life experiences had grown him, and somehow, he believed I could also take part and placed huge responsibilities on my shoulders at a younger

age. Life threw him heavy stuff at the tender age of eleven as he had to fend for himself. After reaching Rhodesia, two years later, he was formally employed as a gardener at fourteen. The income he got was not enough, and through some of his deep-seated entrepreneurial spirit, we had to work, rear chickens, and produce in the fields, thereby reducing the grocery bill and making a little extra to close the income gap. This is the life I live today, self-sufficient in my own food production through an organic home garden and farm-producing food for my family, an essential yet costly commodity.

My father worked so hard and ensured that he strengthened our hands so that, as children, we would not go to bed hungry, and as adults, we would control the means of production and be productive citizens. His philosophy was that life did not come on a silver platter; we had to sweat for it. I am inspired to live such a legacy as my father did; though dead, his legacy continues to live through me and other siblings as we live as responsible, hard-working citizens. Because I delayed acquiring a farm for my father, he passed away before he had access to a big piece of land to continue being active after retiring from his profession as a fireman, an actioned packed vocation. So, I acquired a farm early in life, an industrial stand, and a place for research centred on depositing my hero's aspirations and keeping my mind and body productive and active.

I am determined to deposit vocational skills and knowledge into socially responsible citizens that are hard-working and well-equipped to live and establish enterprises that do not depend on foreign benefactors or employee paychecks. This time, production must be well above subsistence levels with reframed knowledge and technology-intensive products, which model I am co-researching and would gladly co-create with the smallholder farming community in my country.

2.5 Quantitative Factors Affecting my Calling and Constituting my Burning Issue

2.5.1 The Achilles heel of African economies

There are discrepancies between recorded growth rates for African economies in the media and actual economic growth. However, the gross domestic product should not measure the sustainable transformation of the economies based on the employment

rate only. Still, it must change and encompass other non-economic elements, social, environmental, and political spheres. This will bring the numbers closer to what is called 'learning economies. The widening gap between reality and perceptions based on growth rates reflects the increasing global economic divide and the demand for natural resources. It has led to an advantageous change in trade and increased export volumes, raising Gross National Product (GNP) growth rates. In contrast, the impact on domestic employment has often been limited and sometimes harmful. The expansion of the commodity sector neglecting industrialisation only automatically creates large-scale unemployment directly. It has rarely resulted in a substantial increase in job creation in upstream and downstream manufacturing and knowledge-based services for developing nations (Rodrik, 2011).

The participatory approach, where research is done with the affected communities, removes the gaps and uses a bottom-up approach for solutions that work as it brings a sense of ownership and buy-in from beneficiaries. If researchers try to ignore that calling, they may be frustrated, leading to eventual failure. My calling was to avoid spending my days adjusting credit policies and working hard to make businesses in Africa fit into some foreign credit policy of some international bank. Reminiscing on the past means focusing more on the **now and the future**. Self-pity hinders planning effectively for the future and economic independence.

2.5.2 The effect of parenting on one's purpose

Though my research on the innovation journey is premised on the discrepancies in the economy and purpose of local financial institutions affecting African farmers, it would help to look into theories denoting the effect of my father on not only the person I have become but also my career acumen. Turner, Chandler, and Heffer (2009) asserted that authoritative parenting continues to influence the academic performance of college students. Another school of thought was asserted by Hall (2010). He postulated that the stability and functioning of a female's marital life are positively related to the father's parenting in childhood and his relationship with the child's mother. The parenting style affects the child's life in many ways. Kerka (2000) also researched the effect of parenting and career development. The finding of the study entailed that parenting style affects career development. It was further emphasised

that the focus from the individuals may be shifted to the family. The reason may be that the individual is the reflection of their family. As demonstrated in the section below, my father, in particular, and my family generally had a bearing on the person I have become and the calling I bear.

2.5.3 My formative years

My primary school years from 1977 to 1983 were split into two, the first five years at local primary day schooling and being tightly knit at home. The last two years in primary education were considered formative at a mission boarding school in Macheke, some 135 kilometres away from home. I used to scoop prizes yearly, and these became momentous times for my father, who would come to celebrate and see me receive book prizes every year at school. It gave him so much joy that he would not miss prize-giving days for anything. The situation got better in 1983 for my father when I started secondary school; the prizes were given per subject. So, to give him joy, I would work harder to give him that extra joy of rising and going to the podium at least four times on each prize-giving occasion. We had a sense of humour, and he would thank me using our totem, which is a zebra, and the rendition was entirely something lovely and remains memorable in my life. The boarding schools that I attended believed in training the head (academics), the heart (spirituality), and the hand (manual labour) to complete the vicissitudes of life. We worked and produced the food we ate; the staple food was a product of the school curriculum. The school encouraged practical subjects like agriculture and woodwork during carpentry lessons and girls attended sewing lessons. We cleaned our dormitories and did our laundry.

This education fell short in one aspect only. Students were not taught to become business owners or productivity; prizes were given mainly for theoretical academic subjects. Students who excelled in subjects like fashion and fabrics, food and nutrition, and carpentry were not held in high esteem the same way as those who excelled in sciences and languages. Yet, these practical subjects could help someone set up a self-sustaining enterprise. I started wondering why it was so, as I excelled in both practical and theoretical subjects. However, my school administration was happier that my standard and grades for sciences and art subjects were high. It is only dawning on me now that the founders of the schools where I attended primary and secondary

education were Americans and Catholics, so they rated the practical subjects as inferior or less necessary.

Furthermore, one had to have five subjects, maths, English language, science, and any other additional subject, to secure employment. The corrupt system to produce workers started in the education system. The irony is that later in life, during my early working days when my paycheck was still small, I supplemented my income through sewing garments and baking cakes, from hands-on lessons I learnt during secondary school yet looked down upon practical subjects. Now my family is food self-sufficient from basic agriculture lessons I learnt back then.

2.5.4 Life in the commercial banking sector

I joined the working life at twenty-one, and the international bank I worked for was the best in Zimbabwe then. I joined as a clerk and went through all the departments in the space of four years. That was a record time as the departments were manual, and learning and being promoted through eight departments in a commercial bank was phenomenal and recommendable. I also had in me an enterprising spirit. After one year of working, I had an income that only committed to a few bills except my educational expenses. The work situation required that I separate myself from the rest through hard work and relevant professional qualifications. To change our home living space, I had to change my mindset and expand my income stream independently of my employer. I had to start from the bottom, and choose an inexpensive and enjoyable project, as my budget needed to allow me to venture into capital-intensive projects.

As a family, we valued having quiet time with the Lord and private space away from each other. Our relationships as siblings taught me that stages in relationships are seasonal; our ambitions and aspirations differed. Preferences were different, so a familiar and tight space could have caused conflict, and a larger living space was the answer. We also had a noisy neighbour we could hear every night as our houses were semi-detached. As if he suspected a lot of research went on at night, the noise and music he discharged from his home were horrendous. The ghettos are constructed to take away the quietness. One needs to research and think deeper lest one develops profound ideas to change the ugly and evil systems subjected to black and poor

people. I took on the project to extend my parents' house to thank my parents for all the sacrifices they had done for me while I was still in complete control of my income. This was before I acquired and committed my income to other lifelong commitments like marriage, children, and a mortgage for my house.

My father had taught me well; one starts with available resources and grows from there. After extending my parent's house, the remaining yard told me the black workers' housing system was horrendous. Available space left after the home extension meant little space left for the organic garden. The system was intended to squeeze low-income people; one had to make difficult choices sacrificing other life needs in exchange for the other.

Many envied my experience of being enterprising and going up the corporate ladder as such promotions were usually reserved for children of white people or relatives of black bosses in high places in the bank's hierarchy. The bank had exams, most of which were marked outside the country, so the results backed me up in addition to customers' recommendations. To a large extent, I believe God was smiling at me, and His favour was my shield and I felt His countenance shining upon me. Because the shareholders wanted their money kept by responsible and trained people, they gave selected roles to people who would have proven themselves. The interviews involved external parties, so it was only the tough that got going as the going got tough. Credit policy and operations were the backbone of the banking system. To head a credit department meant you were trusted, counted among the cream, and paid well. I was transferred from Retail Banking after six years of being based in the bank's banking division which handled mainly personal accounts and transactions for corporate customers. This provided a pedestal where later in life, my retail banking experience meant I understood the system more and could relate better to and with colleagues at the forefront front serving our customers.

When I was part of the middle management at the bank, my seniors could not afford to move to better neighbourhoods simply because they sent their children to more affluent expensive schools. Living borrowed lifestyles required them to supplement their paycheque with staff overdrafts and loans as part of their benefits as bank employees. Most of the junior managers were falling into the same trap. Relying on

one income centred on working for someone and, worse still, thinking that the best thing one could aspire to be is getting a promotion and a raise and paying more loans. I was fortunate to have learnt from industrious parents and engaged in private extra income generating activities, traits trained in a humble home endowed with a saving culture. A saving culture was another attribute I learnt from my parents.

Out of the ten senior managers at the bank, I was one of the two who bought a second home without disposing of our first house. The second one to do so was a friend of mine. We used to participate in a savings scheme called *Mukando* (round-robin saving scheme). The purchase of her second house coincided with her turn to receive consolidated savings from all participants in the *Mukando* Scheme. The money was enough to pay for the conveyancing fees. She needed more. All others needed to sell their existing houses to acquire the next one in less densely populated suburbs. Their debt burden had to remain within acceptable and manageable limits. For my friend, it was a cross-pollination of saving habits from my family background, which changed how she handled money. After the purchase, our friendship obliged her to start an extra income-generating activity to service her mortgage account quickly and, even better still, accelerate repayments. The impact of having savings left an indelible mark in my life so much that village savings are a theme that I carry with me as part of community building to entrench asset-building schemes in farmers. It's the simple things and frugality that can change lives.

2.6 Engaging my Total Self as a Participant in a State of Passionate Involvement

My working life at Standard Chartered Bank was good enough for a gifted employee. However, I only stayed short in non-managerial positions. I was an executive or a manager for nineteen of the twenty-five years I worked at the bank. Fifteen of those years as a senior manager, I worked locally in Zimbabwe and nine at the regional level at the Africa Regional Office. I was involved in four major international projects for the bank changing systems, policies, processes, and structures. None of these projects put people first as they considered a below-average performer irrelevant to the new system and network. I saw good peers at work being laid off; some would jump ship and look for new employment before being laid off, especially in situations with bad blood. My eyes were opened further when I moved to the Bank's Africa regional office

as the head of the SME credit office. I was young, ambitious and a woman. I oversaw 13 African countries covering East, West, and Southern Africa, including my country.

I was a team leader when the Bank's SME Division started in Africa in 2001, and it was a good challenge. We made money for the bank and were rewarded with life-changing bonuses and pay checks. What irked me as the credit officer was that I often fought for certain individual credit facilities to be approved because someone at the group office considered a credit to Africa too risky or out of policy. Most of these facilities and businesses did well but were always approved as exceptions. The experience of working for systems that were fixed and not encompassing feedback from Africa brought about the gradual emergence of what Lessem and Schieffer (2010) called a 'Living life-based Economy'. It is a creative revisiting of the Anglo-Saxon economic model with a strong focus on ecology and sustainability. Such an emergence is leading to an understanding of an integral economy. However, the experience caused an internal conflict where my inner call to be the voice of the poor was quickly taken as breaking the bank's policy, and my beliefs embodied below were not accommodated.

Generally, banking credit policies are unfavourable to SME businesses in Zimbabwe despite similar industries having been previously funded under corporate banking before the country was placed under economic sanctions. Having worked for this international bank for twenty-three years, I crafted credit policies for my continent within the Bank's Regional Office fraternity. I got a rude awakening when the realisation dawned on me that (we) Zimbabweans/Africans need home-grown solutions to our local context/challenges in a manner that speaks to the significant issues and discomforts we face. Credit policy templates brought over from somewhere by someone, especially foreigners, may not bring sustainable win-win solutions. What is left out in foreign-based templates that come via the givers or foreign investors are the critical issues that, if not resolved, may perpetuate subsistence farming, hand-to-mouth business development, and abject poverty in our society. Aid and foreign investment negotiated from a begging position have led us to perpetual poverty and debt in Africa. Zimbabweans are specifically being hoodwinked into believing that we need outsiders more to solve our economic problems than returning to the basics of being productive, participative, and accountable for public resources. As a re-

emerging power blessed by the Almighty, when we look from without, let it be an upward look not to the East or West because our help and favour come from the mighty Creator. In 2011, I changed jobs from working for an international bank to a local building society commercialising to become a fully-fledged local financial institution. A local financial institution should have policies more closely related to local credit issues. My biggest frustrations in life, then, have been a failure to recognise that I had crossed a transition boundary into my next life phase. According to Leider (2009), a calling is an urge to give our gifts away. We heed that call when we offer our talent in service to something we are passionate about in an environment consistent with our principles. I resisted that next phase to stay comfortable and reassuring.

2.6.1 The price for being passionately involved in the change agenda

The challenges I faced in my second job did not make me forget my calling; instead, they reinforced my desire to be the voice of the poor and bottom of the pyramid, who were always suffering and yet voiceless. The call had grown so much and strengthened my desire to make a difference. It got me ready to break the corporate barriers and pursue my calling. I became the voice of the weak and ready to impact humanity. Being a misfit provided something like a moral core of economic thought and practice requiring reorientation in a society rooted in religion and needing humanistic models. That goes far beyond a capitalistic value supported by an educational system meant to produce employees and not entrepreneurs. My lone voice in board meetings and the corridors of power was personal torture as I represented the voiceless who would pay through the nose to get loans and suffered the effects of corruption to get assistance to make ends meet. I stopped crime and served customers better. Most satisfied customers soon circulated the word and appealed to have their credit issues attended to by me. The head office delayed hiring and filling the new post of Head of Corporates and asked me to double hat. Customers were happy due to the resulting agility, and business increased mutually for the bank and the customers.

I was food poisoned as my office and position allowed me to stop the corrupt deals before they were approved. By God's Grace, I did not die; hence I am writing this story. When my new employers and fellow executives realised, I was a threat to their culture

of brown envelopes and the oppression of workers, they did not know what to do with me. I had become a lone voice in board meetings and the corridors of corporate power as I represented various clients who previously had to pay through the nose to get loans and suffered corruption to make ends meet. Finally, I had to quit as I realised that even management lived in survival mode and lacked integrity during an economic crisis. Corruption and further oppression of the poor were the order of the day. I used to think it was crazy to consider transforming my twenty-five-year-old career into something new. However, when I decided, I recognized it was time for something new. It was something that I thought would better fit my desired lifestyle and mode of thinking. I changed from corporate banker to community developer and social banker and this transition will form my outer calling, which will be explored in the next chapter.

2.7 Summary of the Chapter

The account of my inner calling in this chapter was embedded in that of my father and contributed to my being. It's a story within a story. It characterised the tenets of the southern relational concept of humanism, affirming that identity is rooted initially in the life world or the life cycle of local people. My background and the religious grounding nurtured in me strengthened my inner call. Its impact confirms how such an indigenous world is lodged in nature and religion; hence it is the realm of socialisation. My story attempts to satisfy the theory of empirical phenomenology as it produces an exhaustive description of my everyday experience. My past experiences when we had to grow some of our household food requirements and experience self-sufficiency further pushed me towards my inner call of seeing communities attain food security and self-sufficient ecosystems.

The chapter depicted the inner calling and motivation of the researcher. Family influence was crucial in shaping my call, which could not remain hidden in my heart. The educational and work experience sharpened my lenses, laying bare the inequalities and injustices that have caused me to engage in an integral research journey. The following chapter will introduce the outer calling emerging as an enterprise.

CHAPTER 3

THE OUTER CALLING

3.1 Introduction

The previous chapter was a vivid description of my life's story in a bid to trace the essence and origins of my inner calling. I used the tenets of the Southern relational path to unpack my becoming. In this chapter, I will explore my outer call which is the continuation of my story from a local perspective to a global perspective. Ford (2000) states, "*The Hero with an African Face* seeks not only to contribute to the overall renewal of today's approach to development but is more convinced that Africa has profound contributions to remaking the world as a whole". Similarly, this chapter presents the founding of Tafadzwa Ne Chiedza Development Trust (The Trust/ TnC), a community-building foundation instituted to interact with other ecosystem participants on the journey to transform the lives of farmers at the bottom of the pyramid. In this chapter, I will describe vividly how I institutionalised my inner calling by establishing an enterprise. I will also thoroughly analyse the status quo and the burning issues forming the fulcrum of my research to innovation journey and clearly elaborate on how my Organisation, Tafadzwa neChiedza, overcame the gap.

3.2 An Array of Economic Forces

The economic situation in Zimbabwe is a good example, a country with intellectuals, highly educated yet low productivity. Our country has geniuses who have invented economic models that create quick bucks, leaving a vacuum in a consumptive and wasteful economy. Fortunately for Zimbabwe the availability of arable land, which is fertile and suitable for organic food production. A benefit that stands in favour of black Zimbabweans as more than 60% of the arable land globally has been poisoned through GMO production, so it can no longer produce good nutritious food suitable for human consumption. The world is sick from the contaminated and genetically modified food from synthetic fertilizers. The yearning for social innovation can be seen as a reaction to the bias towards technology if it does not promote social businesses. Social innovation is not only informative research but demands transformation in Society including policy, looking at the issues of wealth ownership and how household income is generated.

The 2008 world financial crisis unmasked the charade of financial institutions' triple "A" rating. One of such triple 'A' rated institutions, the Leman Brothers, collapsed without being downgraded. The powers that manage the credit ratings wanted to maintain a particular perception because they called the shots. On the other hand, countries like Zimbabwe were placed under economic sanctions and their credit rating remains negative yet a trading partner of most strong countries. The economic system could trace trade transactions from Zimbabwe, yet rotten 'A' rated financial institutions could not be detected and the whole world was plunged into a financial crisis. The mortgage crisis in the United States of America affected most countries due to people selling hot air in the name of sophisticated financial products. The products were not underpinned by any production or tangible value involving many countries and the poor in some remote African countries simply because that country's economy is dependent on the rate of the United States dollar. In 2009, the Zimbabwe Government dollarised the economy abandoning the local currency, and to this date, we use borrowed multiple currencies in addition to the local one. The local currency will not buy citizens fuel, pay school fees, or even pay for a passport, yet workers are paid in that currency. Such a trading scenario causes the local economy to suffer from exchange rate-induced inflation, which is aggravated by most Zimbabweans' affluence and consumptive economic behaviour.

The structural change in low-income economies with high growth rates hurt the potential for future aggregate economic growth (Rodrik, 2011). The fact is that the share of low-productive workplaces, many of them in informal sector activities or subsistence agriculture, has grown amid the period of rapid growth. It has gone hand in hand with de-industrialization. This stems from the thought system inspired by the education system we have adopted as Africans which has socialized us to think in a conditioned manner.

Owing to the education system our parents exposed us to, my generation thought we would also have one career and become loyal employees receiving long-term awards. That was what we were told when we entered college, your major in college would define your profession, leading your career path in life. Lessem and Schieffer (2009) ask, "But what do we mean by innovation"? But in his wisdom in the book Proverbs, God advises one to engage in entrepreneurship when he advises, "cast your bread in many ways, one in the morning and when the sun goes down for you do not know

which one will succeed.” Invariably the term innovation is used to represent technical and technological innovation. It reflects the advancement in core industries (from automotive to communications, from information technology to chemistry and biotechnology, from solar energy and what we call social innovation lags" (Lessem and Schieffer, 2009). Now robots and technology are turning the world into a haven full of jobless people living on social welfare and a few wealthy capitalists owning and running the means of production. A new challenge is emerging from what I could call irresponsible innovation: super GMOs, robots are producing products like foods, and people are eating food that has been tampered with and remain hungry after filling their tummies. The hidden hunger problem is the new source of calamity, and the world is plunged into lifestyle diseases.

The climate crisis from climate change demands better stewardship of the earth which is now giving back what it has endured as nations industrialized and exploited the environment to satisfy their evil ambitions. God demands that we become responsible stewards of the land, seas, and the rest of the environment as we tend to it. Ignoring this basic responsibility is backfiring as we have just witnessed natural calamities; New York City had a month's rainfall fill their subways in less than 10 minutes. Germany, Belgium, and The Netherlands were shocked in July 2021 when floods were undetected by their monitoring systems and more than two hundred people died and hundreds of homes swept away. The so-called world leaders can no longer pay lip service to climate change issues as its devastating effects are at their doorstep. They need not employ a humanitarian worker to travel overseas to Africa or Asia to smoke screen help. Simply put, the technology misplacement has widened the economic divide.

3.2.1 Technology widening the economic divide

The world, through technological development, has crippled sound business systems and is producing hazardous food for the ordinary person. It creates customers for pharmaceutical Organisations owned by the so-called developed world. However, Africa can contribute to the hidden hunger problem in a world where people eat to satisfy hunger with dangerous food, as depicted by lifestyle diseases prevalent in all societies. People now eat medicines as if it's food. Most sick people today suffer from

lifestyle diseases as they are given prescriptions followed by instructions not to eat a host of foods they used to eat. Moreover, lifestyle diseases demand that one supplement the diet with medication with side effects that further create dependencies on pharmaceutical companies. Humanity ought to go back to the basics of eating nutritionally rich non-processed foods, which God said in His word, The Bible NKJV in the book of Psalms chapter 104 verse 14, vegetation and herbs are for the service of man.

I had two problems from two different continents. The challenge for Zimbabwe and Africa is the daunting poverty, hunger, and corruption levels. On the other hand, the North and West have the problem of lifestyle diseases created through science and harmful technology. Among affluent Westerners, illnesses emanating from genetically modified foods dampen the quality of life. It is worsened by pollution and a lack of social structures. Western economies are aggravated by refugees from Africa and other developing nations who seem to be following their wealth which was plundered and traded in its raw state. The extractive trade robs the locals by exporting to developed countries jobs and livelihoods, not to mention the value of the processed and value-added commodities.

3.2.2 Farming Community's dependency on corporate and foreign research

Corporate research involving empirical surveys needs to bring out the burning issues. It is limited by the format of the questions designed to bring outcomes that will be solved by prescribed superficial solutions. These are meant to cause temporary relief to profound ingrained challenges and injuries. No foreigner is driven by poverty alleviation or can reduce this social ill. All people pay homage to their governments whose interests are to make their countries first and food secure. Once African governments realise it, we can work for ourselves and stop being selfish, corrupt, and giving away our people's resources. If there has been socially responsible technological and financial innovation, why are we faced with environmental destruction and economic crises? (Schieffer and Lessem,2015). It simply informs us that it is because theories upheld by the so-called INGOs advance work to serve to sponsor governments yet are so divorced from the people they are supposedly created to help.

Recent press reports from the book, *Growth and structural change in Africa* suggest that Africa may be at a turning point in economic growth and development. Although starting from a low base, these reports indicate that Africa is now the world's fastest-growing continent (Sampa & Oyeyinka, 2016). However, Africans should avoid naïve optimism. Furthermore, (Sampa and Oyeyinka, 2016) state that the recent growth has been concentrated in countries and sectors. The transformation of development into sustainable social and economic progress will not happen automatically. I had to transform from a corporate banker, become a community developer, and subscribe to social and financial inclusion. This transformation illustrates that you must co-create a participatory approach with the buy-in of the affected. It may have lasting results instead of a top-down course like aid, where one creates dependents instead of participants. This is why humanitarian aid never goes beyond subsistence farming and food hand-outs. Easterly (2006) defines foreign aid as a voluntary transfer of resources from one country to another, given at least partly to benefit the recipient country. Therefore, we ought to deal concretely with these pain points.

3.2.3 Concretely dealing with the pain points

Due to external *forces*, we overlook that most societies are profoundly rooted in religious or humanistic philosophies that go far beyond articulating singular values. Mastering these transition stages was the “main development task of the individual” (Encyclopaedia Britannica Inc, 2023). The time came for me to change seasons in life. As they say, life begins at forty. Like Moses in the Bible, “training with the Egyptians was over. I needed to stand on my own and with my people”. I felt like a fish out of water in the corporate corridors and was a lone voice in corporate board meetings. It gave birth to Tafadzwa Ne Chiedza Development Trust, which brought awareness to the power we have as a people and the potential to solve our problems in meaningful and tangible ways. The literal meaning of Tafadzwa Ne Chiedza is “we are happy because we have this light/knowledge.” The Trust was formed to deal with the burning issues specific to my society rather than delegating corporate research and foreign-based development. I “engaged in social sciences with the quest to address burning issues of our day” (Lessem and Schieffer, 2010). I had become so unhappy with the status quo that fellow hard-working people suffered simply because of a system that

condemned them to perpetual poverty and slavery. As I could no longer continue deafening my conscience, I left the corporate banking world. This decision called for integral research with the communities.

To deal with these pain points calls for the comprehension that as I am fighting a system, I need an ecosystem and economic system to do so. Therefore, I had to form a trading company and a foundation to engage and interact with my targeted community and stakeholders. My outer call would want to promote self-sufficiency at various stages, starting at a household level, then community to the national stage as depicted below:

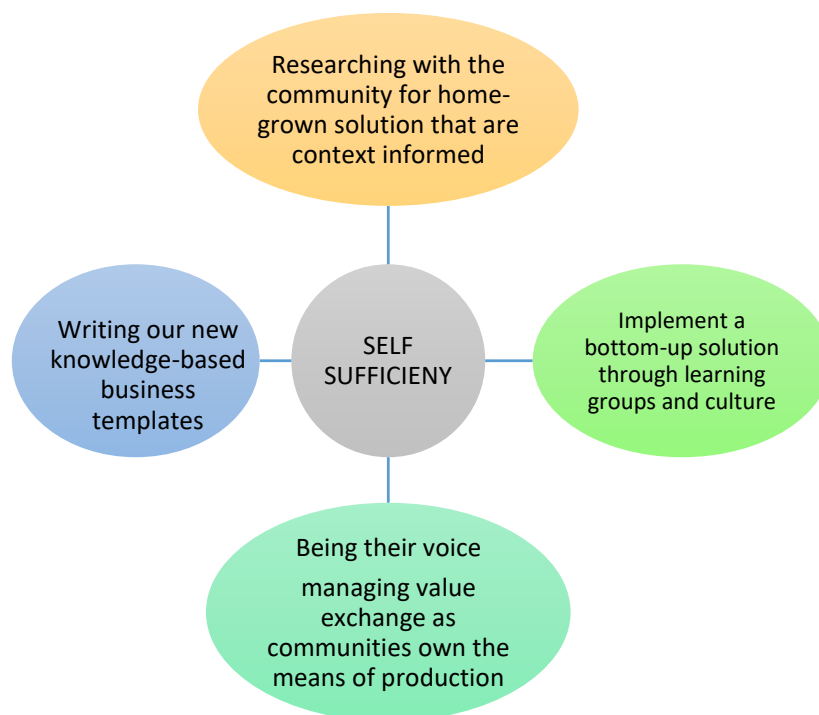


Figure 3.1: Self-sufficiency at various stages

3.2.4 Locating every unique cultural history as an episode in the larger story of poverty eradication and self-sufficiency

A controlled economic system acting as an invisible hand governs institutions that deal with poverty issues and challenges. The tenet, *“you uncover qualitative and quantitative factors in these essences and origins”* is crucial (Lessem & Schieffer, 2009). It is therefore, crucial to hear the voice of the poor in a manner that encapsulates how poverty is felt and lived. The poor are deprived and disempowered by handed-down choices or prescribed solutions delivered to solve their predicament of poverty. Cummins (2018) calls it the "poverty paradox" where social work agents

reportedly cause the impoverishment of people experiencing poverty from the so-called developed countries trading with developing countries. It is reported that social and humanitarian agents have what Payne (2000) calls "poverty blindness" scantily paying attention to community needs yet staging drama that delivers flawed solutions. They provide divorced solutions to the causes that affect the lives of the disempowered, resulting in suffering and strong traps in poverty. The same shameful scenario is experienced by smallholder farmers where large international Organisations like FAO can clearly articulate the rate of poverty levels from one conference to the other. Despite no improvement, they use the same templates and surveys when engaging smallholder farmers. Therefore, there is a need for a paradigm shift into sustainable capacity building.

3.2.5 Sustainable capacity building

According to Light (2000), "Capacity building in the non-profit sector is building the capacity of communities to live self-sufficient lives. It is the most important investment the non-profit sector can make." Lessem and Schieffer (2010) talk about giving the other a voice to augment such a thought process. Through a participatory research trajectory, TnC engaged with farmers inclusively so that they surface their concerns. A socio-economic environment to co-create solutions was created through exposure and engagement with experts making up the desired community of practice. Such a position expands the researcher's awareness of management, social work, therapy, and social and economic transformation within a particular context. It allowed smallholder farmers to participate in the envisioned development and own the process. At this stage, it shaped the outer call's objectives as they govern the nature and level of interactions Tafadzwa Ne Chiedza (TnC) will have with the communities.

To represent and guide the call and become a voice of the poor smallholder farmer and offer home-grown solutions means carrying such a vast responsibility. The Trust has been organised into a professionally run community-based Organisation with a board of trustees for third-party oversight to further tap and access critical skills and local expertise. To achieve the purpose, the envisioned structure of TnC as it transforms into a social innovation catalyst.

3.3 Introduction of Tafadzwa Ne Chiedza Development Trust (TnC) Work with the Smallholder Farmers

Tafadzwa NeChiedza Development Trust was passionately founded on biblical principles responding to the needs of the smallholder farmer and their social challenges. As the call continues the tenets of the descriptive method by Lessem and Schieffer (2009) are employed: *engage your total self as a participant in a state of passionate involvement.*

At a personal level, I left formal employment early at the age of forty to commit and work with communities in agriculture fully. The transition was in line with the tenet from the descriptive method. TnC, as it is now fondly known in the developmental sector, was established to work and represent farmers and understand from inside the essence and origins of poverty in Zimbabwe's smallholder farming community. The intent after inclusively studying and understanding the challenges, encourage communal action to improve the farmers' poor state together with the affected communities as co-researchers. Jesus Christ cautioned us in the KJV (1982) when he said, "The poor you will always have among you." Our value systems are validated by how we treat the poor or the bottom of the pyramid because we will always have them. Having the poor is a fact of life but causing poverty amongst them is criminal. For the researcher, human dignity and self-respect are weighed against how well one treats the poor or the weaker and the least in society. A fair appeal is inspired by reading Christian verses like Galatians 5 verse 13: "For you brethren, have been called to liberty, only do not use liberty as an opportunity for the flesh, but through love serve one another.

In addition, Romans 12 verse 1 encourages Christians to offer themselves a living sacrifice, holy and acceptable service before their maker. Furthermore, Christ, our Lord, and Master, left us with profound words in Matthew 20, verses 26 and 27: "Yet it shall not be so among you: but whoever desires to become great among you, let him be your servant. Moreover, let him be your servant, whoever desires to be first among you?" This biblical exhortation dovetails with another tenet of the descriptive method, *"you seek to reveal your Human and More-than-Human **Engagement fully**"* (Lessem and Schieffer,2009). When one serves others and esteems them better than oneself,

the benefits must be focused on the one being helped, thus fulfilling the ethos of integral research.

During this research journey, TnC had a staff complement of ten people assisted by volunteers and consultants that brought the foundation to life. It interfaces with farmers, and most staff roles cater to the community's agriculture, banking, education, and technology needs. This structure is in line with the tenet. The face of TnC resides in the field officers' position as they are in the community, interacting with the farmers and other stakeholders like policyholders and funders. Such an Organisational structure works well for TnC operating on a non-profit basis. The inner and outer calls deliver for a "southerner" whose being is lodged in the Southern African part of the globe. Initial interaction with farmers revealed a sense of hopelessness and lack of self-respect, with most now depending on handouts, grants, and humanitarian assistance for food security and livelihood. The community initially complained that they did not think they were able to co-create solutions that could help them escape poverty. The level of despondency is alarming.

3.4 The Challenges my Farming Communities are Facing

The observations by Woodhouse (2009), Martin (1945), and Nicholls (1964) are valid in Zimbabwe. Top of the list of the horde of challenges faced by farmers leading them to live in abject poverty include:

- i) Inappropriate economic assistance through aid and grants
- ii) Lack of comprehensive and consistent policies to support the land reform program and agriculture as a productive sector
- iii) The low representation of human and social capital dimensions in cultural policies, especially at the national level, and often not prioritised.
- iv) Limited support and regard for cultural policies as social exclusion tend to be related mainly to employment and other socioeconomic factors.
- v) Breakdown in economic value chains and predatory business practices by private sector buyers
- vi) Climate change challenges
- vii) Lack of appropriate funding within the current commercial banking sector, worsened by inappropriate technology and Knowledge.

viii) Export of raw commodities as opposed to value-added products for maximum beneficiation.

With these challenges, it is of imperative importance to borrow insights from similar initiatives, such as the works of Muhammad Yunus of Grameen Bank. After embracing the socio-economic and cultural gaps of his community and people in his country, Yunus purposefully devised a bank that embraced the rejection by the conventional commercial banking sector. In the same vein, TnC embraced the smallholder concerns and intent to resolve the disenfranchisement issue through research methods that promote participation and inclusion.

After recognising the social gaps where women are oppressed in his culture and community, Yunus took the shortcomings that made the poor women not qualify for an ordinary loan and turned the gender-biased gaps into business opportunities using positive values in his culture. The social entrepreneur/banker included such gaps as allowable approval criteria for his bank loans, and, for security, he used social and community collaborative values. He turned the tables culturally and economically, demonstrating that an inward-looking local social entrepreneur can establish a responsible business underpinned by relationships and shared values—solutions to challenges and societal gaps brought about by the being of Grameen Bank.

Yunus demonstrated relational ethos by personifying values like inclusiveness, compassion, honesty, and respect through the legal personae of Grameen Bank. It was underpinned by "how" knowledge is integrally exchanged, vouching that it can be profitably lived for the common good of all. Yunus established a social enterprise that styled the bank for low-income people in Bangladesh (Lessem and Schieffer, 2010). It is profitable socially, economically, and culturally, creating an integral economy for the poorly treated community of Bangladesh's poor women.

As a banker working for a commercial bank, I witnessed the inequalities and rejections against the local poor in an international banking setup. I established TnC to alleviate these imbalances and segregation. Such unfair segregation resonates with the ethos of the Bank of people experiencing poverty. Customers were rated through credit scorecards and numbered with guidance from the descriptive tenet, encouraging "*vivid, accurate renderings of **experience** rather than measurements*, (Lessem and Schieffer, 2009). My journey to transit from the corporate capitalist banker into social

and community banking through TnC will be fulfilled by correcting anomalies and inequalities; hence, the Grameen Bank provides a shoulder to stand on. The community context of farmers in the other metaphorical southern part could slightly differ from the Zimbabwe women farmers. Nevertheless, it all boils down to inequality and poverty-stricken lives.

The Zimbabwe smallholder farmers were caught in the crossfire as they were beneficiaries of the land reform. They need to be adequately supported by commercial banks to run micro enterprises on their farms as they need title deeds. The foreign-based NGO system takes advantage of bringing half-baked solutions that lack sustainability. The desire to deliver transformation influenced the journey to establish the Grameen Bank. Hence this relational approach motivated the establishment of TnC. Embracing humanistic values like Muhammad guided this southerner researcher with a robust participatory perspective to build a broad-based approach in engaging communities to deliver solutions holistically. Smallholder farmers in Zimbabwe cry because of disfranchisement as solutions are shoved down to them without consultation.

3.5 The Mission and Vision of TnC

Representing and guiding my call is the mission statement for Tafadzwa Ne Chiedza Development Trust. The vision is to create a model and theory of practice that will result in eradication of poverty and creation of self-sufficiency among Zimbabwean farmers, as depicted by the image below:

TAFADZWA NE CHIEDZA TRUST SOCIOECONOMIC LABORATORY



Figure 3.2: The socioeconomic laboratory of Tafadzwa Ne Chiedza Development Trust

To achieve this vision, TnC gains its inspiration from its mission statement, which is broken down into three:

- Facilitate poverty alleviation of communities by promoting their self-improvement, confidence building, hard work, unity, discipline, courage, and servant leadership, which, when practised, result in cohesive, healthy communities
- Realise a social return embodying values that are not traditionally reflected in financial statements, including social, economic, and environmental attributes
- Engage institutionalized ecosystems and create smallholder farming enterprises for social returns embedding local methods/models that work for our communities

To realize these objectives, it is of imperative importance to acknowledge the value system of the affected to be the voice of smallholder farmers and give them an authentic voice. According to Chaskin (2001), every society, every community, every group, and every person has skills, strengths, and the capacity to problem solve, act creatively, and work together to benefit their group. Chaskin (2001) further defines community capacity as the interaction of human capital, Organisational resources, and social capital existing within a given community to be leveraged to solve common problems to improve or maintain the well-being of a given society. It may operate

through informal social processes and Organised effort. Using the Integral worlds approach, TnC will attempt to overcome the issues of numbers and measurements by recording the experiences and feelings of the voiceless farmers and including the community in finding solutions needed to resolve the issue of poverty. One may concur with Todd (1996) that, through participatory research, farmers become rational people in their context. Given an opportunity to escape poverty, they may challenge and fulfil trade contracts for economic sustenance. Giving the farmers a voice and an opportunity obliges the crafting or feeding into the co-creation of solutions that positively impact their livelihoods. It would change the method where solutions are handed down and confined to foreign-based templates aloof to the realities on the ground, as in the current environment. In integral research, individual research ought to stand alongside one's community. You do not bring things to them. You walk together. You make discoveries together.

3.6 The Role of TnC: Bridging the Gap

The reaction by communities has permitted poverty to remain with us. Zimbabweans are suffering in a land endowed with natural resources. There is an urgent need to turn around the situation by making people productive and separating politics from day-to-day work. Many local and regional people are angry, frustrated, and upset about low commodity prices, dilapidated rural infrastructure, cutbacks in services, the deterioration of communities, and a perceived lack of government attention (Pritchard, 2000). Many people feel their life chances are deteriorating and often find scapegoats looking to identify the causes (Gray, 2000). At times this has led to political fundamentalism. The research on innovation will bridge the existing gaps by establishing the phenomena behind smallholder Zimbabwean farmers remaining in abject poverty and co-create solutions pertinent to the situation.

As recorded by FAO in 2006, Zimbabwe has a total land area of over 39 million hectares, of which 33.3 million hectares are designated for agricultural purposes. The remaining 6 million hectares have been reserved for national parks, wildlife, and urban settlements. The distinguishing characteristic of Zimbabwe agriculture is its dualism, i.e., the existence of two major subgroups based on the size of landholdings. The larger group is recorded as unsophisticated and comprises about seven million

smallholder and communal farmers occupying twenty-one million hectares. In general, communal and smallholder farmers occupy a lower natural agricultural potential in rainfall, soils, and water. Besides, these areas have lower economic potential because of the distances from markets and poor communication and social infrastructure. Before the ill-begotten land reform, the other group comprised about four thousand large-scale farmers with very sophisticated production systems and occupied about eleven million hectares of land, primarily in areas of high agricultural and economic potential (FAO, 2006). This research-to-innovation journey will help communities use their tacit knowledge and indigenous endowments to raise them from abject poverty, with TnC working together as co-researchers. The involvement of TnC will also help the communities to identify and refrain from Maimed economic adjustment programs.

3.6.1 Effects of maimed economic adjustment programmes

The weak and the so-called developing countries are pushed to accept aid in place of maimed economic adjusting programs and debt, which is extended to them. Debt is a trap as it comes with covenants that need to be more progressive. Aid is put at the forefront when the developing country cannot borrow. It still needs to be offered with many shortcomings, delivering limited sustainable impact in priority areas such as poverty reduction. It needs to address self-sufficiency issues, as low-income people are addressed through workshops and conference rooms. Transported from their poor homes to far-away conference places, such hide the dismal realities at their production places as solutions proffered by the conference is a far cry from their immediate realities. The poverty levels in Africa testify to the dismal failure of aid and debt structures extended to Africa over time immemorial. TnC will capacitate farmers to be able to work in their own best interests.

3.7 Summary of the Chapter

The outer call has been crystalized into a community development trust to contribute to meaningful community-inclusive action. The role and being of TnC, which is the manifestation of the outer call, is brought about to lift the voice of the unheard farmer currently disenfranchised. The next chapter is community activation, where TnC will purposefully activate its community of farmers.

CHAPTER 4

COMMUNITY ACTIVATION

4.1 Introduction

In the previous two chapters, I explored the southern path of renewal based on descriptive tenets. The key theme that stood out was my story of “self,” which was uncovered through delving deeper into my life story, which carried the stories of other people in it. Through a bird’s eye view of my life at different stages and with different people and Organisations, I understood my relationship with the communities I work in. I gained understanding from myself as my past proved to be a vibrant archive enlightening my past, present and future.

Given the background of my outer call, the community activation process was caused by my inner call. It led to several beneficial initiatives involving real people with real-life experiences. This chapter reveals the purposeful process involved with the community in the research-to-innovation journey. The process helped unleash the participatory potential of small-scale farmers. It shows how I brought my community together towards one goal: alleviating the imbalances within the farming sector.

The chapter explores the first C of the CARE model (CARE-ing), the community activation process (Lessem & Schieffer, 2018). It takes place by identifying imbalances and collaborating with agents and agencies within a community. There are diverse levels in which community agents work together to identify and resolve individual and communal challenges/needs.

Community activation is a process designed to achieve communal action, which leads to the attainment of a common goal. To contextualise community activation under the CARE model by Lessem and Schieffer (2010), it is a communal engagement intentionally aimed at awakening awareness in ways that capacity-build to resolve identified community challenges. The objective is to empower the community to solve their challenges from within rather than wait for outsiders to shove solutions on them. In the case under research, the community are smallholder farmers inspired to take action and live self-sufficient lives by engaging in livelihood projects that would free them from poverty.

The chapter further expresses how an inner circle of affected participants change into a revolution that will transform into owners of their destiny by changing their mindset and working communally to resolve daily life challenges.

4.2 The Research Trajectory

The integral research process being followed is open to blending indigenous with exogenous knowledge exploiting natural resources and human capital in the quest to alleviate poverty. After establishing the community's voice, the vision is to develop and generate new knowledge that directs social innovations that speak to a particular livelihood-based framework. Inclusion is appropriate for creating fully-fledged locally-based opportunities for the common good in smallholder agriculture development. Using 4Cs and CARE tools whose foundation has been laid, the participatory ethos is missing in the current developmental space.

At this stage, smallholder farmers are stimulated to become aware. Hearing their voices and experiences in the research journey is vital before co-creating solutions. Holistically employing the integral tools to engage the community gives the smallholder farmers a sense of "belonging," an essential aspect of the integral research process. A successful activation process takes a life inventory of the six hundred selected groups of farmers who should be able, from their voices, determine the best way to attain and own their aspirations as a community.

The researcher has selected CARE and 4Cs, including the Four Worlds integral Approach by Lessem and Schieffer (2010), to provide a floor plan for the Theoretical Framework. The CARE and 4Cs framework are elaborated on below:

CARE stands for Community activation, awakening integral consciousness, innovation-driven -institutionalised Research, and Embodying integral development.

4Cs stands for **C**all, **C**ontext, **C**o-creation, and **C**ontribution trajectories. The pair will be employed for community activation and engagement, guiding the integral research journey in pursuing social innovations for transformation. Figure 1:2 on page 3 demonstrates the co-joining of the tools and integral knowledge exchange mapping the trajectory to be followed. We are at the first level of this bottom-up approach.

4.3 Use of Phenomenology in the Community Activation Process

Phenomenological inquiry portrays the affected as a whole human being with needs other than the illness or unfair practice they present at that juncture (Langbridge, 2018). It embraces the language for various functions and notes expressions to communicate meaning. According to Steiner (2016), Phenomenology can be used as a bridge between the East and the West, meaning overlooking the notion of a passive onlooker. Steiner's viewpoint is that Knowers can potentially transform the world.

On the other hand, classical research is viewed as a one-sided methodology heavily biased towards the West. It systematically neglects the South and East, if not the North, Lessem and Schieffer (2010). Phenomenology is an inductive, descriptive research method. The task is to investigate and describe all phenomena, including human experiences, in the way these appear (Omery, 1983 p.49). Phenomenological research aims to describe experiences as they are lived; in other words, the "lived experiences."

Lessem and Schieffer (2010) summarise the critical tenets of phenomenology as follows:

- i) Immersing in the life world of immediately lived experiences
- ii) Illuminating the nature of the inner self
- iii) Locating every unique cultural history as an episode in the larger story of poverty eradication

The phenomenological methodology used at this juncture causes transformation at three levels: self, enterprise, and society. Phenomenology is established relationally in the "southern" guise. The foundation was needed to contextualise research to innovation so that research under mode 2 differs from conventional research under mode 1. The researcher's relational orientation is then applied at the community and enterprise levels. Langridge (2007) explained phenomenology as a research methodology that focuses on understanding a lived experience in the case of small-scale Zimbabwean farmers.

In the Stanford Encyclopaedia (2007), Langridge further advises that Phenomenology studies the structure of various types of experience ranging from

perception, thought, memory, imagination, emotion, desire, and volition to bodily awareness, embodied action, and social activity, including linguistic training. The community is not researched. As such, the southern relational path will be used. The floor plan in Fig 1 outlays the research as participatory and action-oriented, which can result in transformative action. According to (Lessem & Schieffer, 2010), it is critical to understand how your world is “constructed.” It is multidimensional while simultaneously being transdisciplinary within the integrated realms. The philosophy of phenomenology, for its founder, Edmund Husserl (Eddie, 1987), records that phenomenology emerged from the crises of the European sciences early in the 20th century. In grounding this research, identifying and immersing oneself in a questioned phenomenon is essential. According to Emerson (2004), this phenomenon causes us to want to engage. Because it disturbs me, moves me, and calls upon me to motivate me to investigate it further; ultimately, one that stimulates me to think, feel and act upon it. What disturbs the researcher is the poor status of farmers with land living in poverty, with no income and safety nets.

4.4 Motivation behind Community Activation

The predominant theme of this chapter is collective activity to be collectively aware and form an inner circle before building the outer community, Lessem and Schieffer (2014). Standing on the shoulders of social leaders in relational community activation like Muhammad Yunus of Grameen Bank, he used ethos like self-sufficiency for poverty alleviation in the vicinities. The research inner circle is built through encouraged participation, promoting local power for better buy-in, transparency, accountability, hard work, removal of bureaucracy and enhanced capacity. TnC is acquiring some cues from Grameen Bank, nicknamed The Bank of the Poor. Yunus understood the local conditions of his community where people experiencing poverty, especially women, were excluded from accessing loans through cultural barriers and stringent commercial loan requirements. He embraced their challenges and established a bank that would relate to the causes of poverty, staying in touch with the community he wanted to serve. Grameen Bank was established to serve people experiencing poverty as long as they believed in the bank's values like hardworking, honesty and group work. Yunus took advantage of the community's religious beliefs and innovated new loan security values around religious values that resonated with

everyone. Millions of poor people in Bangladesh escaped the poverty trap through group-social-micro loans extended after training and knowledge to run social-micro-enterprises. Getting cues from such balanced and contextualised self-sufficiency models goes a long way in helping co-create a self-sufficient Zimbabwe model for local smallholder farmers.

4.5 Prior Maimed Research

Questionnaires and surveys as research tools have not worked in the past, as there are many research results on poverty in Africa with no change. However, diminutive solutions have been established to eradicate the challenge. According to Lessem and Schieffer (2010), current research is built on a faulty foundation. Contrary to empiricist research methods' objectifying and reductionist nature, they reduce people to five senses. To avoid falling into the same trap, a mixed-method approach was used. Focus group discussions and semi-structured interviews with open-ended baseline study forms were also used.

4.6 Selection of Participants in the Community Activation Process

The Ministry of Land and Agriculture gave TnC fourteen Agritex officers from 4 different regions to work on the research project. The Ministry is the custodian of farmers and a key stakeholder as they formulate policies that impact the lives of all farmers countrywide. For balanced research, TnC was given the following areas: Bindura, Buhera, Gokwe, Masvingo, Chipinge, Nyanga and Dowa-Makoni. The areas cover all five agricultural regions in the country, from wet to dry, most fertile to non-fertile.

Zimbabwe has five agricultural zones labelled from regions one to five, with region one receiving the most rainfall and the most fertile land producing the best yields. Region Five receives minor rainfall and poor soils with little or no vegetation, producing low yields. TnC has been working with farmers in some of the selected regions; some Agritex officers are familiar with and willing to be part of the research. TnC and Agritex selected fourteen focus groups of forty farmers/households in each group to

participate in the research. Each group selected a lead farmer to represent them and was deputised by a treasurer, and a secretary was also selected.

4.6.1 Sample make-up

TnC followed the ideal sampling method in descriptive phenomenology, allowing maximum variation sampling. The participants shared experiences with a wide variety of demographic characteristics. Farmers in Zimbabwe's rural areas are an ideal sample as they vary in several demographic components, like land size, zones, soil fertility, age, sex, level of education attained and family structures. The variables come with different challenges underlying the issues at hand. The research had a population of six hundred farmers, fourteen lead farmers, seven TnC officials and fourteen Agritex officers.

Furthermore, there was a pool of volunteers (interns), and each focus group member was a household representative. It was made clear that there were no financial incentives, TnC would not compensate expenses for the meetings, and most meetings would be held at the lead farmers' field or demo plots to be identified. Each focus group was assigned at least one Agritex officer, and two groups shared a TnC core resource with one of their own, the lead farmer, representing them as the chief farmer. To activate and gather the voice of the smallholder farmers, several meetings to select the lead farmer for the focus groups were held as part of the initial meetings.

Some considerations and evidence were:

- i) lead farmer's field was expected to be exemplary
- ii) fit to become a demo plot
- iii) The capacity to become a community leader
- iv) willingness to motivate others in agriculture development.

4.6.2 Self-awareness process

Engaging the small-scale farmers, the activation aim is to make a community aware of their communal challenges and own the process of becoming self-sufficient small-scale farmers in Zimbabwe. The ethos must be extended to farming activities in

agriculture production and related agri-business sectors. The voice of the voiceless farmer must be heard before engaging in the 4Rs (Restore, Regenerate, Reframe, and Rebuilding) that are part of the integral pathways. Lessem and Schieffer (2018) speak of restoring nature and community in the South.

The engagement activates the community to be self-aware and communally agree on challenges that affect them. Their losses, disenfranchisement, and experience must be told through their stories and experience in ways they are comfortable with and, more importantly, free to engage. This is an essential stage as the remaining three Rs, Regenerate, Reframe, and Rebuild, focus on improving and resolving issues and gaps that will surface integrally as the community is activated. Emery (1983) defines phenomenology as inductive, descriptive phenomena used to narrate human experiences the way they appear. The researcher immersed herself in smallholder farmers to describe the difficult life they lived and experienced. Buying a 100-hectare farm and embarking on agriculture production for her own lived experience as a farmer increased the understanding of daily challenges of a farmer. The move of becoming a farmer in her own right helped also influenced the shaping of the objectives of the Trust, which institutionalised the outer call.

4.7 Use of Phenomenology in the Activation Process

Phenomenology studies various experiences: perception, thought, memory, imagination, emotion, desire, and volition to bodily awareness, embodied action, and social activity, including linguistic training. (The Trans4M Movement, 2018). The community is not researched, and the Southern relational path researches with the community through participatory action research, which can result in transformative action. According to Lessem and Schieffer (2010), it is critical to understand how your world is 'co-constructed and multifaceted while being transdisciplinary within the integrated realms.

4.7.1 Phenomenology tenets

The activation process used various fundamental tenets of phenomenology as elaborated on by Lessem and Schiffer (2009).

These include:

- 1) engaging in radical inquiry
- 2) immersing oneself in a world of immediately lived experience.
- 3) locating every unique cultural history as an episode in the larger story of poverty eradication

The phenomenology philosophy emerged from the crises of the European sciences early in the 20th century. In grounding this research, it was essential to project the tenet – “immersing ‘oneself’ in a questioned phenomenon.” As alluded to by Langbridge (2007), the process causes us to want to engage because it disturbs me, moves me, and calls upon me, motivating me to investigate it further, ultimately culminating in a state that stimulates me to think, feel, and act upon it. The research reconnects with humanity's foundation story to chart a meaningful path to the future. Truly integral research embraces the four worlds of the South, East, North and West, each with distinctive strengths and weaknesses.

Through it all, TnC has embarked on inclusive community building using the Southerner's relational approach, which slants towards natural-and-economic self-sufficiency. In integral research and accounting terms, embracing the community's positive emotional state through vivid, accurate renderings of experience is vital. The trajectory relates well with daily experiences and intentionally finds solutions to our long-standing issues in smallholder farming.

4.8 Community Activation Tools

Community activation tools and strategies used by Tafadzwa Ne Chiedza fall into six distinct categories:

- i) Awareness campaigns and building of community circles
- ii) Integral research and Community advisory services as an engagement tool
- iii) Market linkages trade missions for exposure and empowerment
- iv) Education and capacity building for self and group development
- v) Access to appropriate technology, funding, and catalytic funders

vi) Information sharing and empowerment programs

Mulgan (2020) bemoans how researchers detach themselves from communities and what makes the communities strive. He promotes recognition of social values and social capital where relationships are built based on Trust and duty. As the being for TnC was established to be the voice of the smallholder farmers and cause relevant social transformation, the activation process where campaigns on self-awareness are the starting point emulates “Dare” an indigenous way of coming together to discuss and deliberate issues of concern. Dare is for the inner circle and holding such TnC regards the smallholder farmers as an inner circle so that the voice represented by TnC or voiced out to other stakeholders is in unison with that of the farmers. Similarly, the community activation process was designed to establish a social contract based on trust.

Mulgan (2020) further promotes restoring natural and community life based on social realities and human capital. Such an orientation led TnC to seek to know the aspirations of the smallholder farmers' community, the context of farmers, and their earnest developmental issues that required undertaking. Most farmers have the land resource available for farming, an asset that can be responsibly exploited to establish sustainable livelihoods. Furthermore, fauna and flora from the wild, available to farmers have the potential to become community living assets. The integral world approach was kept in perspective for sustainability in developing the communities of farmers in sync with what the world at large is facing.

4.9 TnC Community Stakeholder Activation Programme

4.9.1 Participants of the community activation program

The participants shared experiences with a wide variety of demographic characteristics. Farmers in Zimbabwe's rural areas are an ideal sample as they vary in several demographic components, like land size, zones, soil fertility, age, sex, level of education attained, and family structures. The variables come with different challenges underlying the issues at hand. Following Langridge (2007) explanation on phenomenology, as a research methodology that centres on understanding a lived experience, in this case, the poverty headache. The research had a population of sixty

hundred farmers, fourteen lead farmers, seven TnC officials, and twenty Agritex officers. Furthermore, there was a pool of volunteers (interns), and each focus group member was a household representative. It was made clear that there were no financial incentives, TnC would not compensate expenses for the meetings, and most meetings would be held at the lead farmers' field or demo plots to be identified. Each focus group was assigned at least one Agritex officer, and two groups shared a TnC core resource with one of their own, the lead farmer leading them as the chief farmer. To activate and gather the voice of the smallholder farmers, several meetings to select the lead farmer for the focus groups were held as part of the initial meetings. Some considerations and evidence were: lead farmer's field was expected to be exemplary and fit to become a demo plot: Capacity to become a community leader, and willingness to motivate others in agriculture development.

The aim and research questions were made known to the communities through their lead farmers. The lead farmer concept has been successfully used before to promote community leadership. N2Africa employed the lead farmer approach with the Ministry of Agriculture in Zimbabwe. The project was on nitrogen fixation in Guruve and Goromonzi districts. The lead farmers were the contact persons for the project and partner Organisations. The lead farmer approach assisted in beefing up community leadership as the ratio of extension officers is deteriorating in Zimbabwe as reported by the International Centre Tropical Agriculture (2012). TnC adopted the N2Africa procedures in selecting lead farmers as the approach would bring mitigatory measures under Covid 19 movement restriction. The lead farmer would be on the ground championing development in agriculture. Training or educating them on new technologies and essential project matters was doable using technology and social platforms. The lead farmer field offered a place for practical evidence and overcame challenges like illiteracy among focus group members. The other important aspect was that the lead farmer motivates other farmers and is committed to community progress and resolving surfaced communal challenges.

4.9.2 Community activation of key stakeholders

Illuminating the nature of the inner self is an essential tenet consolidating the research journey in the transformational process.

The Ministry of Agriculture is the custodian of farmers and a key stakeholder as they formulate policies that impact the lives of all farmers countrywide. For balanced research, through its collaborative relations, TnC was given the following areas: Bindura, Buhera, Gokwe, Masvingo, Chipinge, Nyanga and Dowa-Makoni. The areas cover all five agricultural regions in the country, from wet to dry, most fertile to non-fertile. Within the five agricultural zones categorized from regions one to five, region one receives the most rainfall and is the most fertile land producing the best yields. Region Five receives minor rainfall and poor soils with little or no vegetation, producing low yields. TnC has been working with selected farmers occupying all the different zones. An added benefit was Agritex officers who are familiar with and willing to be part of the research. TnC and Agritex selected fourteen focus groups of forty farmers/households in each group to participate in the research. Each group selected a lead farmer to represent them and was deputised by a treasurer, and a secretary was also selected. The TnC Community Activation Programme was enhanced by establishing a viable operational structure at the national level securing the buy-in of the farmers' parent ministry in charge of a viable yet understaffed Agritex office dotted in all rural provinces of the country. The buy-in of the Ministry of Agriculture afforded TnC the local reach desired to access the targeted focus groups of farmers in various rural provinces. The framework followed is represented by the chart below:

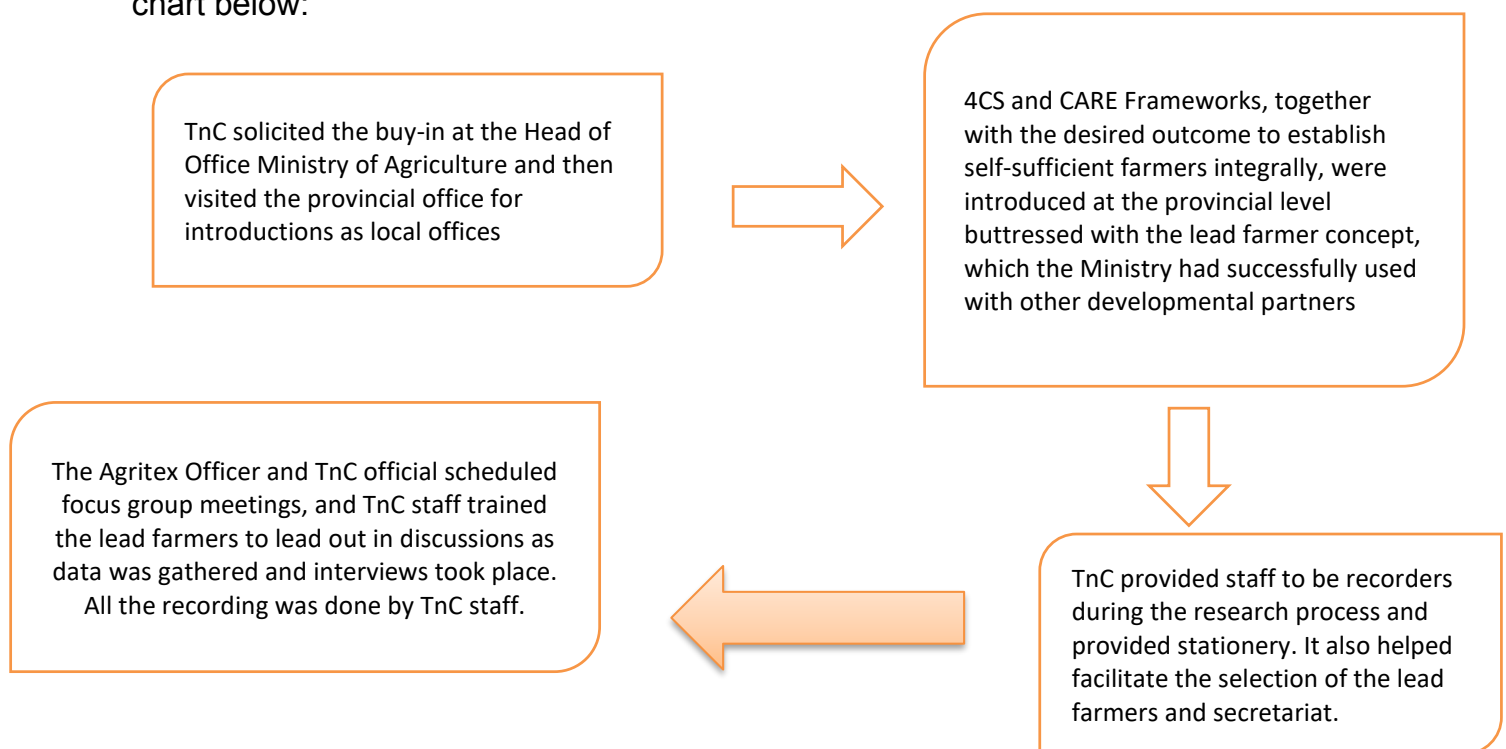


Figure 4.1: TnC Community Stakeholder Activation Programme

(Adapted from Tafadzwa Ne Chiedza Strategic Thrust 2019 to 2023)

Due to Covid- 19 movement restrictions and challenges, the engagement program resulted in interlocking steps to deliver a functional smallholder working model of community activation across the selected focus groups and lead- farmers. The following considerations were critical:

Table 4.1: Interlocking steps to deliver a functional smallholder working model of community activation

Critical Success Factors	Key Actions to deliver	Critical Resources Required
Establishment of local leadership at the community level	TnC secured local partnership through a formalized project relationship through the Ministry Head office, and most of its desired outcomes were embraced as objectives of the local extension officers (Agritex)	Head office support meant Agritex officers were resourced
Secure local buy-in and appoint working steering committees	Agritex officers, together with TnC, managed to administer the selection of lead farmers and the creation of focus groups	Community buy-in resulted in sharing of resources required to hold meetings and interviews, activating the community
Devise a timeframe for the roll-out of the community activation programme	Inclusion in coming up with the schedule for the programme in line with Covid 19 protocols resulted in a well-received activation programme	
Democratise the group and capacitate the local lead farmer and secretariat.	The Agritex Officer and lead farmer selected their group members democratically, which formalised the group establishing a conducive working group.	The lead- farmers were capacitated and trained to lead the future meeting and become a point of communication, and a WhatsApp group was formed with other lead farmers to exchange knowledge and share notes

4.10 TnC in the Field Activating Farmers

The entire lead farmers' team and the secretariat were capacitated to gather information on their focus group membership using a semi-structured baseline research form. Another approach adopted to complement the lead farmer approach was the train the trainer (ToT). It was taken on board due to Covid 19 challenges. It worked well under Covid 19 challenges as TnC staff members and volunteers were affected by Covid-19 movement restrictions. Training on how to conduct the baseline research was done for two days. The lead farmers became an essential communication point as they could visit their community members without the increased dangers of exposing the community to the spread of Covid 19 from outside.



Figure 4.2: TnC capacitating lead farmers how to gather household information

Training- household representatives on gathering household information from some of her members; mid-stream, the farmers could only meet in groups of up to 15 due to Covid restrictions. Recordings to gather the farmers' voices were complimented by the lead farmers. Interviews were semi-structured, and lead farmers completed baseline study forms to augment the verbal interviews.



Figure 4.3: The principal researcher in Nyanga with a focus group

4.10.1 Focus on the subjective view of experience

The community activation proved to be well-rounded, impacting self (the call/researcher), Organisations (TnC), and communities (smallholder farmers). It enabled all involved to focus on aspects hindering development needed to establish sustainable community-based economic and social activities. In Nyanga, Magadzire village, the farmers represented a community of farmers dotted on farms around the country as the area has features of all five agriculture regions. The principal researcher visited them to discuss the research and hear their voices and concerns. Various trips were done to embed the integral route and have community leaders understand the research and hear their views. The societal approach to problem-solving is what is being pursued.

My father's upbringing demonstrated that self-sufficiency could be attained when one believes they have the power to use survival and productive skills and escape the jaws of poverty through hard work. Such a culture evoked the profound sense that if we could do it as a family, it would be possible to be self-sufficient as a country, starting at the village level and going upward to the national level. At this stage, it is essential to separate self-pity from humility, as the former is self-destructive and has resulted in a citizenry of beggars. The farmers constituted ninety per cent women reflecting the

high composition of women in the agriculture production sector. The group aired their views, concerns and challenges.



Figure 4.4: TnC field officer and board member during community activation in Gokwe

Because the leading officers were male, the turnout of both males and females was balanced. This goes to show that certain males might opt not to receive help if females are leading the project.



Figure: 4.5: TnC staff members in Zaka, Masvingo

NB. Covid 19 restricted the number that could attend.



Figure: 4.6: TnC in Jerera, Masvingo

All TnC gatherings followed Covid-19 protocols and restrictions.



Figure 4.7: Lead farmer Mrs Mashanga in Zaka motivating her group

4. 10.2 Locating every unique cultural history as an episode to a huger story and going beyond reductive positivism and naive empiricism

4.10.2.1 Major imbalances raised by the farmers

According to FAO, the distinguishing characteristic of Zimbabwe's agriculture is its dualism: the existence of two major subgroups based on the size of landholdings. The larger group is observed as unsophisticated and comprises about seven million smallholder and communal farmers occupying twenty-one million hectares. In general, communal and smallholder farmers occupy a lower natural agricultural potential in

rainfall, soils, and water. Besides, these areas have lower economic potential because of the distances from markets and poor communication and social infrastructure.

4.10.3 Foreign aid templates

The narrative above confirms the developers' attitude toward and practising the Modernisation Theory to create dependency in Africa or so-called under-developed countries. The farmers are perceived as unsophisticated with a low potential for development. Mulgan (2020) would call it detachment to communities one wants to develop and lack face-to-face human interaction to attain societal success. Farmers voiced the issue of mistreatment and the low opinion researchers have of them.

Farmers recorded an experience with foreign investors/funders who compartmentalised aid for short-term gains. These recorded experiences reveal a negative attitude toward humanitarian aid towards rural development. FAO (2006) reports that eighty-five percent of thirty-nine million hectares of land is designated for agricultural purposes in Zimbabwe. The remaining six million hectares are for non-agricultural use and reserved for national parks, wildlife, and urban settlements.

4.10.4 The quandary of Zimbabwe farmers

From an empirical phenomenology viewpoint, land reform was a necessary evil to correct the injustices perpetrated mainly by the British. In response, the world system in 1986, through the IMF imposed an economic structural adjustment program (ESAP) on the Mugabe government. Unfortunately, though deliberate, ESAP ingrained unsuitable policies and guidelines so the economy would crack. The IMF would find a way back into Zimbabwe's economic system by introducing unsustainable debt covenants and looting the country's mineral resources. Due to land reform issues, agricultural markets were withdrawn, and the hopes of ordinary people, especially farmers, were dashed. Zimbabwean farmers faced many challenges as the world would not watch Mugabe chart a new Africa turning the tables on historical land ownership and controlling the means of production.

The retribution on Zimbabwe was severe, with economic sanctions, dehumanisation, and many other challenges. On the local front, due to differing self-resisting-pressure points, those close to Mugabe took the opportunity for self-aggrandising, and most of the intended beneficiaries did not get land. The land redistribution process was imperfect due to internal and external sabotage. Randall (2014) would call it a story within a story. The farmer is receiving the end of this bitter stick. As the government continues to be squeezed, the unfortunate result is more suffering at the bottom of the pyramid. The enabling environment is tight for the farmer, and productivity remains suboptimal. The government's reliance on foreign aid ignores the farmers' voices. Looking at their agenda, they have a different purpose in the farming fraternity.

4.10.5 Understanding the system that oppresses your community

It should be appreciated that Britain would not watch its cronies and economic machinery being destroyed. Unfortunately, other European countries listened to the outcry from the British, and Zimbabwe faced severe economic sanctions that have left the country under economic instability and social pressure. On the positive side, however, the land was repossessed and is now in the hands of the black majority. To ensure that Zimbabwe was an excellent example of a failed land reform, all humanitarian agents and aid workers have been coming to the country, posing one question on the land title before they can help farmers. Even banks pose the same question, a reminder of the partition of Africa where the flag followed the cross.

It is essential to reckon that the two systems working in cahoots, possibly unintentionally, oppress ordinary people. The researcher chose to stand on the shoulders of Muhammad Yunus of Grameen Bank for people with low incomes. As he worked with women in Bangladesh, culture and humanitarian aid were fundamental causes for Yunus to tackle. He managed to separate issues challenging the poor women in his community when he engaged in meaningful action and crafted a credit policy that would circumvent the local cultural challenges of land ownership for females. He also responded to the lack of land, grants and humanitarian aid pitfalls causing the disempowerment of women and other locals.

There are terrible twins to fight in the local economy, corruption and non-partisan challenges, surfacing as inappropriate economic policies coming through foreign debt instruments and foreign aid templates. The farmers suddenly have large pieces of land yet need the means to produce and turn around their fortunes. On the other hand, foreign aid wages a subtle war, turning a blind eye to poverty and yet creating dependents to justify their continued presence. The success of the black farmers in Africa may irk the global village.

4.10.6 Roots of humanitarian assistance and foreign aid

Foreign aid and humanitarian assistance have their roots in the modernisation theory. The modernisation theory originated from the social theories of German sociologist Weber (1864–1920), who saw shrewdness and irrationality as nations changed from traditional to modern. Weber's approach was fundamental for the modernisation paradigm popularised by Harvard sociologist Parsons (1902–1979). The forewarning of the modernisation theory reinforces economic development as the only option for growth at the expense of social norms and cultural values. The path is defined as predetermined in the Rostow modernisation stages. It premises that modernisation must externally guide the beneficiary towards a developed industrial society. Through Rostow's prescribed steps, the economic developments of underdeveloped nations are guided through the envisaged industrial transformation. The external help would allow developing countries to catch up with industrialised Western countries with the prescribed transformative process leading them to socio-economic growth. As we speak, countries like the United States, through their foreign policy, push the same agenda with the help of the developmental aid industry, presently known as foreign-based international non-governmental organisations (INGOs).

4.10.7 Effects of modernisation and dependency theory

According to Escobar (1994), the modern development theory entails material advancement as the only justifiable route to accomplishing economic advancement. The dependency theory cofounded by Theotonio Dos Santos (1950) was a reaction against modernisation theory. Dependency theory rejected the copying and pasting view, arguing that underdeveloped countries are not merely primitive versions of

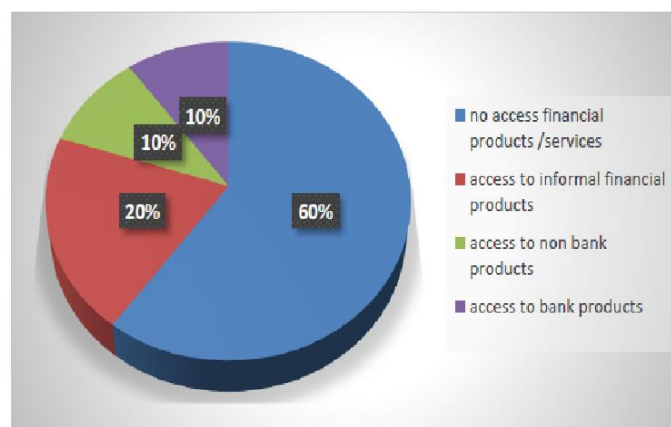
developed countries but have unique features and structures. Importantly, they are the weaker members in a world market economy because of the oppressive trade by proponents of the modernisation theory. In addition, there is a new wave in migration, where people from the West are moving to continents like Africa shunning the so-called first-world standard of living instead of a slow-paced life in natural environments not available in Western countries. Such developments cause further challenges to a Western worldview.

4.11 Recording of Burning Issues

4.11.1 Lack of appropriate tools, funding and transformative knowledge

Some of the burning issues that surfaced are lack of appropriate tools, funding and knowledge of production models to ensure smallholder farmers achieve critical volumes and production. Now that the community is aware of the origins of aid, they can better comprehend why they have no tools and are not supported by the commercial banks governed and sponsored by their previous colonial masters. The following diagram depicts the banking level in Zimbabwe, where most poor people cannot access banking products, are not banked, reflecting the challenges the poor experience, the most significant being lack of funding:

Figure 2-4: access strands for SMES to financial products and services



Source: *Finscope 2013* http://www.finmark.org.za/wp-content/uploads/2016/01/Broch_FSZimbabwe_Consumer2014.pdf

Figure 4.8: Access to banking products by poor people in Zimbabwe

Most farmers confirmed that they do not have bank accounts and do not qualify for loans, even those offered by Micro-lenders. Lack of know-your-customer documentation (KYC) excluded them from participating in the financial sector. The farmer considered the requirement to open bank accounts too cumbersome and bank charges too high as their income is seasonal.

4.12.2 Land ownership changes lack sustainable community capacity building

The change in land ownership and structures was not followed by substantial local capacity building to detangle impoverished locals. Nothing was done to rebuild the agriculture sector through meaningful national efforts directed or linked to the new ethos of black empowerment. All this was because the government was hoodwinked and concentrated on defending its sovereignty and land reform program. Resources were scarce, and priority was given to other areas, such as defence and bread-and-butter issues. It led to subdued local production as Zimbabwe plunged into economic challenges over the past three years.

Immense changes in community values for Zimbabweans resulted. Ingos took advantage of the poverty-stricken peasants by delivering food handouts and non-consequential developmental plans. Forces such as global. Ingos "de traditionalisation" began re-moulding previous generations' value systems, altering public authority patterns, and transforming social engagement and commitment to local institutions (Gray & Lawrence, 2019) and Halpin (1991) states that "agrarian" values including self-reliance, hard work, independence, and family and community importance have declined. Smallholder farmers bemoaned the same predicament in Zimbabwe's rural and farming areas.

4.12.3 Social commitment needed for disruptive social change

In this research, the burning issue number 3 is the "missing dot." A development plan must deliver services and support, engaging communities in a genuine partnership, (Cavaye, 1999). The community must be encouraged to think outside the box to solve apparent problems using existing skills and resources. Unfortunately, many communities and regions have developed plans and strategies that have yet to

progress far, as advised by Cavaye (1999). Often created by external specialists, many programs have yet to engage communities genuinely to foster local action. Even after engaging and issues surfaced, the community complained about delivering solutions that were aloof to their issues because of prescription. After thoroughly analysing these challenges, it was apparent that changes needed to be implemented for Community Development and Activation.

4.13 Recommendations by the small-scale farmers

4.13.1 Activation of conscious leadership and integral stakeholders

The research issues that surfaced were uniform across all the groups and discussed with The Agritex offices and lead farmers. The Agritex officers conferred with the lead farmers, who shared the results with their communities/groups. All participants suggested establishing research circles for community impact, ranking their challenges, and looking for solutions. The issues were ranked, and the priority list was amazingly similar. For the Agritex officers, change in the research method was apparent as they advised that in previous research, besides getting per Diem for attending conferences and training materials, there needed to be more initiatives to further engage the community for solutions. Most conferences were stage-managed. In Zimbabwe, extension officers, affectionately known as Agritex officers, have significant influence, and farmers desperately listen to their advice as information and knowledge are hard to come by. This strange relationship poses concentration risks regarding knowledge dissemination, integral knowledge and information exchange. The other challenge comes when the Agritex Officer is not capacitated and does not have adequate tools to develop the group of disempowered farmers. Focus groups held with Agritex officers revealed that most Agritex officers felt they needed more adequate tools, knowledge and exposure to take the communities to the desired level of economic self-sufficiency. Despite these issues, the research method helped Agritex officers realise the need to collaborate and work with communities to achieve common goals.

4.13.2 Call for new forms of accountability

Due to the inclusive nature of the research, the burning issues could not be shoved under the carpet. New forms of accountability are needed to allow local social agencies to include communities and account for tangible outcomes and efficient delivery of services in their contribution to the community Organisation, cooperation, and attitudinal change. Cavaye's (1999) Community Development model proposed two additional forms of accountability: interaction with communities and community capacity outcomes. These involve criteria and performance indicators that measure the "quality" of the process with which social/research agencies engage communities and the resulting impact on community capacity. Many communities appear to be stalled in planning – with multiple plans developed but with little change in community outcomes. Planning is essential. Long-term planning is crucial to communities maintaining a vital economy, environment and social situation, but people should not be planning forever. Establishing priorities for change through planning is also critical. However, in many communities, planning and prioritization are revisited rather than progressed. Cavaye advised that the humanitarian agency develops a culture of deliberation and deferral of confidence. Communities and support agencies overemphasise the establishment of priorities and need rather than focus on action to pursue an issue, even if it is a minor priority within the context of an overall plan. Opportunities to engage people in action – no matter how small or "low priority" in broader planning – are needed to start movement and progress.

It fosters regional networks for communities and practitioners to work within local and regional networks involving community members, local government, private businesses and government agencies. The role of an integral researcher is not just to interact solely with communities but also to enhance development outcomes by comprehensively helping the ecosystem function towards the achievement of a specific common goal. It requires investment in relationships, commitment, trust and good communication.

4.14 Role of Local Policies on Indigenisation and Heritage

According to the Local Government (2018), policies on indigenization can counter the negative aspects of modernization by coining a home-grown socio-economic agenda

taking relevant notes from countries like China, Japan, and India. These countries advanced using their heritage and human resources, focusing on areas where they had strength as a nation. On the other hand, opponents of the modernization theory argue that modernity is not independent of culture and can be adapted to any community. Japan is viewed as an example by both sides. Most take it as proof that a modern way of life can exist in a non-Western society.

On the other hand, others view Japan as more Western due to its modernisation. The new mantra by the new republic to establish a middle income by 2030 based on the strengths of the local heritage creates a new lease of life for farmers as they have the fauna and flora to exploit and inclusively participate to escape the poverty trap sustainably. Paradoxically Covid-19 has involuntarily depicted strengths that locals were overlooking despite reduced imports. Retail outlets are well stocked, and local products constitute a higher percentage of total stocks.

4.14.2 Observed adverse effects of institutionalised modernisation theory on Zimbabwe

Modernisation theory ends up being played out through covenants in foreign debt and aid delivered through international non-governmental Organisations and foreign civic societies. The irony is that, whilst the Organisations are called non-governmental, they represent and protect the interests of certain Western governments. Quizzing why it is so, the researcher made some maiden observations below:

- i) The building of capabilities of poor people is separate from most developmental work of foreign-based assistance.
- ii) Knowledge assets and frameworks shy away from local and indigenous knowledge systems, and the question again is why?
- iii) Why bring innovation which ignores the needs of people experiencing poverty and is engendered by foreign-based aid?

These observations emerged from investigation during the literature review, discussed below and more in chapter four. The review allowed a broader stakeholder engagement which is unfolding.

4.15 Challenging Politics in Africa through Community Building

African politics has been infiltrated, and accountability issues still need to be resolved. From the realisation shared by Osabu-Kle (2000), TNC sought to challenge the assistance received from development agencies and international funding organisations. It includes tied aid, humanitarian assistance, loans, with superficial debt structures extended to African countries. The top-down handed aid packages invariably fail to achieve any sustainable objective. However, smoke-screened aid cannot bring prosperity to the intended beneficiaries but development to Africa. To understand why few wealthy black leaders and large masses live in abject poverty. Especially in rural areas, Osabu-Kle (2000) avers that, in most cases, the African elite assumed the layers of political power during the transition to independence by calculating their interests ahead of those of the community.

14.15.2 Lacking values of the relational approach

For Anglo-German development economist Schumacher (2011), a man driven by power or greed loses the power to see reality and things in their roundness or wholeness. The selfish interests of local political leaders who negotiated the country's independence fashioned harmonious relationships beneficial to themselves with international capitalists. Joint experiments with the same imperialists they had previously condemned and fought in the armed struggle for independence have resulted in the communities' continued suffering. It implies that most African states obtained political autonomy, as is depicted by the gap between the wealthy and primarily corrupt few. The economic system established by the previous colonial masters is still extant despite declared independence in various African states, including Zimbabwe.

4.15.3 The journey towards collective wholeness

Exploring the descriptive method originating the path and so-called 'empirical phenomenology' as a source of origin reflects a need for more humanism in the handover of political independence to African countries. Current independence statuses for all African countries were at political levels only. Looking at the Southern relational path, the Being-ness was not attained as relationships were abandoned,

lacking community negotiation. Both our African leaders and the aid funders circulate in the blue circle, as indicated below:

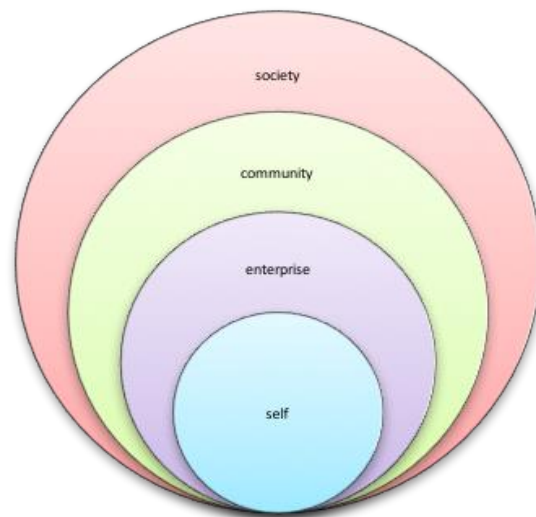


Figure 4.9: The blue and purple circle

(Own Elaboration)

Activities are for selfish gain or INGOs on behalf of the governments that fund them or they represent.

4.15.3.1 Modern ways to continue with community economic oppression

Many African leaders remain confined in the blue circle above, serving self-interests or transcend to the purple stage in uncouth, predatory, corrupt, or crude capitalistic practices. This path continues to drain people with low incomes of limited resources in exchange for little added value as they lack social contracts. The purple circle represents their country or organisation for international aid frontiers, serving as a smokescreen for development. Nevertheless, looking at it closely worldwide, poverty and homelessness are only covered or toned down by social welfare pay-outs in developed countries. In Europe and the West, only one per cent of the population, if not less, controls the means to get wealth worldwide (Shiva, 2018). The big boys' circle is tightly protected, and newcomers enter at such inhumane terms, even agreeing to sacrifice human lives, especially people with low incomes. Suppose whole societies cease to be infected by these vices; they may achieve astonishing effects in conventional economic terms, as has historically been the case in America and, more recently, China. Instead, they have become increasingly incapable of solving the most

straightforward problem of human existence. Productivity may rise relentlessly as measured by statisticians but not as experienced by the overworked, economically deprived, emotionally, and mentally stressed, if not alienated, people in rural Africa. In short, for Schumacher, man is far too clever to survive without wisdom, and the youth in Africa have become impatient and failed to continue their co-existence.

4.15.3.2 Impact of systemic oppression on communities

Many rural people blame the government and other external influences; they feel "workshopped" and "meetinged" and strongly expect government-sponsored assistance. This anger and frustration are an understandable and natural response to the impacts of deteriorating change in many rural areas. Gillard (2000) describes a series of emotional reactions to "unchosen change" in rural areas, such as denial and self-justification. Instead, this suggests that the current ways many perceive their problems make it difficult for them to engage in community development initiatives based on cooperation, innovation and self-help. Getting inspiration from one of my favourite writers, White (1990, p98), "It is not God's purpose that any human being should yield his mind and will to the control of another, becoming a passive instrument in his hands

4.15.3.4 Need and passion for a mind cure

Engage your Enterprise-and-Community as Participants in Impassioned Involvement

The reaction by communities has permitted poverty to remain with us. Zimbabweans are suffering in a land endowed with natural resources. There is an urgent need to turn around the situation by making people productive and separating politics from day-to-day work. Many local and regional people are angry, frustrated and upset about low commodity prices, dilapidated rural infrastructure, cutbacks in services, the deterioration of communities and a perceived lack of government attention (Pritchard, 2000). Many people feel their life chances are deteriorating and often find scapegoats looking to identify the causes (Gray, 2000). At times this has led to political fundamentalism. The research will establish why the smallholder Zimbabwean farmer

is in this apparent state and motivate them to co-create solutions pertinent to their situation.

White (1991), in her book, *Ministry of Healing*, advocates that good deeds are twice a blessing, befitting the receiver and giver of kindness. The consciousness of right-doing is one of the best medicines for diseased bodies and minds. When the reason is free and happy from a sense of duty well done and the satisfaction of giving happiness to others, the cheering and uplifting influence brings new life to the whole being. Tafadzwa Ne Chiedza Development Trust was established to demonstrate how community capacity-building can be a valuable tool for increasing self-reliance, leading to a better quality of life and well-being. It dovetailed with the southern path and sought to bring out the burning issues my call desired to solve while contributing to society.

Seeing that the causes of poverty are systematic and organised, there was a need also to take a systems approach to resolve these issues. It could only be successfully done after giving the community a chance to air their views, experience and feelings coupled with space to co-create solutions. Locally there is a saying which is quite profound, "*Chara chimwe Hachi tswanyi inda*", meaning one finger will not kill lice; you need at least two fingers to press together and kill the lice. Sharing resources and exchanging values for a balanced society so that whatever we strive to achieve, we are better together and a more potent and formidable force. TnC sought to work together with the farmer and come up with solutions to their problem.

Even the Bible in Ecclesiastes tells us that a cord of three is better than a cord of two. Better still to a single cord. The Bible advises - A thread of three intertwined will not be easily broken (Ecclesiastes 4 verse 12). As I went through the induction of this PhD program, I discovered that I am not alone. The way I want to solve the burning issues of my community does not fit and conform to the models and theories offered by the "official" developmental world. Within the research team for Da Vinci, TnC would work with Dr Mamukwa, whose research was focused on Integral Knowledge exchange and modelled an approach called "Calabash of Knowledge". The model focuses on how knowledge can be harnessed and exchanged in a way that results in societal transformation. Knowledge management is essential, and more will be explored as Dr Mamukwa is part of the TnC research team. Building warm relationships with

communities is a vital aspect of TnC. Trust is crucial, and engaging the communities in the Southern style is expected to yield the expected social innovations.

4.15.3.5 Education to extend veiled colonial systems as economic oppression continues

Africans have been socialised to look down upon themselves through the white man's education. Trading commodities in their raw form lacks equity and has continually robbed the continent. Commodities are at the lowest value robbing nations of future value. For Osabu-Kle (2005), it is a thread that cuts across all African nations; naïve political leaders have failed their fellow Africans and, in most cases, for selfish gain. The foreigner has destroyed *Ubuntu*; thus, instead of *because you are*, it is now "*me, myself and I*" only. Moreover, Africans run away from anything that may point them to their origins, good or bad. They have been oriented not to face problems at home but to run to other continents for work, bringing temporary solutions as Africans remain dependent and live under dismal conditions that modernise slavery.

Statistics in the United States of America (USA) reflect more Ghanaian doctors in the USA than in their home country. That number is adequate to cover West African medical personnel requirements. Maladies like brain drain, wars created to plunder resources in deserted places during the crises, and the export of raw commodities from Africa, have led to the recent refugee crisis, challenging Europe and the USA. Through unfair trade, Africans continue to witness their job opportunities and wealth swept away right in their faces. Political leaders mortgage our continent for peanuts and personal fat bank accounts abroad. While warlords sell out our future, our youth are drugged to fight in these demeaning wars causing terror and fighting each other for nothing. In the meantime, helicopters loot minerals to provide ammunition to Africans fighting against each other. Infrastructure and tarred roads are witnessed in deserted places and jungles, and one wonders about the sanity; the investors know the hidden value of putting up that infrastructure.

4.16 Social Innovation in Place of Humanitarian Aid

The delivery of services to meet needs often does little to challenge perceptions and help people face recurring life issues. Indeed, on its own, service delivery can reinforce

dependency, and sustain the community whilst focusing on symptoms of deficiencies, thus deferring power to external "deliverers." McKnight (1995) warned of a "dependency masked by service." Nevertheless, the researcher contends that the support of the government and other agencies for community development often needs to be improved in service delivery. Communities must be capacitated to self-help themselves and the issue of beneficiation taken onboard so that the same community derives further value from the resources that it produces.

4.16.1 Systems and network activation underpinned by TIPS

Embedding TIPS principles to the four worlds and the GENE model is essential as the activation process involves the interaction of various stakeholders. Communities cited their need for technology and equipment. Some of the issues raised by farmers pointed towards foreign systems governing the way things are done, pointing towards systemic risk and policy and ignoring such would challenge sustainability. Bringing on board systems thinking early is critical as developmental systems are envisioned. Systems thinking brings structure and process, critical components as various solutions, innovations, assets and components interact to deliver sustainable development. TIPS embraces aspects like people, technology, and ideation to create value, tools and metrics for differentiation. These are critical in this integral developmental journey of individuals and communities in Zimbabwe. The answer to poverty issues challenging farmers could be found in social innovation and doing things differently.

Community development initiatives need to provide information and services. However, development agencies need to do more than disseminate information and services. It means capacity building, coaching, and working with community groups to help them access appropriate information and help improve their capacity to navigate the broad array of services and available opportunities. Light (2000) recommends that communities have access to key individuals - "community allies" - with rural development expertise and community trust. Access to networks often with other communities has enabled communities to gain new ideas, build confidence and accelerate local initiatives. The change in process will go a long way in including the community in economic affairs that impact their livelihoods.

The voice of the smallholder farmer reflects that there has yet to be deliberate exposure to other communities nor policy change and developmental models established to take advantage of the change in land ownership.

4.16.2 Changes caused by feedback from integral research

Through the activation process, the community of 600 farmers voiced the desire to become productive. The community of smallholder farmers dreams of their small pieces of land being transformed into sustainable enterprises. The question they raised is how? The focus groups' feedback contains a cry for appropriate technology, knowledge and skills to turn the idle land into a hive of commercial activities. It has also reflected that farmers are idle seven months of the year due to reliance on rain-fed agriculture and commercial banks offering inappropriate loan products. It brought the realization and change to the TnC logo from a multi-layered circle with joining dots through multiple connections resulting in complex cross-sectional relationships as depicted below:

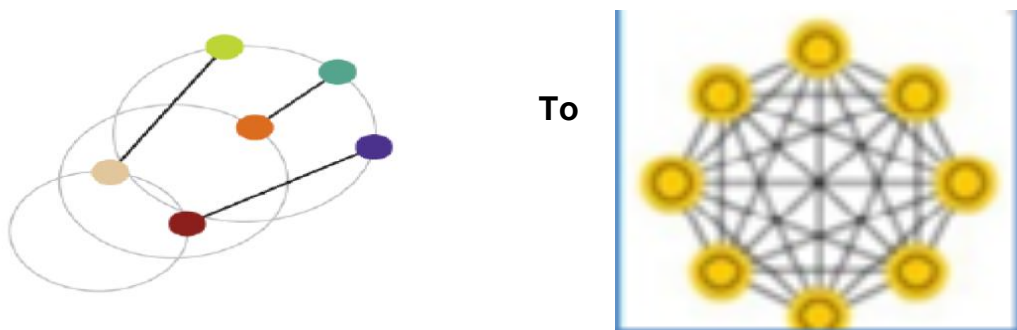


Figure 4.10: TnC logo changes

The issues raised by farmers are many coming from many different fronts. It means the solution must embrace various aspects that resonate with wholeness. There is no way to avoid the problematic, multi-sector work and mending long-broken systems; the research seeks powerful ways to accelerate those efforts.

4.17 The Voice of the Smallholder Farmer

Smallholder farmers voiced that they must be treated equally, have tools and sufficient resources to produce food to feed their families, and excess to trade and cover other household expenses and demands.

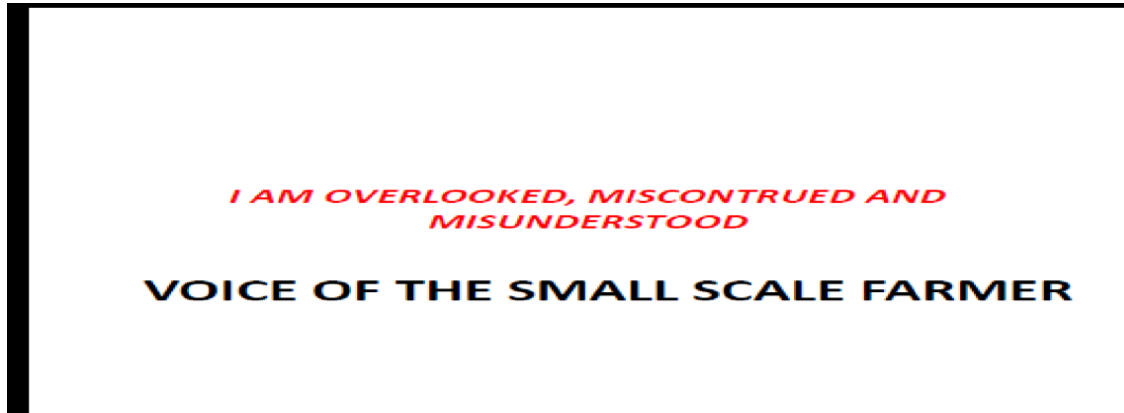


Figure 4.11: The voice of the smallholder farmers

A distinct voice from the farmers was, "I am disempowered and often misunderstood." Technology has been cited as promising the tremendous potential to do that when it is intelligently combined with public sector fraternities. Over the past two decades, a steady build-up of new African community-supportive economic enterprises was witnessed. This approach is commonly known as "community wealth building." It creates opportunities that put wealth in the hands of the local enterprise (with ownership vested in community stakeholders), not just investor-driven corporations. The community is crying out for economic divide issues that need relooking, promoting anchored businesses that reinvest in their local neighbourhoods, and building wealth in asset-poor communities. They contribute to regional economic stability and stop the leakage of dollars from communities, reinforcing environmental sustainability and equitable development.

Farmers were cognisant of the climate change challenges, their need to motorize their operation as fossil-driven machinery is also expensive to run, and the need for technology to build resilience. The various other voiced issues directly linked to business operations are then categorised below:

- 1) Productivity and competitiveness
- 2) Infrastructural development
- 3) Knowledge and resources management

4) Sustainable markets.

The activation process strengthens an integral development compass by calling which aspects were dealt with in chapters two and three concerning addressing imbalances. The four integral worlds approach towards an integral economy by Lessem and Schieffer (2010) guided the path to community activation of the smallholder farming process. For Lessem and Schieffer (2010), community activation is about engaging the community in ways that empower them to solve their communal challenges. An orientation towards social innovation, which culminates into institutionalised research, is encouraged. It takes on board aspects like expertise with each world speaking to social innovation by locals. It is a game-changer as farmers were activated using participatory action research, as Borda (1991) articulated. Ownership is built by inclusively giving farmers a voice in co-creating and implementing solutions. Farmers, through a sense of belonging, air their views and share knowledge and experiences. Inclusion when finding a solution to perennial hunger, stagnant development, climate change, and lack of systems that hinder progress in their communities.

The researcher distinguishes self-sufficiency as the key deliverable as the research pursues the best method to establish an integral economy. As the journey will involve a broad base of stakeholders, TIPS embracing the systems theory by Da Vinci will be used to dynamically bring together multiple collaborations whilst building the outer circle and establishing systemic thinking at the onboarding of collaborative stakeholders. The seven-layered Framework brings about systems thinking.

According to McTaggart (1991), an ecosystem is a group of activities whereby individuals with differing power, influence, and status participate in changing and designing a collaborative thematic theme to solve their challenges. The researcher considered this viewpoint relevant to the study as it is a fact in the smallholder's working life. The chapter focused on inclusive community activation dealing with bureaucracy, dogma, and corruption (Lessem & Schieffer,2018). In line with the GENE Model by Lessem and Schieffer (2010), the research aims to inspire the GENE- ius model at three levels holistically

- i) individual,
- ii) communal

iii) societal

It allowed the four fundamentals of Transformation Management to alleviate poverty through locally ingrained social innovation. Lessem and Schieffer (2018). Such outlines community activation as one that embraces the following:

- a. Nature & Community and the Underlying Transformational Flows
- b. Culture & Consciousness and the Underlying Transcultural Forces
- c. Science & Technology and the Underlying Transdisciplinary Fields
- d. Economics & Management and the Underlying Transpersonal Functions

4.17.1 Meaning of the farmer's voice

There are four stages to a descriptive phenomenological analysis (Giorgi, 1985; Giorgi & Giorgi, 2003): reading for overall meaning, identifying meaning units, assessing the psychological significance of meaning units, and synthesising meaning units in a structural description. The first stage is straightforward. As is common in a great deal of qualitative research, one of the first things to do when beginning an analysis is to read through the text to understand what the text means. The first stage requires the analyst to read (and probably re-read several times) the description of an experience that is the focus of the analysis. The data collected was semi-structured and qualitative in certain instances. Focus groups recorded qualitative data, and the research includes an attempt to identify themes or make generalisations regarding how a particular phenomenon is perceived or experienced.

According to Lester (2005), the strengths of phenomenology as a data collection and analysis practice are that it seeks to find the universal nature of an experience and provide a deeper understanding. The themes and meanings of an experience emerge from the data. The qualitative nature of phenomenology allowed the researcher to notice trends and look at the bigger picture.

The data did not fit into a statistical test that confines or restricts the interpretation. It helped to understand a lived experience and brought meaning to it. It may contribute to the development of new theories, changes in policies or changes in responses. Results helped expose misconceptions about an experience. It is a means to have the

participants' voices heard, prompting action to resolve challenges to preconceived notions and complacency of foreign aid and farmers' dependency. The various other issues directly linked to business operations are then categorized below:

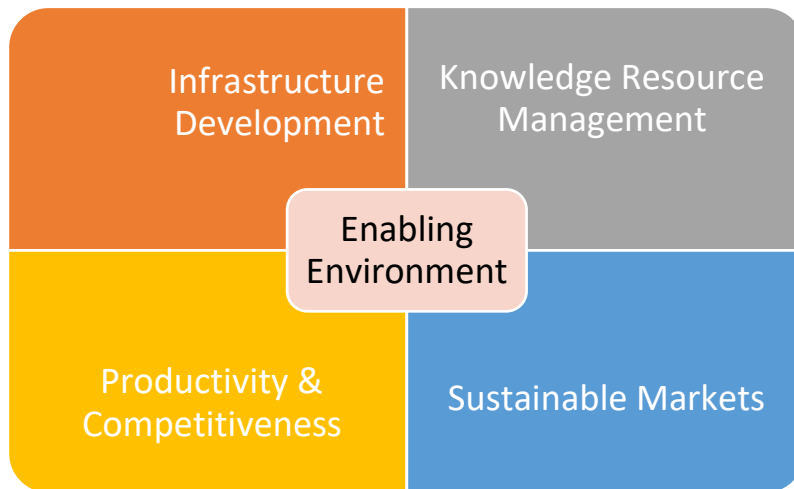


Figure 4.12: Gaps in smallholder farmers

4.17.2 Systems and network thinking underpinned by TIPS

Embedding TIPS principles to the four worlds and the GENE model was essential as the activation process involved the interaction of various stakeholders. Communities cited their need for technology and equipment. Some of the issues raised by farmers pointed towards foreign systems governing the way things are done, pointing towards systemic risk and policy and ignoring such would challenge sustainability. Bringing on board systems thinking early is critical as developmental systems are envisioned. Systems thinking brings structure and process, critical components as various solutions, innovations, assets and components interact to deliver sustainable development. Phenomenology concerns the hidden constitutive performance of things that are not culture-explicit. On the other hand, Feminism challenges the taken-for-granted structures of lived experience. The concealed assumptions, which are cultural and social, inform our experiences. They are overlooked by phenomenology and are advocated in this research through feminist research tendencies. Thus, the combination allows knowledge gained through the Feminist-Phenomenology guided by Southern relational analysis to establish a groundwork in transformative and down-to-earth social action. TIPS embrace aspects like people, technology, and ideation to create value, tools and metrics for differentiation. These are critical in this integral

developmental journey of individuals and communities in Zimbabwe. The answer to poverty issues challenging farmers could be found in social innovation and doing things differently.

In the future, Community Development initiatives need to provide information and services. However, development agencies need to do more than disseminate information and services. It means capacity building, coaching, and working with community groups to help them access appropriate information and help improve their capacity to navigate the broad array of services and available opportunities. Light (2000) recommends that communities have access to key individuals - "community allies" - with rural development expertise and community trust. Access to networks often with other communities has enabled communities to gain new ideas, build confidence and accelerate local initiatives. The change in process will go a long way in including the community in economic affairs that impact their livelihoods.

The voice of the smallholder farmer reflects that there has yet to be deliberate exposure to other communities nor policy change and developmental models established to take advantage of the change in land ownership.

4.17 Summary of the Chapter

This chapter was an overview of how TnC, as a social innovation hub, managed to pool resources to activate its communities and communally come up with issues and challenges needing social innovations. Through activating my community, I realised the importance of self-activation as I was about to empower my communities, so it called for me to also be empowered. It was of imperative importance that I immerse myself in the theories around aid and community capacity building and tap into giants who have walked the way before me. I had to consciously change how I viewed my communities, not as research subjects but as co-researchers and reservoirs of tacit knowledge. I had to distance myself from the trap of conventional aid. As a result, I had to perceive them as who they really were and as knowledge repositories that I would learn from as well, as journey mates with whom I would go through the transformation journey.

Guided by the first C within the flow of the 4Cs model by Lessem and Schieffer (2010), the next chapter is part two of this research journey. The next chapter is on the research context, to unfold a farmer's story as I embark on a journey to understand the context of self-to-society. This section has a discrete theme of exposing, with view alleviation, areas of disparity and fragmentation in my individual, Organisational and societal context through phenomenology.

CHAPTER 5

RESEARCH CONTEXT

5.1 Introduction

The methodology for the chapter on context is a theoretical approach underpinned by Feminism. The chapter speaks to both the 2nd C – Context in the 4Cs model: and the research methodology - Feminism progressing from the last chapter, which used Phenomenology to activate the community of smallholder farmers. The farmers' voice has been established, and they are the inner circle. As an outer circle is being built, it is crucial to be aware of the context from self to Society as factors in these affect the farmers' operating environment.

5.2 Feminism and Context

In the previous chapter, the phenomenological research sphere's core theme was engaging with one's life world. Smith et al. (2009) advise that it is founded on the axiology/morality that explanations should only be imposed after phenomena have been internally understood. The ontology and reality of the research method are that the lifeworld is the fundamental framework for human endeavour. There is a need for a strong critique of empiricism as many different forms of intuition underlie our judgement and reasoning processes. This was achieved as Phenomenology is the

research of phenomena of our experiences. It is now an additional discipline of philosophy, the other four core disciplines being ontology (the research of beings), epistemology (the research of knowledge), ethics (the research of right or wrong) and logic (the research of valid reasoning, Smith et al. (2009). For Van Manen (1990), in describing phenomenology as a philosophy, the central question usually asked is the meaning, structure and significance of the lived experience of the phenomenon for a person or group of people. As Phenomenology was used in the previous chapter to activate the community and hear out the farmers, a huge need to understand the Context at individual, Organisational and societal levels became a huge need which this chapter fulfils. Feminism will be used to establish the context causing the farmers to feel disenfranchised and overlooked and live in abject poverty.

There is now a glaring need to proffer a holistic solution to the farmers' multifaceted issues and make the research an integral journey. As we established the context, it is calling for the Feminist tenets, which are essential at this research stage. Phenomenology provided meaning without limiting the farmers to using the five senses, as with classic research. The Feminism tenets will contextualise the issues the farmers surfaced before an ecosystem is built to innovate and co-create a transformative process to alleviate imbalances (Lessem and Schieffer, 2018)

As alluded to by Lessem (2010), surveys are unfair, confining and at times dehumanising as they exclude realities confining the respondent to adjust their feedback to options given by the researcher. Consequently, denying the researched communities the opportunity to air their views, experiences and burning issues lucidly. Previously the survey data was collected and, in turn, analysed and interpreted. This resulted in exclusion and repression at the bottom of the pyramid. To overcome that shortcoming, contextualising the research will help pick up the risks and factors to be dealt with and a deeper understanding of issues needing resolution.

Lessem and Schieffer (2010) acknowledged that what could resolve the difficulty in delivering practical down to earth resolutions of burning issues is the use of integral research methods that allow inclusion resulting in the Researcher/s researching with the community. The previous chapter gathered the voice of a farmer who is not bemoaning the loss of a job but an incapacitated state to make their land resource productive and challenged to attain optimal yields. To resolve the issue and be

relevant, the notion of sustainable livelihoods is embraced as recommended by the small-scale farmers. It is a sustainable option to eradicate poverty in the small-scale farming sector as they have access to land. Land provides a pedestal to various livelihoods concepts will be researched on as context is built.

5.3 Feminism

In the spirit of the feminist guise, Lessem and Schieffer (2010) see knowledge as a tool for liberation, hence their presentation of Feminism tenets as:

1. Strive to represent human diversity
2. Views a researcher as a person; hence one is included.
3. Include nature in research

From the viewpoint of being a woman, the feminist approach is befitting and a necessary tool to use as one piece of research methods with fellow farmers, seventy percent of them female. It onboarded trajectories that embody experience and culture whilst surfacing imbalances intending to alleviate even the softer issues in the context of female farmers.

Using feminism to explore the context in answer to research questions and the farmer's voice gives the research a richer and more holistic account of what is uncovered. A particular, persuasive focus has continually driven the researcher's life: *- Making a difference in people's lives, especially those at the bottom of the pyramid? Do people with humble beginnings and devastating backgrounds overcome and create lives that inspire others?* Self-consciousness or self-identity is essential to awaken the giant within (Robbins, 1992).

5.4 Research Context and Questions

The burning issue is the abject poverty faced by smallholder farmers in Zimbabwe. In answer to that the researcher wants to establish the factors that constitute an all-inclusive enabling environment. The main question is:

What factors are required to create this enabling environment for sustainable development within the smallholder farming sector in Zimbabwe?

The second question is:

Which pillars should be entrenched in the community for the sustainable socio-economic prosperity of the small-scale producers to take place?

A similar principle has inspired thinkers like Mbeki (1999), Makgoba (1999), and Abigail (2000) to advocate for an African modus operandi and renaissance for Africa to survive. The burning issue is abject poverty caused by a myriad of issues. Stakeholders and researchers agree, as mentioned above, that a myriad of issues has bent Africa and its farmers on their knees, leaving most of the populace in abject poverty. The causes of the burning issue will be specifically broken down into quadrants, as each quadrant cannot be overlooked nor lumped up, as is currently the case.

More importantly, solutions for all the causes of poverty do not lie in one part of four worlds, as Lessem and Schieffer (2009) advised. However, any of the four spheres metaphorically provides a piece of the solution that can be systematically interwoven with other parts for sustainability. Such a slant allows exhaustive research, a holistic approach, and comprehensive solutions for each household.

5.4.1 The research sub-questions

In this research to innovation journey, the researcher answered the following sub-questions;

- I. How can a rural community (small-scale farms) take charge of their destiny, creating viable enterprises and meaningful production and live happy lives?
- II. How can smallholder farmers be activated to produce above subsistence levels optimally utilising their God-given heritage with appropriate technology and skills?
- III. Can the concept of Integral farming release the gene-ius in small-scale farming communities and eradicate poverty?
- IV. How will farmers benefit from inclusive research to institutionalised innovation endeavours and share indigenous and exogenous Knowledge through learning communities for economic prosperity?
- V. Can local inclusive funding templates improve farmers' access to credit and enhance productivity to optimal levels establishing a manufacturing base in localities?

Looking at the research questions, the core themes of feminism by Lessem and Schieffer (2016) provides in-depth knowledge as the research establishes the context in which everyday feelings and hardships are experienced:

Table 5.1: The seven core themes of feminism

Lessem and Schieffer's seven Feminism- core themes	
Metabolism of subject and field	Deals with the problem of objectivity, proposing the notion of dynamic objectivity or the metabolism of subject and field as if they are one organism
New materialism	Deals with the new materialism in which knowledge is to be grounded in personal experience
Socio-historical location	Deals with the problem of the socio-historical location of the researcher
Reflexive nature of the social inquiry	It deals with the reflexive nature of the social inquiry, whereby the researcher must continually reflect on themselves.
Social sciences as the new paradigm	Proposes that the social sciences, not physics, should be the paradigm for all sciences
Nature is active and complex.	Deals with the recognition that nature is active and complex, adopting an ecological or open systems approach
Knowledge for liberation	Knowledge should be used as a tool for liberation, not domination.

(Adapted from Lessem & Schieffer 2016)

These, alongside those tenets of phenomenology, will be considered with contextual issues as meaning is derived.

5.4.1 Engaging in the process of radical inquiry

Lessem and Schieffer (2010) inform that the pioneers of the concept of phenomenology, Edmund Husserl and Martin Heidegger, emphasized the importance of radical inquiry. Phenomenology must pay attention to the nature of consciousness as experience, not as pictured by common sense or philosophical tradition; it must make a fresh interpretation of phenomena bracketed off from customary outlooks and conventional assumptions. For this research, and owing to years of Tafadzwa ne Chiedza Development Trust interacting with farmers, the Researcher realized that when bringing about interventions, it is essential to pay attention to the needs of the farmers. The research team embarked on a radical inquiry into the status quo of

farmers not as pictured by literature from research, common sense, or philosophical tradition but as experienced first-hand.

5.4.2 Agriculture development and livelihoods

Current developments and modifications in economic and social fields and implications reflect that the role of heritage has been altered, seeing the process of heritage is now considered in establishing livelihoods. Knowledge and ingenuity have been increasingly recognised as fundamental strategic assets and potent engines in motivating economic growth. The key issues that are looked at are listed in Scoone's (1988) livelihoods checklist: as follows:

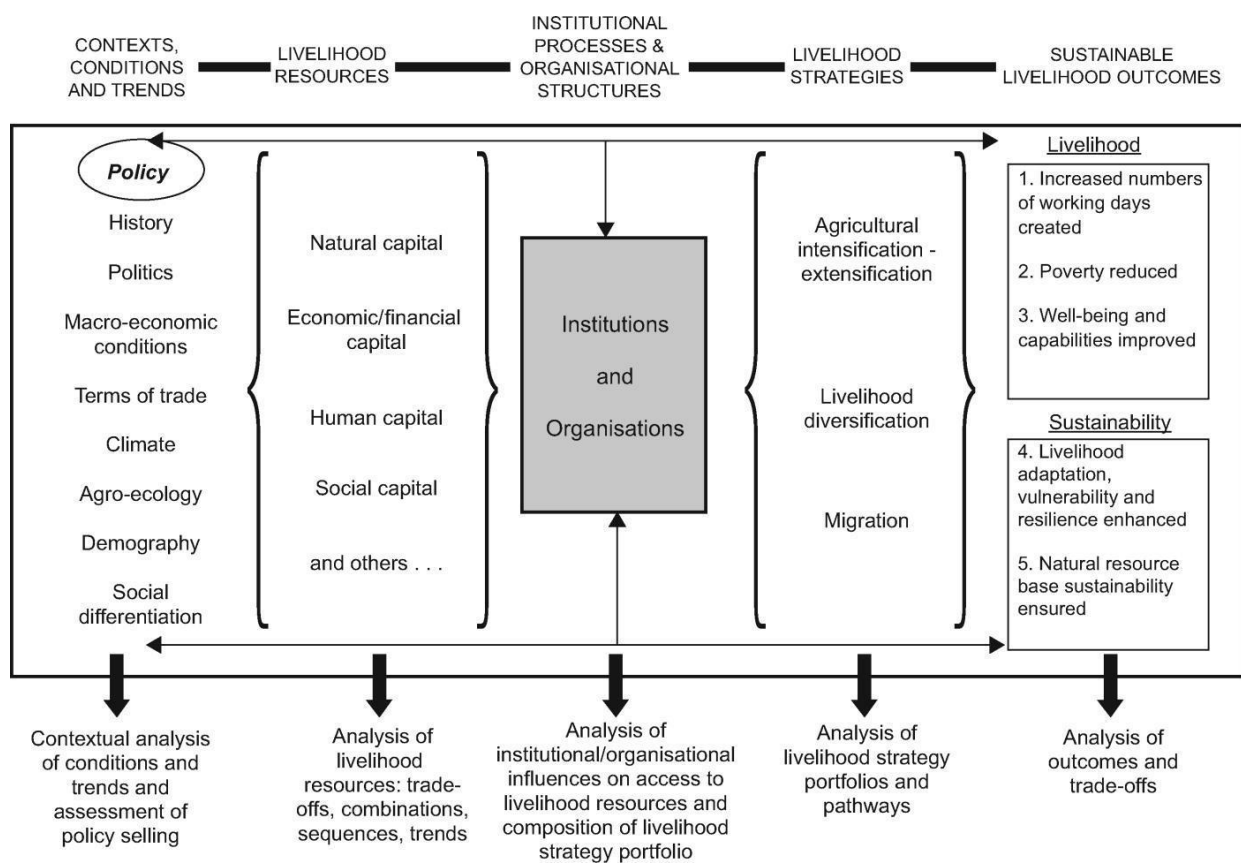


Figure 5.1: Livelihoods checklist

(Adopted from Scoone, 1988)

Bearing in mind the five critical components by Scoone (1988) above, thus context and conditions, livelihood sources, structures, Organisational processes, and sustainable livelihood outcomes: sets the framework for the research context. Going back to the chapter on the activation process, one will see that Scoone's five

components touch on challenges raised by the farmer and using it as a checklist provides a yardstick which will hugely respond to the burning issues raised by the farmer.

Deals with the problem of the socio-historical location of the researcher

NGOs and institutions like the World Bank talk about unemployment as a critical economic indicator ignoring livelihoods in place of employment to wood wink the bottom of the pyramid and governments of developing countries. Livelihood strategies would demand sincere capacity building of farmers for optimal productivity. Looking at history and previous policies is essential as it sheds insight as to the stance taken by NGOs, The World Bank and IMF. Attention will be paid to previous policies that require detaching from and further dealing with. Systematic onboarding of policyholders as stakeholders who control or influence the policy- pillars is required for the integral development of the farmers. Historical policies and systemic risk are not holistically being tackled with an adequate depth to detangle African farmers from the hostile past colonial policies causing the negative impact of poverty. Colonialism is a system requiring concerted effort in dealing with its effects. The situation has been complicated by new challenges like climate change and the Russia-Ukraine that have aggravated the environment.

According to Scoone, the historical issues of slavery and current developmental policies premised to take Africa as a production base need correcting. The new integral approach to development calls for inclusive mode two-based research that is informative and leads to social innovation, which results in societal transformation. (FAO, 2006) has revealed Africa's insignificant benefits from primary commodities like cocoa and mining minerals used to set up and sustain huge industries in Western economies. TIPS and CARE/4Cs resonate with the researcher's belief in helping to build a case that Africa can be self-sufficient if Africans research with their communities and co-create home-grown solutions. To every action, there is a response or result. "We reap what we sow ", as said by (Waldo, 2004) in the Law of Cause and Effect. He terms it the "law of laws." If we sow self-pity and helplessness, we reap continued oppression disguised as humanitarian aid.

5.3 The Global Agriculture Context for Africa

Michael Lipton (1968) proposed the urban bias thesis, which criticised industrialisers. The state favoured the urban class in cities and towns at the expense of the farmers in the rural areas. Inversely, donors and aid agencies that come to Africa to look for a production base of raw materials promote market-based projects where African farmers who meet their trade requirements and export raw materials are deemed very successful. Lipton's arguments are centred on the inefficient allocation of resources and inequitable distribution of revenues, perpetuating low growth rates in LCD countries. The underfunding of resources for agriculture has led to slow growth and damaged the economy's growth potential. As for Zimbabwe, the scarce foreign currency now spent on food imports hampering agro-based industrialisation needs to be reversed. The developmental world continues promoting the export of raw agricultural materials and commodities as an outcome to solve poverty alleviation.

Furthermore, urban-based policies the former colonial regime instituted aggravate rural poverty. These have left lingering effects of hardships on smallholder farmers, and it has been argued that large-scale farming creates less employment per hectare than small-scale farmers. The situation is worsened by centralising manufacturing as jobs are exported to cities and urban areas, leaving rural areas with no extra livelihood sources of income. The active and productive rural population then migrates to seek liveable income in manufacturing factories far from the farms. Under the Ministry of Local Government, Zimbabwe has established a devolution policy to decentralise the economy, which can go a long way if adopted as a multi-sector approach.

5.4 Cause and Effect Theory by Waldo (2004)

Arguments put forward by the West have yet to answer why poor people are poor (Kay, 2009). The Cause-and-Effect Theory by (Waldo, 2004) will guide areas that require quizzing to answer Kay's question. Taking into account Scoone's five pillars guiding the research, the question is forcing integral researchers and locals to innovate home-grown solutions to problems and challenges as they are felt and experienced at home in an Afrocentric way. Technological advancements not researched for Africa have been imposed through Government-to-government negotiations and political gain. Also, rather than striving to meet requirements for foreign-based solutions set on

African states through the guise of Calls for interest, Aid templates begging for aid, grants, and loans that have mortgaged the continent's resources to foreigners. One exciting aspect that requires common sense is to ask why solutions for Africa differ from those employed back home in donor countries. The research seeks an answer to optimal productivity through technological interventions on small farms. Working as groups and communities of smallholder farmers can achieve the economies of scale required to be competitive, Jones and Corbridge's multiplier effect (2008). TIPS will help create the system required for industrial clusters to provide agriculture machinery, equipment, and inputs to understand and solve poverty through the creation of synergies dynamically.

CARE/4Cs processes merged with The Four Worlds Approach by Lessem and Schieffer (2010), therefore, demand that one engages communities meaningfully and takes impactful local action. On the other hand, the TIPS framework by Da Vinci and the Cause and Effect by (Waldo and Emerson, 2004) obliges the analysis of systemic risk brought about by foreign-based solutions as they are not meant to uplift African lives. Through its vested interest in technology, it will answer whether industrialization is a prerequisite to sustainable agriculture if both are well-thought-out to be in the same ecosystem.

Table 5.2: Metabolism of subject and field

Metabolism of subject and field	Deals with the problem of objectivity, proposing the notion of dynamic objectivity or the metabolism of subject and field as if they are one organism
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LCD nations which Zimbabwe is categorised as and treated as such are stranded because of the separation of industrialisation and local agriculture production. Industrialisation occurs in the West and agriculture production in Africa or LCD countries. To succeed, Zimbabwe might have to resolve the challenges in providing appropriate agricultural machinery, inputs, generation transfer, and agricultural surplus to local but not centralised manufacturing centres in Zimbabwe for locals. Social innovations from multiple disciplines deliver results that can be institutionalised for sustainable collaborative community impact. Research on the developmental

strategy and ecosystem will focus on the equitable distribution of the fruits of progress to maximise inter-sectoral synergies.

5.5 Individual Context

Strive to represent human diversity

The researcher is female, and GoZ-ZUNDAF (2012) informs that seventy per cent of farmers are women. To establish the context, a feminist attribute is employed to engage relevant stakeholders in establishing the integral ecosystem. Women farmers in Zimbabwe carry a double burden of tilling the land and providing care in the home. Now that the voice of the farmers is summarised as *disempowered, misunderstood, impoverished, and often overlooked*. The *research pursues* answers that will lead to inclusion and social transformation. The Researcher's context is one of a former corporate banker who has become a farmer and community/social banker—retiring early from capitalistic banking, which segregates against local businesspeople and farmers. As a woman in farming, aspects like technology, justice and ergonomics are key deliverables as they speak to issues like health and optimal yields.

Commercial banking uses economic systems that support international businesses yet condemn the local poor and entrepreneurs/farmers. After being transferred from corporate banking, the researcher worked as a regional credit approver in charge of thirteen African countries' SME Credit books/portfolios. There had been a deliberate education to inculcate the belief that local small businesses and farmers are not bankable and are high-risk. The other worrying factor was that the bank always supported subsidiaries of locally based global companies even if they exhibited similar weak credit traits to their counterparts in the same sector. The foreign bank in Africa would not shy away from showing off its corporate position that it is not a bank for everyone and favouring the minority in some countries where it earned most of its revenue streams. Worse still for the women facing other challenges arising from a parochial society, having no collateral further pushed women potential clients away from the bank.

5.5.1 Context of the community of farmers

Reflexive nature of the social inquiry	It deals with the reflexive nature of the social inquiry, whereby the researcher must continually reflect on themselves.
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A community of smallholder farmers dependent on handouts and self-pity emerged. Since poverty is a perennial feature for farmers who have received developmental support for decades, farmers requested for a change. The previous chapter brought out the experience and voice of farmers, and a closer look at the feedback shows deeper issues from female farmers than male farmers. Both groups remain stuck in poverty. Researching the intimate elements in the life of female farmers revealed that most live in shame. As a principal researcher, I could trace shame as most female farmers narrated their experiences, voicing their lack. Most male farmers expressed frustration and anger at seeing their children and families go to bed hungry despite working hard in the fields. This analysis of farmers at the individual level is essential before grouping them. When the farmers are grouped, aspects like shame and hunger are not readily displayed or voiced out. The farmers share the collective effects of political, environmental, social and even educational elements, as cited by Tarborga (2014). Ahmed (2018), in her discourse – "The Cultural Politics of Emotions", states that emotions like shame shape a person's or group's collective outward behaviour. Shame over and above hunger emerged as one key element that pushes farmers to work hard to feed their households and for female farmers to avert child marriage to receive food handouts. It is imperative to note a transformation of a female adult farmer handed out in marriage as a child or young adult against her wishes, working to avert the same fate for her girl child.

The activation stage within this research process established that the farmer's voice evoked the same emotions and psychological effects when the researcher was working. The feelings can be likened to undue differences in emotions coming out amongst male and female farmers. Working with a community of female farmers and not attending to socio-cultural and economic issues would be tantamount to injustice. More is needed to cause healing to brokenness arising from cultural and social gaps, not written down but heard through discussions and similar personal experiences.

Some male farmers, poor as they are, but because they are male, failed to embrace the research simply because a female was the principal researcher leading the research process. One could sense deeper, complex emotions as most farmers felt an invincible block that bounced them back to the same place they had started –a bottomless pit full of misery, self-pity, hunger and poverty.

5.5.2 Gender dynamics and context in the agricultural sector

Views a researcher as a person; hence one is included

Working with farmers has reflected that gender bias and status impact female farmers inversely. Using the two-research methods, phenomenology during activation and Feminism as context is established to overcome gender sensitivities bringing out the concrete experience in a gender-sensitive manner. The researcher was obliged to reflect continually. Truly integral research embraces the four worlds of South, East, North and West, each with distinctive strengths and weaknesses. Phenomenology is of imperative importance in that it gives researchers a human feel. At the same time, Feminism made the research sensitive to the significant number of women farmers.

5.5.3 Context at the national level

Socio-historical location	Deals with the problem of the socio-historical location of the researcher
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In 1980 Zimbabwe gained its independence and inherited a twofold economy encompassing a modern sector that employed twenty per cent of the labour force. It is a subsistence agricultural sector that employs approximately eighty per cent of the national labour force. The country then underwent a hyperinflationary era from 2000-2008, severely affecting economic performance. The reduction was fifty-one per cent between 1999 and 2008 (48% between 2000 and 2008). The poor performance relegated Zimbabwe from being the second principal economy in SADC in 1996 to eleventh by 2008, in light of its shrinking GDP. Interferences by international organisations in the INGO sector, the IMF and the World Bank could sustain causal relationships that need more development. The IMF, the lender of last resort, is notorious for a high economic project failure rate.

Despite prowling as a helper of countries with economic problems, in a review of 763 IMF programmes between 1980 and 2015, Bernhard Reinsberg and Thomas Stubbs recorded a relatively high failure rate. Of these programmes, 512 were interrupted due to failure, and 191 did not resume. The reviewers blame the programme design, explicitly having too many policy conditions, making it difficult for reform-minded governments to see them through. Zimbabwe's IMF programs have also dismally failed, and the country remains at the agricultural stage of development.

Additionally, the economic decline caused by ESAP had unsympathetic effects on women workers. They were further marginalised, remaining worse off because the mandated budget austerity led to cutting social spending and squeezed more from the taxpayer through increased education costs (Kawewe et al. 2015). It made it harder for farming families to subsist, forcing them to withdraw their children from school, particularly girls in a patrilineal society, further devaluing females. Prioritising export agriculture led to reduced food production, forcing women to be exploited in the labour force, which has loosened through ESAPs' deregulation that undermined labour social rights.

5.5.4 Further understanding of the country's demographic characteristics

GoZ-ZUNDAF (2012) informs that the total population of Zimbabwe in 2012 was 14 061 239, of which fifty-two per cent (6 780 700) are female, and forty-eight per cent (6 280 539) are male. The urban population is thirty-three per cent (4 310 209), of which 2 241 309 are female, and 2 068 900 are male. The rural population is 8 751 000 (sixty-seven per cent), of which 4 550 535 are female, and 4 200 464 are male. The country has a youthful population of fifteen to thirty-four years comprising thirty-six per cent. Life expectancy is thirty- eight years. The average population growth rate from 2002 to 2012 was one point one percent. The population services record that Zimbabwe has a population density of 33 persons per square km, and the average household size is four point two persons. About sixty-five per cent of households in Zimbabwe are headed by males and thirty-five per cent by females. Child-led families are relatively high, with 0.8 per cent of all homes being run by children under the age of 18 years (thirty-eight per cent of female-headed and sixty - percent of male-headed households) (GoZ-ZUNDAF, 2012).

Gender equality is an issue that policymakers and employers continue to grapple with. The World Bank reports (2016) indicate huge gender gaps among farmers, entrepreneurs, and employees. Because of gender-specific constraints, female farmers experience gender-specific conditions resulting in lower output per unit of land. Women are also less likely to be active in commercial farming than men. This disparity stems mainly from unequal access to productive inputs and finances. Female entrepreneurs also typically operate smaller firms and in less profitable sectors.

The World Bank (2016) reports that gender differences in land productivity and participation are due to gender differences in access to inputs, resources, and services. Research has also shown that female employees are working more in temporary and part-time jobs hence less likely to be promoted. Females access occupations and sectors with lower barriers to entry. Women and girls also do the vast majority of unpaid care and housework. In most parts of the world, women still earn less than men.

5.5.5 Employment or Livelihoods in a deteriorating economy

Zimbabwe has significant developmental challenges in high unemployment, rising poverty levels and inequality, and low savings and investment rates. As mentioned earlier, deteriorating infrastructure constraints retards the pace of economic recovery. The economic challenges facing Zimbabwe have affected the general population, including women. Cultural expectations continue to hinder women's economic and social empowerment in Zimbabwe.

Despite women's heavy workload and gender roles, they have the additional burden of caring for sick and elderly family members. In rural areas, there are often unpaid home-based care programmes community-based and usually implemented by NGOs. Women are the major players in these programmes, thus leaving women with limited time to engage in productive activities. They are confronted with the cost of travelling to the health centre, limited personnel and the need for medicines, some of the main challenges for rural women accessing health facilities. The limited resources at the national and family levels mean that the ideals for women and health, particularly regarding sexual and reproductive health, may not be met (GoZ, 2014).

Maternal Mortality is encompassed in one of the Sustainable Development Goals (SDG) targets and an indicator of women's access to essential services and rights. This rate is considerably high in Zimbabwe at 960/100 000 live births. The continuing decline in the percentage of births attended by skilled personnel is one factor contributing to the risk of maternal deaths. It had declined from seventy-three per cent in 1999 to sixty-six per cent in 2010–2011. Despite women's heavy workload and gender roles, they also have the burden of caring for the sick, ascribed to them by society. The situation is worse for rural women who voluntarily care for the sick, leaving them limited time to engage in productive activities, let alone social indulgences.

5.5.6 Focusing on the subjective view of experience

The tricky question is: should we talk about the employment and unemployment rate in a country where eighty per cent, if not more, derive livelihoods from agriculture and the informal sector, not salaries? As alluded to by Lessem and Schieffer (2010), in its time, when the advance of outer-directed technology was rampant and as a cast science, phenomenology steadfastly protected the subjective view of experience, refusing to understand the nature of knowledge. In its profound critique of naturalism as a philosophical programme, Husserl and his followers saw his scientific approach as self-defeating because it consciously excluded consciousness, the source of all knowledge and the value of all creativity and innovation. Everyone, including the government in Zimbabwe, is conscious of the above demographics and that seventy to eighty per cent of the population derive income and livelihoods from crop production. No deliberate action has been made to mechanise the farming community or the informal sector. For economic indicators, economists naively use employment as a critical economic indicator clinging to formal employment as a measure to conform to standards set by external forces like the World Bank and IMF. Furthermore, no contextualised livelihood concepts are discussed or developed to arrest the challenges of low productivity and cyclicity as the nation strides towards a middle-income economy. Educators and academia continue their business as usual despite churning out unemployed graduates for decades. Industry sometimes alleges that the graduates need to be more employable and require retraining to be helpful in the industry. The populace, to survive, has resorted to being a consumptive nation,

importing goods and services and competing with the local industry, now operating at an average factory utilisation rate of thirty-five. Some youthful people migrate overseas or to neighbouring South Africa to earn a living and feed their families.

5.7 Understanding Rural Development at a Regional and Global Level

Researching across rural America, Canada, Europe, and Australia, many communities adapt to effective change and implement community-led initiatives, Light (2000). Agencies must provide high-quality services adequately, and communities have every right to expect them. The book *The Great Escape* (Deaton, 2014) declared that foreign aid does more harm than good. According to him, it corrupts governments and rarely reaches people experiencing poverty. Easterly, a developmental economist and author of the book — *The White Man's Burden*, estimated that the West had poured more than USD\$2,3 trillion of aid into Africa in the last four decades. However, to this day, poverty and underdevelopment remain standard features in many aid recipients' African states. Many communities' research findings are not translated into action. Some research initiatives cease after external funding is exhausted, suggesting a less than genuine connection with local passion and contribution to community capacity. A considerable investment of community and government resources in planning and prioritisation is never institutionalised for continuity. Nevertheless, assessing needs and delivering services and infrastructure has always been suggested to aid recipients in an ad hoc manner. Solutions are not comprehensive and inclusive. Meeting perceived needs are central for government and community support agencies. Such is lacking or is half-heartedly done. Instead of waiting for aid agents to change, this research process activates communities to participate, surface their challenges without restriction, and write their solutions template.

In 2014, 13 United Kingdom and Africa-based non-governmental organisations, including Health Poverty, Jubilee Debt Campaign and World Development Movement, claimed that Western countries used aid to deliver services that help them "sustain looting" of the continent. Africa loses nearly US\$60 billion annually through tax evasion, climate change mitigation funding, and the flight of profits earned by foreign multinational developmental institutions and companies. Political leadership has failed people; African economies have been characterised by extractive trade structures

exporting primary commodities. Community development relies on social innovation, motivation, organisation and local leadership; the current smoke-screened service delivery then characterises a half-done methodology. Such creates space for integrated community development and learning from prior work done. Hearing and accommodating the farmer's voice will go a long way in establishing our desired path and local action for social change.

5.8 Status Quo of Agricultural Land in Zimbabwe

Zimbabwe's land area is thirty-nine point one four million hectares (ha), of which eighty-five per cent is potential agricultural land. About fifteen per cent of the land comprises national parks, state forests and urban land. The maximum land area with irrigation potential is estimated at five hundred and fifty thousand hectares (one point six per cent) if all surface and groundwater were used for irrigation. The area, two hundred thousand hectares, has already been developed, but only three hundred and seventy-four per cent of the irrigable land is functional. Zimbabwe has several distinct farming systems reflecting historical land allocation, tenures, natural resources, and technologies. At independence in 1980 after close to one hundred years of British rule, Zimbabwe inherited a dual agricultural system: the large-scale commercial and small-scale communal subsectors, with the former mainly held in freehold and the latter de jure owned by the president, but de facto communally owned (Rukuni & Tawonezvi, 2006). Communal ownership confers individual rights to plots for houses, gardens and fields with shared and unlimited access to grazing land. Zimbabwe is a tropical country that generally experiences a dry savannah climate.

Nature is active and complex.	Deals with the recognition that nature is active and complex, adopting an ecological or open systems approach
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A range of notable micro-climates being observed within the country makes it impossible to continue dividing the country into five agro ecological zones known as Natural Regions from one to five. These were classified concerning rainfall amounts, temperature and soil types FAO, (2012). They used to range from Region I with red or clay soils, average rainfall of 1000+ ml per year, rains in all months, and relatively low

temperatures. Region V, with sandy infertile soils below 450 ml of rainfall, is erratic during the year. The GoZ has, over the years, engaged in programmes to increase food and agriculture production, particularly in rural areas, through an expansion of input supply and marketing structure, increasing the availability and access to credit and extension services and increasing producer prices. As things stand, in one area one can find characteristics of all five regions. This is a result of climate change adverse effects on farming communities and use of unsustainable agricultural practices in the quest to produce food.

5.9 The Context within the Worldview and Collective Level

In his model called *ages of humanity*, Renesch (2012) outlines the different stages the global society has undergone as follows:



Figure 5.2: Ages of humanity model

(Adapted from Jon Renesch 2012)

As Renesch (2012) indicated in his rendition, *bridging the gap between wisdom and practice*, individuals have the power to transform themselves and organisations to avoid irreversible deterioration in the quality of life. Humanity and the different cultures have moved from hunters and gatherers to the agricultural age, industrial age, and information age, and now living in the age of conscious evolution. Most African countries expect South Africa to have not gone through all the Ages of Humanity as

industrialisation, for one reason or another, seems to hit a glass ceiling for the rest of other African states.

5.10 Context from Available Literature

The context that caused the disarray in the research sector was the smoke-screened help by foreigners being its financial institutions or donors (Raman and Borda,2001). Following the modernisation theory, which premises those developing countries, which status Zimbabwe is in, must be externally guided towards a developed industrial society. The research assumed that knowledge creation and integral knowledge exchange are critical factors in poverty alleviation through transforming minds. Over seven decades, donor dependence syndrome has perpetuated the poverty challenge. Despite repeated failure of mode one learning styles being used to help the 'intended' beneficiaries, they still need to improve. The problem posed by Education 3.0 is that students who graduate are expected to come up with a problem. Research the community and come up with solutions. On the other side, donors research to inform.

After interacting with donors, the bottom of the pyramid remains with crushed spirits. Hope is dashed, and the future is bleak. It is why radicals accuse donors of intentionally transferring inappropriate technologies and organisational systems (Burch,1987). Donors impose neoliberal policies on weak states that have increased inequality and marginalised people experiencing poverty (Manyaya ,2002). Technical policy analysts attribute failures to inappropriate procedures and processes and unrealistic models and expectations among donors. Andrews (2014), with over 50 years of African fieldwork and consultancy and Levy (2014) alluded to the reality that donors often favour their own rather than local interests. They ignore local conditions, values, and needs and insist on inappropriate procedures and structures that make unreasonable demands on implementing agents and beneficiaries. Locally the Minister of Higher and tertiary education, on the launch of the new education system 5.0, spoke about transforming local education and producing graduates who can produce goods and services relevant to the communities they use.

5.11 Research Findings on Context

The context being revealed is of poor farmers who know what they want but need inclusion and external input to be able to create and concretise their solutions. As discussed in the chapter, farmers have an overwhelming burden to extricate themselves from historical oppressive systems.

According to Robbins (1992), it is simple: he learned to harness the principle he now calls concentration of power. Most people lack the endurance to improve themselves and their communities. According to Lessem and Schieffer (2009), these distinctions lack the power to answer your call and concerns in ways that address imbalances through social innovations for transformation. It goes to show that conscious evolution starts at the individual level, happening at three stages, the (intimate -self, then family and friends), immediate (organisationally) and outer level (societal or global). Robbins (1992) believes that one of life's major lessons is understanding what makes us do what we do. What shapes our human behaviour? Now that the context has been uncovered and farmers, despite being disfranchised, appreciate the mammoth task before them, and as a community are motivated to tackle it as such.

5.12 The Disintegration of Global Society and the Feminist Slant

The feminist tenets listed above (under 6.3) were used to guide the establishment of the farmers' context, giving a solid feminist slant to pedestal relevant social innovations from the smallholder farmers and students' community. The uncovering of context was embarked on with a view to alleviate the challenges and causes unearthed. They are the intended beneficiaries and co-research participants. The epistemology and knowledge the researcher brings about are that Feminism puts the research of culture or spirit on a proper scientific footing complimenting the 4Cs framework in establishing pointers to areas that require social change. The next chapter will see TnC and the community of farmers engaging an outer circle so that appropriate social innovation is co-created to answer and resolve burning issues. Certain aspects of the context will change as farmers have agreed to lead their own destiny.

Introducing and engaging friendly outsiders who are technocrats willing to work with communities strengthen the transformation process. Establishing such a

comprehensive ecosystem requires engagement of experts (Lessem and Schieffer, 2010). The need to bring onboard external stakeholders arose from the gaps and voice of the farmer. They are crying out that they need integral knowledge exchange and appropriate technology to mechanise and fill the gap caused by the rural-urban migration of their youth, low yield due to their reduced capacity to intensify land yields and loss of drought power to disease. The ongoing brain drain has not spared rural farming areas as graduates and the youth migrate to Western countries or neighbouring South Africa for seemingly greener pastures.

5.13 Summary of the Chapter

The smaller holder farmers' context has been established ranging from self/household situations, the national context and the global one. Knowing the context helps the affected as they are aware of the magnitude and nature of the challenges they are faced with. The different contextual levels depicted in the chapter calls for diverse stakeholders' engagement. In the next chapter, Awareness is Awakened for the community to be conscious of their need and commit to co-creation of social innovations which aspect strengthens buy-in and sustainability.

CHAPTER 6

AWAKENING AWARENESS

6.1 A Bottom-Up Approach

To attain the research substance, the researcher's trajectory continues to follow the integral research process at three stages, individual, communal, and Organisational. The chapter depicts the awareness and awakening process undertaken with the farmers to build an innovation ecosystem supporting the much-needed transformation (Lessem and Schieffer, 2018). The researched body of knowledge will now draw, supplement, and complement the relational research process with the Awakening Awareness process.

This chapter examines the second aspect of the CARE-ing Approach, thus, Awakening Awareness or consciousness. Look at the meaning of the word

'consciousness'. Words like mindfulness, cognisance, alertness and responsiveness are some of the words that come to mind (Oxford Dictionary ,2018). Awakening starts from within at a personal level and is diffused to those around us. Awakening can start with a sense of dissatisfaction with the status quo. Awakening can also arise from receiving information or exposure to previously unknown realities. Thus, intimate awakening is between the inner Soul and God the Creator. The awakening brings awareness, impacting family, friends, and those near us. It is externalised as an enterprise structured for outward reach. Tafadzwa Ne Chiedza (TnC) is that organisation reaching out to other stakeholders, business associates and the community. The Trust endeavours to be a light in every dark corner bringing hope and happiness through integral knowledge and technology transfer. Knowledge brought or exchanged should translate into hard but smart work, which produces profit and social transformation. According to Lessem & Schieffer, (2009), Awakening Awareness is a collective action to build an innovation ecosystem to support integral transformation. Community imbalances are surfaced to alleviate such inequities.

A successful Christian awakening will inspire a paradigm shift and change the old way of doing things. As a Christian, taking a leaf from Spiritual Awakening in the kingdom of God, one initially longs for more. There is a sense of dissatisfaction; in that universal feeling, one is inspired and perceives that there is more to life with a purpose worth fulfilling. The research results reveal that the troubles and challenges of the smallholder farmer are similar in all agricultural zones.

6.1.1 Examining conscious evolution to establish individual context

Tarboga (2014) examines conscious evolution with the integral lens from dimensions of depth, complexity, subjectivity, and objectivity. He views conscious evolution as the research of culture and life changes over time. Tarboga established the four quadrants of conscious evolution as follows:

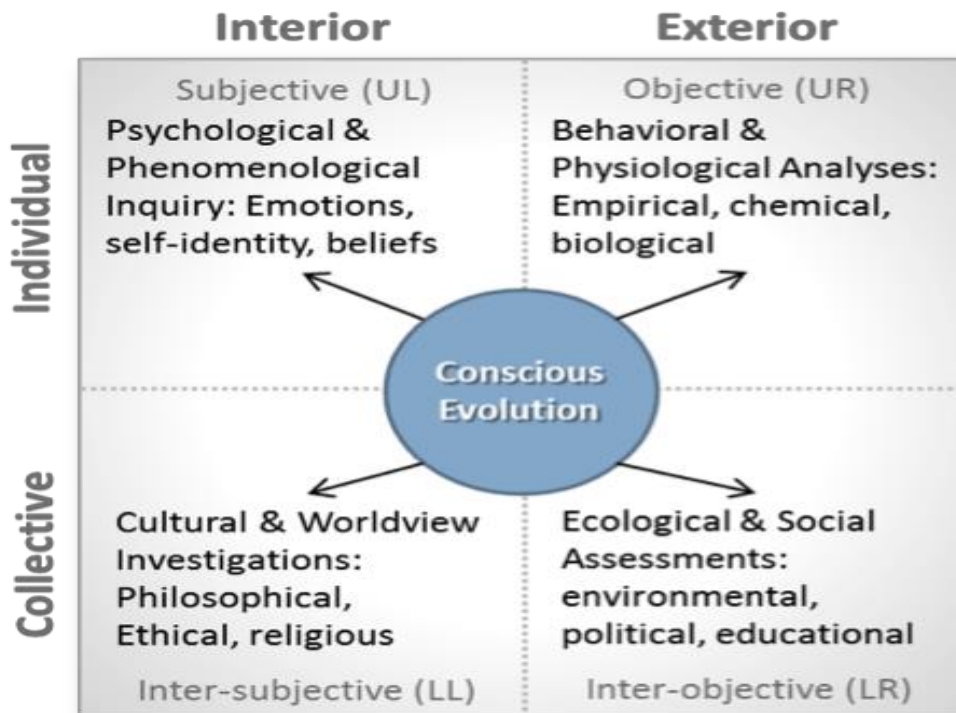


Figure 6.1: George Tarboga's four quadrants of conscious evolution

(Adapted from Tarboga's Notes 2014)

Within the context of understanding-"yourself" to society- context (Lessem & Schieffer, 2009), the researcher's theme is identifying a context that helps uncover imbalances. Establishing the inequalities and the context is crucial before taking the next step – alleviating areas of imbalance with integral theory and practices.

As Tarboga (2014) puts it across, culture and experience affect one's psychology, emotions and self-identity at the individual level, which then surfaces as behaviour and character. The world then sees or gets to taste that experience or outward behaviour. The external system that induced credit declines for most African businesses was also evident in farmers' lives. Prior experience and knowledge influenced the researcher in analysing the results and feedback from the research with the farmers. A question lingered – which system was operationally causing poverty and a sense of helplessness, worse still, further aggravating that of her female counterparts.

The issues of objectivity and subjectivity were balanced off in the research as there was mindfulness that the population where the sample was picked from constituted groups of people from different footings. Knowing the adverse effects of living in a patriarchal society awakened the need to guard the research against a high likelihood

of being affected by gender bias issues. The composition of a high percent of women farmers has also flagged outcome aspects of subjectivity kicked in and had to be dealt with through mindfulness. The inner calling was substantial and persuasive to listen and hear the voice of the oppressed. The stories and farmers' daily experiences caused the researcher to challenge poverty differently. Though poverty affects the total population cooperatively, the female researcher was keen to check if it manifested differently in the female-farmer-led livelihood endeavours.

6.1.2 Researcher's conviction

The aphorism by Allen (1903), "As a man thinketh in his heart so is he," not only embraces the whole of a man's being but is so comprehensive as to reach out to every condition and circumstance of his life. Being a Christian, a bible verse supports this aphorism, King James Version (1982) Proverbs 23 verse 7, for as he thinketh in his heart, so is he, speaks volumes to the human core. A man is literally *what he thinks*, his character and the complete sum of his thoughts (Allen, 1903). Upbringing played a significant role when a father who employed survival and productive skills to escape the poverty trap assigned roles and responsibilities to his family members (children at a tender age) and assisted in shaping the researcher's thought process and life outlook. One central element learnt from upbringing starts from what they have and establishes building blocks until a complete ecosystem is established.

On the other hand, the smallholder farmers think they need to be more capable of helping themselves and need external help. This has rendered them dependent on grants and government inconsequential input schemes to the extent that for decades, farmers in dry regions plant corn in areas they know that the crop will fail to do well. The excuse they give is that it is the seed distributed for free by the government. In the past two years, the government started distributing small grains to areas traditionally designated as dry regions. Tables are turning as high yields and bumper harvests of small grains are recorded.

The derived meaning from the farmers' stories and data from the semi-structured baseline studies segmented into six categories with cross-sectional requirements that would uplift the farmers' livelihoods are needed for:

- A. appropriate technology
- B. integral knowledge exchange
- C. skills for production
- D. catalytic funding structures
- E. access to sustainable markets
- F. beneficiation through provincial value addition and new value creation from community assets.

The context was established, and factors affecting and causing imbalances at different levels were uncovered and are as follows:

1. At the global level, the residual effects of colonisation are now at play in diplomatic ways through aid and grants that are expensive to developing countries, of which Zimbabwe is one of
2. Climate change challenges
3. Lack of researched Afro-centric technology to mechanise the small-holding farming sector
4. Lack of integral knowledge to improve farming and productivity
5. socialisation of locals through the education system to remain employee minded in an economy based on agriculture with fewer employment opportunities
6. Globalisation disadvantages developing countries due to a lack of industrialisation

An invincible hand seemingly engineering the challenges farmers face and climate change hardships worsening the situation became clear. The farmer's voice is now crying for enfranchisement and the co-creation of solutions that speak to challenges as they are daily felt. The research established that farmers and locals, upon knowing their context and what is causing challenges in their daily lives, unanimously agreed on a localised definition of what is meant by poverty. It included more inclusive descriptions of the state of poverty, and challenges were ranked as a broad-based approach was reached to build an ecosystem which included policymakers, industry and the education sector as they all impacted the enabling environment required by the farmer to escape the poverty trap. The following SDG framework was established to guide the transformational trajectories:

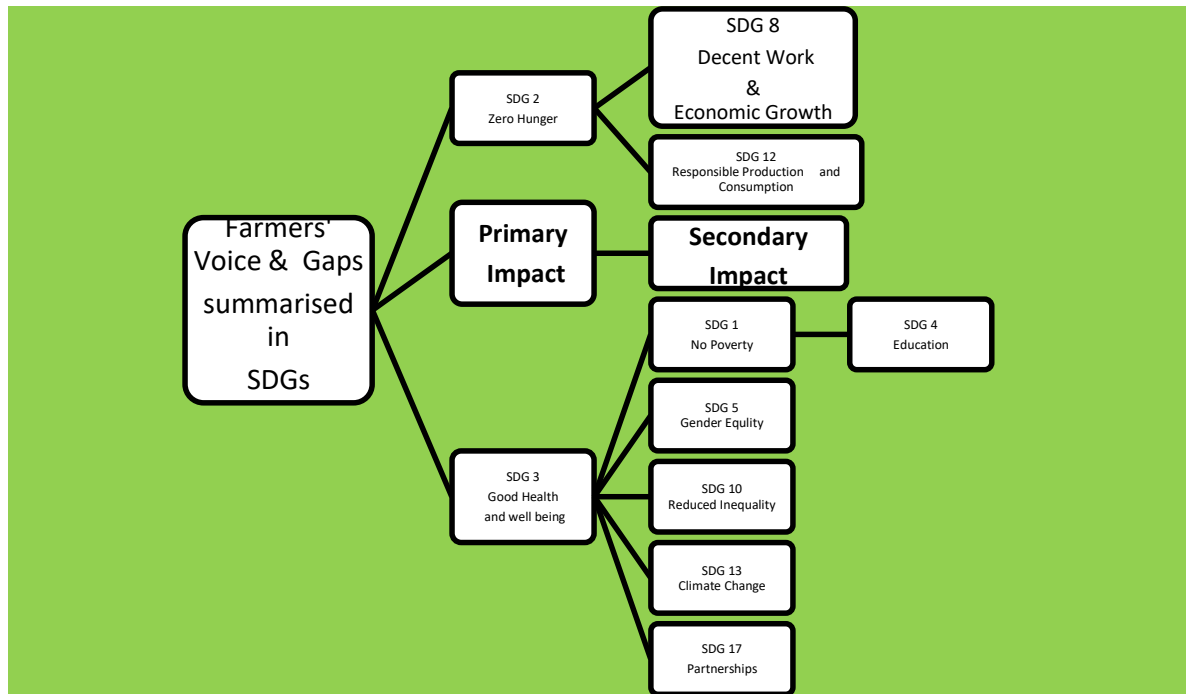


Figure 6.2: Ranked SDGs needed to close the gaps and answer the farmers' voices
(Own Elaboration)

For Gudeman (1998) and Lessem and Schieffer (2015), development is not primarily about capital accumulation but innovation in relationships with your immediate learning community, external community, organisations and society. Furthermore, pursuing an ecosystem-based strategy synthesised with ecofeminism themes deriving knowledge from indigenous work to respond to climate change and technological challenges expands the resource base for smallholder farmers. Solutions are being widened to lessen reliance on aid and grants by establishing an integral ecosystem to build heritage-based sustainable livelihoods and forming a framework with easily identifiable pillars.

6.2 The Awareness

6.2.1 Awakening the smallholders to using their commonalities/ voice

The farmers have been made aware of their state, and their stories have been analysed. The strengths of phenomenology as a data collection and analysis practice are that it seeks to find the universal nature of an experience and provide a deeper understanding. The themes and meanings of an experience emerged from the data. The qualitative nature of phenomenology allowed the researcher to notice trends and

look at the bigger picture and solutions to the imbalances and gaps. The data was not analysed through a statistical test that confines or restricts the interpretation. It helped to understand a lived experience and bring meaning to it. The farmer's voice universally emerged as – *I am disempowered, misunderstood and often overlooked*, manifesting in an impoverished context or state of poverty economically, socially and mentally.

6.2.1 Awakening to the smallholder farmers' context

The farmers' context constituted several factors and gaps that surfaced from the research, and poverty was reflected at three levels: personal/household, communal and national. Families face hunger and live below the poverty line at household levels, with some surviving at less than \$1.25/day. The disheartening factor, above all, was the sense of hopelessness, shame and vulnerability they exposed. The research occurred during the pandemic, making the need for tools, equipment and technology more urgent and essential. The Covid-19 pandemic has even challenged the digital culture of rural communities as people were obliged to distance themselves physically. Yet, as social beings, the need to remain socially connected heightened. Availability of appropriate technology mitigated the virus while making physical distance necessary without diminishing productive levels.

At the communal level, the communities know they are all suffering but have not decided to do something about it collectively. They were even aware that they were taken advantage of and that their poverty was used for political gain by some elements. At the national level, the awakening was also apparent. The country can capacitate grassroots and create its own market for the commodities that are being imported against low productivity levels. It is hardly the case that locals come together and put resources together to solve their problems without restrictions that come with external funding and help.

Farming communities need more infrastructure, tools, knowledge, and skills to achieve liveable incomes at the household and communal levels. This is against a backdrop of being affluent and consumptive, against foreign currency shortages and low GDP levels. The culture is translating to a net importer status and high poverty levels.

As the farmers were engaged in the research, most blamed the government and expected external help to escape poverty. Covid-19 propelled the need to achieve self-sufficiency at three levels, thus household, provincial and national. Over and above, the challenges cited by farmers hugely reflect climate change effects that have worsened the state of the economy. A mammoth task beset the research team to ensure that all the SDG aspects are embraced. SDGs 1 to 3 seem urgent; overlooking or deferring SDGs like 13 on Climate action would reverse all efforts and achievements.

During the 2021-2022 rainy season, Zimbabwe experienced variability in rainfall patterns. In times past, unique droughts characterised by flash floods and abnormal quantities of rain resulted in some households remotely located remaining food insecure whilst others celebrated bumper harvests. Such climate-induced challenges must be recognised and addressed as social innovations are encouraged.

The Awakening Programme was structured at four levels in line with the research results and steps to partner with stakeholders is at the following levels:

- A. Personal level (the researcher and her Trust, including co-researchers)
- B. The farming communities and their lead farmers
- C. Policy makers
- D. Experts or ecosystem partners at all sector levels

Feedback from all directions pointed to the one common agenda. The voice uncovered similar imbalances and called for an innovative ecosystem that is essential to overcome such common challenges holistically. Adopting an ecosystem will harness concerted efforts to co-create solutions for better lives.

In line with Lessem and Schieffer's (2014) position on Awakening Awareness, a researcher builds an innovative ecosystem to support the envisioned transformation.

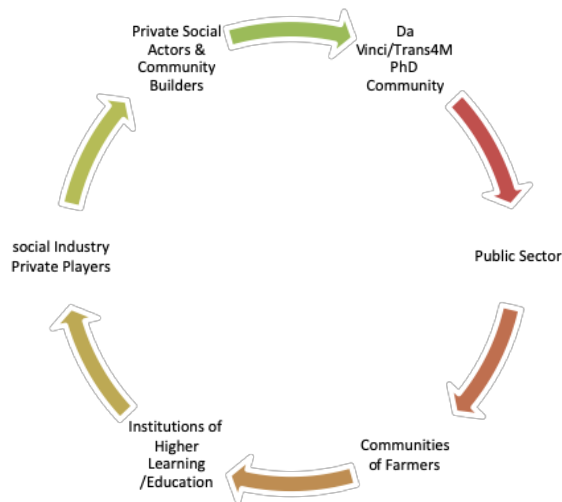


Figure 6.3: An innovative ecosystem to support the envisioned transformation

From the challenges and gaps established, the research aims to co-create researched technologies and establish a sustainable competitive edge for smallholder farmers using system thinking, innovation, collaborative networks and integral knowledge transfer. Developing an innovation ecosystem requires access to complex and diverse knowledge, which smallholder farmers still need to possess or hold fully. The ecosystem strategies approach in building the collaborative network called for an open innovation environment, partnering with other stakeholders in a manner that integrally deals with and engages farmers who are participants, not just as beneficiaries or subjects. Rural households in Zimbabwe follow livelihood strategies that hinge on their natural and socioeconomic contexts. The factors that determine household livelihood options are affected by the available resources; in this case, land and other community assets are in the vicinity.

Keeping in mind the following sub-questions for the research on innovation, a community-led approach was muted in line with the questions and feedback from the research:

- 1) How can I activate smallholder farmers to produce above subsistence level
- 2) Can the concept of Integral farming release the Gene-ius in a small-scale farming community?
- 3) How can a rural community (small-scale farms) take charge of their destiny, creating viable enterprises and meaningful production and leading happy lives?

- 4) How will farmers benefit from inclusive research, innovation endeavours, and sharing indigenous and exogenous knowledge?

6.3 Community-led Approach Embracing an Innovative Ecosystem Strategy

TnC, in its catalytic role, expanded the participants bringing onboard policymakers that would speak to the broader issues that surfaced and were documented from the research. The research methodology and the Second C of the 4Cs approach demanded that an innovative ecosystem be built. The importance of integral knowledge became evident with the need for an ecosystem-based strategy to co-create new resources and value for the smallholder farmers' community.

6.4 The Basis for the Ecosystem-based Developmental Strategy

Stage two of the Awakening Consciousness framework involved setting up the collaborative network of experts, establishing an integral ecosystem creating an open-source platform to reinforce innovation flow facilitating an environment for farmers to participate in the co-creation of social innovation—a co-formulated plan for the awakening awareness framework. A complex ecosystem embedding a cohesive strategy designed to assign responsibilities and accountability was established for order and traction in the transformation journey, answering the farmer's voice.

The final stage to co-create an action plan embraced a design-led approach with five distinct phases in line with the predestined research methodology to build an innovation ecosystem, building the ecosystem, and institutionalising it for social action.

- 1.1. Identification and establishment of the priorities with the community and share,
- 1.2. Establishment of the sustainable development plan,
- 1.3. Determining inclusive innovation developmental projects with the community,
- 1.4. Mobilising resources and investments and establishing an innovative ecosystem with toolkits

1.5. Embodiment and institutionalisation of the development projects for transformation.

The awakening awareness framework and results were successful, and each stakeholder designed a toolkit and contracts attached for action.

6.4.1 Partners listed as follows their buy-in coming with expertise in specified areas

- a) TnC and the Principal Researcher
- b) Horace Clemmons and Clebber LLC (USA)
- c) Group of 14 Lead farmers and their farming communities
- d) University of Zimbabwe and Solusi University
- e) Private sector players in Agriculture Machine and Implements Manufacturing representing their industry

Much healing and restoration are planned at the bottom of the pyramid. The intimate space of this level of awakening through trust is expanded to like-minded people like the researchers, and the Trans4M PHD co-students, majoring in knowledge creation Tafadzwa Ne Chiedza will further it through catalytic management for the improvement of livelihoods. In pursuit of technology innovation, TnC engaged Clebber LLC. This USA-based company has an open-source platform run by a social entrepreneur, Horace Clemmons. He is willing to share his knowledge in software engineering to co-create technologies that can close the economic divide resulting from technology injustice. Having worked for IBM in the 1960s, Horace left IBM in protest to the capitalistic tendencies of the global firm where his then-employer perpetually milked customers through royalties for as long as they used the company's computers. He is now globally working with community builders to disseminate the open-innovation thought process, thus establishing technology that promotes mass production and closing the economic divide gap caused by technological injustice. Communities can take advantage of their numbers, co-create technology suitable for their minor needs and have the strength to mass-produce and satisfy their communal needs keeping

value where production takes place. Such a way of thinking builds an interconnected ecosystem and self-sufficiency as technology becomes an enabler to take advantage of the opportunity as it avails itself.

Engineers India Research Institute is acclaimed for creating industrialists in rural communities, bringing to the ecosystem knowledge in food processing, biochemistry, waste management, and recycling. They enable farmers to expand their value base, process new products from their crops, and harvest from the wild. Farmers expressed the need to build skills for development and enhance beneficiation ceasing the exportation of raw commodities.

6.4.2 Second-level partnerships: Fellow integral researchers

A significant group of the innovative team is Trans4M students and doctors, having researched pillars identified as missing and needed in the social transformation of farmers. Mamukwa brings on board knowledge management as she researched Knowledge creation. Farmers' voice was distinct on the need for their core business to grow, expanding new services and products interconnectedly.

6.4.3 Third-level partnerships: Policymakers

Policymakers are vital ecosystem makers. Through the involvement of the Ministry of Agriculture, TnC realised the need to co-opt two additional ministries as they have an immediate impact on the smallholder farmer's lives: thus, the Ministries of Industry and Commerce and The Ministry of Higher and Tertiary Education Science and Technology. Joining and creating additional dots is how farmers are awakened to the social action needed to alleviate their impoverished situation. The two additional Ministries co-opted as their policies affected the innovation and institutionalisation of some of the envisioned technology and tools in the farming community.

The Ministry of Higher and Tertiary Education, with its drive to impact the minimum body knowledge of students and communities through the new education policy 5.0. The new policy fits well with the new way communities are being engaged. After a

successful awakening, the Ministry of Education gave TnC five universities to partner with in the innovative collaboration. Each university will focus on its area of speciality:

- i) The University of Zimbabwe would collaborate with researchers in engineering, merging social sciences and technology to innovate with TnC and the community of farmers' required technologies. The local ecosystem will stand on the shoulders of Horace's Oggun open-source platforms, collaborating to co-create appropriate technology.
- ii) The University of Zimbabwe will be transformed into an enterprise development centre where the Business School will speak to the national supply chain system. The faculty of Agriculture at the campus will revamp the ecosystem in agriculture development and community engagement.
- iii) A Heritage Communiversality (HC) working in food science and value addition co-created by the researcher will awaken the community and nation to beneficiation to speak to the out-cry by farmers on the issue of exporting raw materials.
- iv) The private sector will work on Applied Science in Agriculture knowledge and technology, establishing a local wholesale system to manufacture and scale up co-innovations by the University of Zimbabwe and the Oggun open-source architecture.

6.5 Categorisation of Imbalances

Besides physiological effects like climate change, soil degradation, and economic elements like globalisation, local cultural, political and economic issues have also affected farmers. Imbalances were deciphered through storylines, and participants were informed of the results.

6.5.1 Embracing storylines and ranking them for action

The storylines were analysed, and factors that impact livelihoods in the farmers' socioeconomic, natural context, opportunity and assets were ascertained. Using storylines and results from the baseline study was quite involved. This journey enabled

the establishment of livelihood choices taking the awakening process to another level which called for social action.

National policies in the form of presidential schemes also impacted rural household choices. Farmers advised: that *they are economically challenged with no money to acquire irrigation equipment and wait for the presidential scheme for seeds and fertilisers*. They need to qualify for bank loans to fund their production adequately. The alternative they have are companies that offer contract farming distributing inputs, and the farmers offer labour-growing commodities like cotton, tobacco, maize and soya. The uncouth business principles of the private sector and small inputs from the presidential scheme result in them occasionally becoming poor as the harvest is outside the family size and needs.

Farming income distribution was also affected by climate change, *with ongoing drought spells resulting in crop failures and the need to establish alternative sustainable livelihood strategies*.

More than eighty per cent of the sample derived a total of their income from farming operations, and these had the lowest livelihood capital compared to those that received remittances. Of the poorest, some complemented their farming income by providing labour to other farmers who were ranked better and could pay for assistance during the weeding and harvest periods.

A feature that distinguished households further was the sexuality of the head of the home. Most female-headed households expressed concerns about inequality and segregation as they pursued their agricultural activities. Child-headed and women-headed families *came second after male-headed ones*. That social standing impacted their treatment, pitting them against males in their parochial society.

Most families were alleviated from such predicaments if one of their siblings or children sent remittances, lifting them from the dust after securing employment abroad or in urban areas. Over and above farming activities, twenty percent of women augmented their income with natural capital in the form of plants harvested from the forest. During this pandemic, there were reports of increased demand for wild teas and medicines. At the top of the list were Zumbani, Artemisia and aloe vera, as most people turned to natural herbs and medicines.

6.5.2 Adoption of Sustainable Livelihoods from a heritage perspective

From a heritage perspective, sustainable livelihoods include capabilities, assets, social resources, and material and activities to derive a means of living, Chambers (1987). Despite Chambers' profound contributions in his review paper, sustainable livelihoods remain at the periphery of discussions and debates of The United Nations and World Bank as they prefer to focus on employment, a universal measure of the state of any economy. The two bodies ignore the broader concerns of such a measure as livelihoods are complex, especially as one incorporates issues like environmental dynamics. To change such a measure means developing genuine poverty-focused development tools that speak to local problems in a contextualised manner.

The objective of the research accommodated innovation relationships and the social and institutional dimensions guided by The TIPS Seven layered framework, the CARE process by Lessem and Schieffer and the 4Cs Community engagement guidelines.

The chapter looks for effective pathways to improve household income and land productivity to foster sustainable livelihood strategies. For societal transformation, the heritage-based sustainable livelihood strategies envisioned establishing learning communities and increasing productivity levels in the farming sector through knowledge exchange and technology as households produce at subsistence levels, creating a poverty trap. Awakening Awareness aims at building innovative ecosystems, and this is a guiding principle that was pursued as awareness was awakened. Starting with onboarding partners and stakeholders to build the desired ecosystem, smallholder farmers' challenges and causes of poverty spoke to the partnership type and levels of accountability.

The developmental compass by Lessem and Schieffer (2016) assumes that as one begins with storytelling, they are affected and move with their community and participants in the research. The inner call as it unfolded was institutionalised into an enterprise for greater engagement creating a system and design which can establish the rules of the game and how it is played. The institutions are being governed by locals for impactful home-grown results.

Players on boarded to the integral ecosystem were awakened to the call to achieve transformative results. Collaborating with individuals and organisations with diverse Knowledge, skills, and expertise fostered the development and sharing of Knowledge.

The following is the envisaged community of practice which has been set up: Through the TIPS Framework, dynamic engagement and rearrangement of existing relationships created the integral ecosystem being sought after. They were tapping from the South Korean and Taiwanese policymakers who were aware of avoiding the dilemma and ensuring sustenance. There was a need to balance the interaction between agriculture and industry and maintain a balance between agriculture-industry synergies. The institutionalized technological innovations stimulated shifts in production patterns both at farm and industry levels.

Sectors that would improve agriculture were onboarded, as advised by Cheng (1990). In line with Tataj's innovation through network thinking by Taj (2017), innovation networks go through three stages to unleash growth through the power of networks. Firstly, they understand the problem or opportunity. Secondly, they co-create; thirdly, they orchestrate and grow, delivering the desired outcome. Living in a digital age, the Tataj growth model exploits Knowledge, communication, and research to provide solutions through open innovation ecosystems. Participants and partners share skills and assets to build networks to understand markets and disrupt the digital space, making innovation faster and contextualising issues on the ground.

6.6 Ecosystem Approach for a Knowledge-Based Economy

Ecosystems do not evolve toward a monopoly with a few dominant players. Ecosystems more closely exhibit the market conditions proposed by Smith (2006). Thousands of players fine-tune their actions as if an invisible hand were directing them to the best allocation and use of resources. How does this arise – not by pursuing individual self-interest, as Smith assumed? (Sol, 2006), in his discourse on *-Living Assets: Caring for the Things We Most Value*, advised that the most critical features of this new Theory are the distinction between living assets (people and nature) and non-living assets (capital). Bragdon believes that contrary to the effects of traditional capitalism, *living assets are more critical to the productivity and longevity of companies than non-living capital assets*, for living assets are the sources of capital assets. Most intellectual capital assets, including supercomputers, cannot function without human guidance and natural assets. Living Asset Stewardship (LAS), as such, becomes the core of an emergent theory of management, taking on from where the biologist E. O. Wilson leaves off with his "biophilia", or respect for life.

6.6.1 Poverty solutions through mode 2 and social learning

Promoting social learning under integral research awakened the need for farmers to become learners and to pursue learning within structures that allow them to select the outcomes they want to achieve and what they want to know and do after each learning. Such an approach was unavailable, and smallholder farmers contextualised- learning space became a desired outcome.

The answer was in social learning, where the curriculum will answer the problem in the field of research. It gives the researcher and the community of farmers ample industry space to co-create learning cycles called Nhimbe based on the community. The learning cycles will operate under an open university structure called Heritage-Based Communiversity. Block lessons will be at the centre, and the farmer's field is the classroom, with lead farmers running demo plots to ensure that the learning by doing concept entrenches the needed knowledge.

The learning needs arose from meetings and “needs assessment exercises”, and farmers want a learning centre that speaks to their knowledge and livelihood skills requirements for attaining sustainable livelihoods. However, to end up with a rounded farmer, especially the young farmers who are growing in number, it is imperative to adopt a multidisciplinary learning approach. From the GENE theory by Lessem and Schieffer, it has been posited that farmers, no matter how small their operations, will need to acquire knowledge in farm production, management, marketing/trade, and even processing as they act as both the CEO and manager of the farming enterprise making decisions across all functions. Most of the young farmers have passed through the country's institutions of higher learning. To stop the cycle of poverty, the research team onboarded the Ministry of Higher and Tertiary Education, and they are part of the integral ecosystem.

6.7 Education: Zimbabwe's New Education System 5.0

As farmers learn through the adoption of social learning, there is a need to short-circuit the adverse effects of an adopted education system. This is in line with the new education policy dubbed 5.0. The research team agreed to collaborate with Tertiary Institutions and create a learning environment relevant to our smallholder farming

sector and students currently studying in institutions of higher learning. As stated in the National Strategic Plan 2019-2023 of the Ministry of Higher and Tertiary Education Science and Technology (MH TEST), the Minister, Prof Murwira, would want to see knowledge as a tool of liberation, hence the transformation of the MHTEST curriculum from 3.0 to 5.0 education systems. The change is timely and a welcome phenomenon. The desired outcome of the 5.0 new education system is to yield graduates who can produce goods and services that speak to community challenges. At the same time, it seeks to enhance local graduates' minimum body knowledge (MBK) whilst introducing a multidisciplinary approach to tertiary education.

6.7.1 Origins of 5.0 education systems

Sawa (2019) reports on the Kyoto Brief, which the Japanese government calls Society 5.0. aims to bring about progress, such as artificial intelligence. The Japanese progressed from 1.0 through 4.0 in chronological order in their human history, starting with hunting, farming, and industrial, and now at the information society, stage 4.0. Takamitsu Sawa further reports that the Japanese Ministry of Education, Culture, Sports, Science and Technology created a team to reform university education and entrance exams to usher in Society 5.0. so that its youths are trained to be relevant as they transit to an age of artificial intelligence.

In April 2016, the panel jointly released its members' interim report and proposal. To sum it up, the report emphasises the need for nurturing human resources well-versed in AI and data sciences and calls for improving liberal arts education. Emulating the 5.0 society, the Zimbabwe government is pursuing their heritage and capabilities, living in the information society, as they exploit their capabilities entering Society 5.0. It would bring onboard remote medical services. This automatic translation removes language barriers as AI and robots are built to support the elderly or people with disabilities. The Japanese have ushered in autonomous driving technology and real-time access to disparities to eliminate problems arising from social inequality. The Japanese 5.0 can be interpreted as a utopia that would simultaneously achieve economic development and resolve various social issues. The social challenges have been accepted at face value. It is questionable if technology only would provide what

a human touch and social traits of humans can deliver through gadgets as humans are social beings.

For the Zimbabwe education system, two additional pillars, namely innovation and industrialisation, were stacked onto the long-standing three traditional ones, community service, research, and teaching. The researcher sees the desired change in the education system as an opportunity to engage the government in smallholder farmer development. There is a need to reframe knowledge and impart relevant skills and build a heritage-based economy in the production agriculture sector, which will not pass through their corridors of education.

The chronological order of 5.0 for Zimbabwe is pertinent as the added pillars, innovation and industrialisation, would make an impactful transition from 3.0 to 5.0. It would assist in capacitating the nation to underpin social innovation and industrialise to a heritage-based indigenous economy.

The Japanese transited to the new Society 5.0 and now live in a world of AI to respond to their social needs. It is a nation with a considerable proportion of its population aged and living alone. Zimbabwe's education 5.0 system ushers in an era where all institutions of higher learning now house an innovation hub. The leading university, the University of Zimbabwe, has built an agro-park that aims to house agriculture equipment co-invented and innovated by locals to solve the social and economic ills challenging our society. When the Minister of Higher and Tertiary Education introduced 5.0, it was instituted to start from the early stages of the local education system. There is a need to consolidate the policy with social entrepreneurs with open-source platforms to collaborate in transformative technology design and adoption of open-source platforms. The industry which supports agriculture requires wholesale transformation from machine manufacturing to mechanise farmers' production stages and avert imports done on a best-fit basis—the manufacturers of pertinent machinery and equipment to Zimbabwe's maiden industry. Education 5.0 is said to have the potential for mindset change, ushering in a new culture where children would learn practical subjects and technology used in their everyday life.

In Zimbabwe, the establishment of learning communities under economics and enterprise linked to socioeconomic laboratories brings fresh air to the social and educational arenas. Under the Mode 2 educational perspective, livelihoods offer a unique starting point in community transformation, drawing on a diverse disciplinary perspective and cutting across sectoral boundaries to provide solutions to abject poverty to a people with a substantial heritage-based resource. Under the 4Cs and CARE processes, capitalistic companies are revisited, and socioeconomic enterprises are established. They will act as socioeconomic laboratories to provide places of learning to communities.

6.8 Industry - The missing dot brought on board

6.8.1 Open software/Innovation systems for network thinking

According to Open Source (2020), in an open-source innovation project, the problem or opportunity itself is the central point of focus. Hence, people and organisations connect rather than work through one central organisation. Open-Source Innovation records that are giving up centralised control, required under the open-source model, can be both a benefit and a hindrance". This position aptly describes the needed environment for the research journey. In that vein, the researcher invited a social researcher in software engineering based in the United States of America called Horace Clemmons to be one of the stakeholders bringing on board the pillar of software and design engineering of agriculture equipment. Horace offers The researcher access to an open software platform to research and study agriculture efficiency and its impact on the smallholder farming sector.

The platforms identify multiple future options and a community of practice that offers pathways. Socio-technology transitions will be well managed when social innovations are localised and given pre-eminence. According to Stirling (2008), science and technology approaches can lead to exploring how interactions between social and technological systems can move towards a more sustainable configuration, which can be through radical means emerging from niche places.

Open innovations exude vibrant energy, promising solutions to emerging global issues of rapid globalisation, climate change and the recent COVID-19 pandemic. The innovative thinking will provide practical experimentation and research that will reshape rural livelihoods to meet challenges in a phenomenological way as they are felt and experienced. Embedding local contexts that are place-based in innovation includes poor people's perspectives that have been ignored for a long time.

Horace believes that the Oggun Open Systems Manufacturing can be offered as a College Curriculum for Engineering and Community Development since the leading Global Engineering Universities worldwide base their curriculum on advancing the concepts and technologies of a leading edge. The products derived from this process may reduce expenses for global agriculture manufacturing companies and increase productivity. However, they are generally more complicated and expensive for the smallholder farmer to benefit from. It has resulted in affordable products by those in the top twenty per cent of the economy and increased the global economic divide.

Open innovation allows locals to establish a modus operandi sought by Mbigi (2000) and other social scientists. While the worldwide engineering curriculum is essential, it must be augmented by a curriculum designed to produce agricultural machinery and products suited to the lower end of the global economy. The Oggun's open software platform affords willing local researchers in their territories to co-create with him customised agriculture equipment suitable for the national development of agro-based economies like Zimbabwe. Horace provides the blueprint which guides on technical aspects of the machinery to give ergonomics but allows locals, after testing the blueprint against local soil conditions to co-create their machinery, initiating local agricultural machinery sectors.

Whilst delivering a speech on 5.0, the Minister of Higher and Tertiary Education advised that the current education, especially in most universities, could have been more helpful as graduates were increasing unemployment as their degrees could not produce relevant goods and services. He expected liberal arts degrees to improve students' ability to think logically and form normative judgements. Through their broad subjects in humanities, social and natural sciences, students ought to acquire life skills where they identify and resolve problems, design and devise and become a reality and be used as a tool for economic transformation by bringing learning to farmers. The researcher sought to pilot community learning at universities.

These would provide physical space that bridges the world of scholars/academia, industry, and communities, bringing together leaders from diverse backgrounds to lead the socioeconomic sustainability shift.

6.9 Determinants of Agricultural Development

Looking at insight provided through some of the previous work in the same field of farmer's poverty alleviation, threshold components that constitute agriculture development and determinants required for it to be sustainable at the minimum (Gatzweiler & von Braun, 2015). This is illustrated as follows:

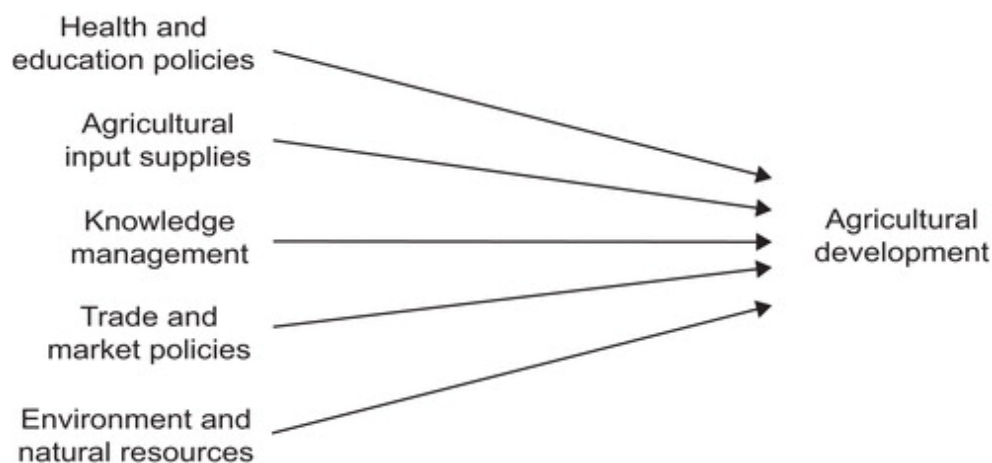


Figure 6.4: Threshold components that constitute agriculture development and determinants required for it to be sustainable at the minimum

(Adapted from FAO, 2007)

Marrying the determinants of successful agriculture development with the ecosystem activities is allowing positive policy adoption. It also allows the expansion of government priority programs enlightening the desire to have a state-of-the-art infrastructure at learning institutions. It creates additional infrastructure in the form of operating companies throughout the industry. It taps into human resources in the industry to benefit community building through improved production and establishment of the vital supply chain.

Below is a summary of the current seven strategic pillars of the Ministry of Industry and Trade:

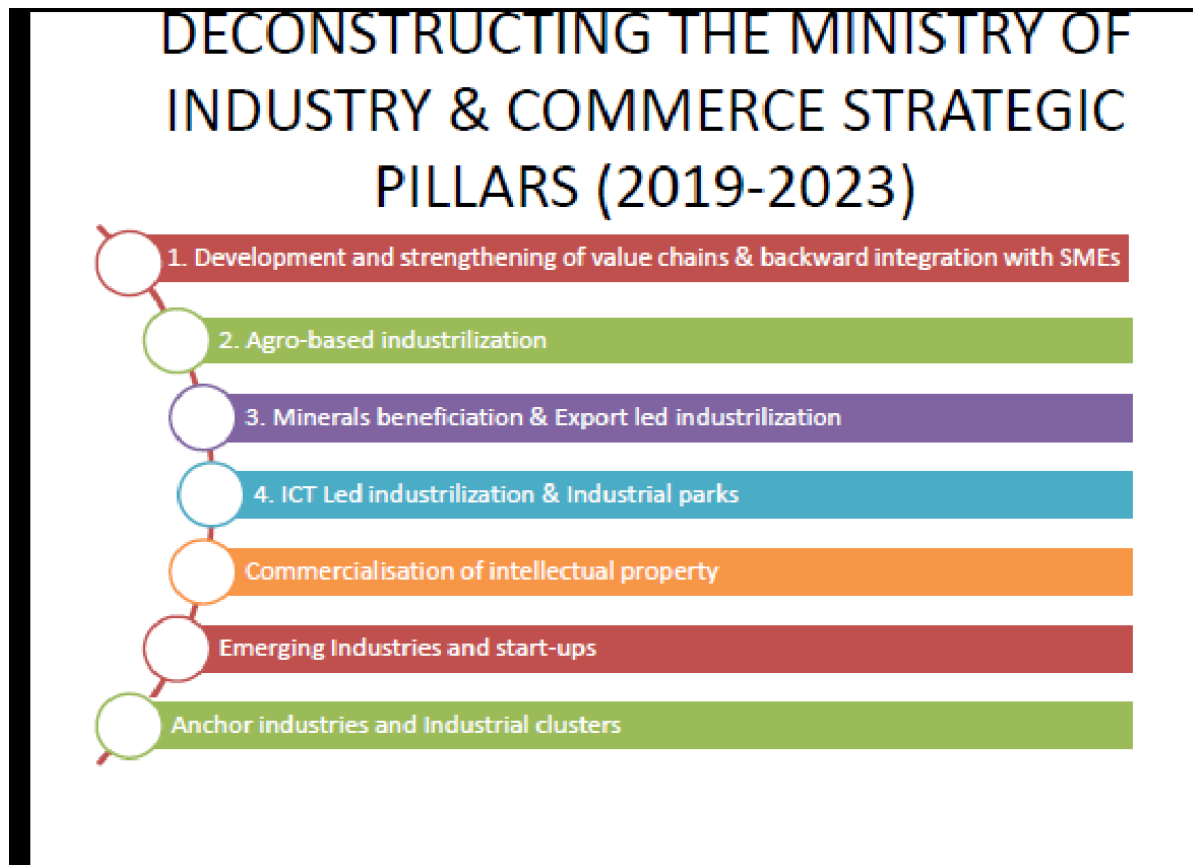


Figure 6.5: The seven strategic pillars of the Ministry of Industry and Trade
(Adopted from the Ministry of Industry Strategic Framework)

It results in symbiotic relationships benefiting trade and establishing a self-sufficient agro-based economy. University graduates have the opportunity to learn and acquire industrial skills and fill those vacancies of wanted start-ups in industry and avert unemployment through self-employment.

6.10 An ecosystem-based Approach to Sustainable Development

According to Bryceson (1996) and Ellis (2000), diversification of livelihoods is imperative for poverty reduction in Africa. They cited four failures to engage with economic globalisation, debates about politics and governance, environmental challenges, and fundamental shifts in rural economies. The researcher would want to pursue an ecosystem-based approach as different solutions are needed to solve the poverty challenge's failures. Each encounter requires a different set of keys or action plans. COVID-19 has brought another dimension needing a renewal of livelihood

perspectives with new foci and a diverse group of priorities. It could be a forced theme on many governments.

6.11 Need for Mode 2 Learning

Mode 2 learning is oriented towards the learner's objectives instead of the agenda of the one providing the learning space or environment. The Heritage-based Communiversality will accommodate those farmers who are semi-literate yet in need of integral knowledge to improve yields and productivity. There is no fixed way of acquiring or creating knowledge, and learning depends on the needs of learners adopting a cross/trans-disciplinary approach. The knowledge produced is contextual to the application accommodating the diversity of learners and users of the knowledge created. As Mamukwa (2014) researched, Zimbabwe now requires a new way of integral knowledge exchange encompassing indigenous and exogenous knowledge. The Mode 2 learning model below encompasses the ethos of integral knowledge creation and the exchange thereof and will be adopted to structure the aspect of integral knowledge exchange, consolidating Dr Mamukwa's Calabash of Knowledge (2014).

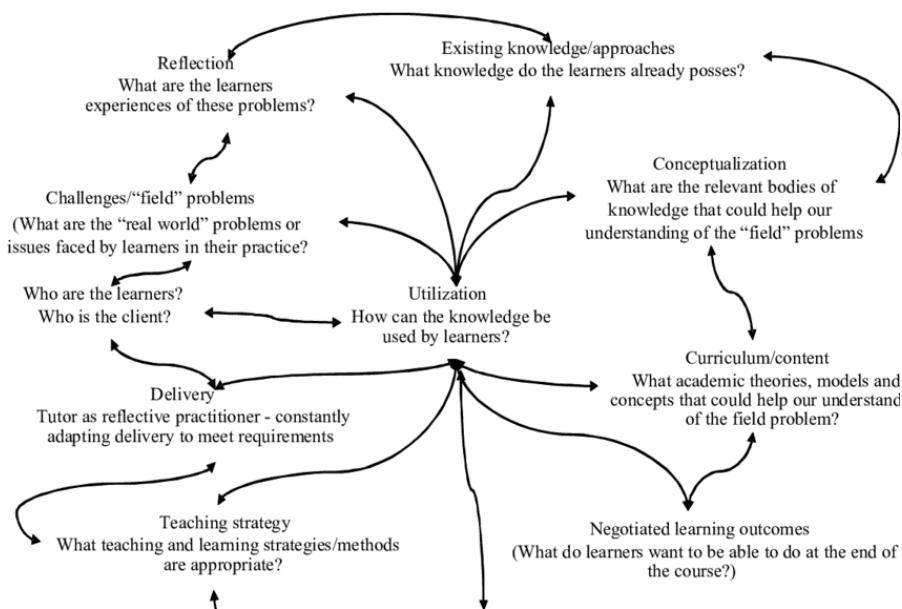


Figure 6.6: The mode 2 learning model that encompasses the ethos of integral knowledge creation and exchange

(Adapted from Research Gate Website – 15 October 2022)

6.12 Origins of Livelihoods Perspective

Heritage-based livelihoods approach tapping (Scoones, 2009) needs one to understand where such perspectives originated from as their conceptual roots influence how they have been treated and resolved. The livelihood standpoint begins with how people live in diverse places and derive a living using a mixture of available resources and the activities they engage in to gain possession (Chambers, 1995). In the research under discussion, rural development will help focus on defined activities like agriculture, farm labour, off-farm activities, small-scale enterprises, technology and various means to access it and ownership structures. Developing liveable incomes require communities to combine resources due to poverty challenges making a multifaceted portfolio to build resilience against hardships caused by climate change against menial resources available for survival.

However, in arguing that livelihoods perspectives are essential for integrating perceptions and interventions outside corrective or sectoral confines, the research also touches on some of the limitations, threats and challenges as the researcher pursues the establishment of pillars of concern for the holistic development of small-scale farmers. The researched ecosystem approach will lead to longitudinal, dynamic coping mechanisms as outcomes and embodiment of Knowledge gained during the research is institutionalised to aggregate complex livelihood strategies and pathways starting at household levels, village and growing into the ward, district, and provincial levels.

6.13 Socio-Economic Laboratories

According to Frost et al. (2007), a study in rural Zimbabwe paints a pessimistic picture of livelihood sustainability to international organisations. The aid and donor industry are considering adding remittances to rural income. Rural Zimbabwe has been augmenting income from such mixed sources, yet needs improvement. What is needed, which might be too expensive for the world, is to let locals co-create local innovations for their challenges and enjoy the sweat of their labour and resources.

6.13.1 Sustainable livelihoods perspective: A way to reflect gaps in aid and donations

A diverse team of researchers and authors in the development fraternity, like Chambers in the 1990s, Conway (1992) and Scoones (2002), started promoting sustainable livelihoods. The approach reflected gaps in the Aid and Donor industry marred by power and policies failing to speak to local issues for the people the sector perceived to be assisting yet serving their interests. A mixture of foreign interests and realities on the ground has made it challenging to put livelihood perspectives into practice due to inherent organisational structures and policies of post-world War organisations like the World Bank and the United Nations. They impose disciplinary preferences and funding arrangements constructed around other conventions and ways of thinking. According to Scoones (1990), one discovers that livelihood perspectives arose from tensions, dissonances and struggles dating back to the 1950s. Modernisation theories dominated discourse then, and professional economists fought for dominance rather than developmental generalists as topical issues like supply and demand were deemed more critical than developing the sources of raw materials. It pushed aside alternative sources of social science knowledge, particularly cross-disciplinary livelihoods and specialists with specific technical disciplines in bilateral development agencies. Scoone argues that radical Marxist viewpoints engaged at the macro-level on the political and economic associations of capitalism post-colonial reforms have yet to investigate clear-cut micro-level contextualised realities. However, Marxist theories made crucial contributions to agriculture economics, making some viewpoints still valid today. Such are areas like the importance of agrarian reforms to cushion farmers and promote the agriculture sector.

6.13.2 Need for a holistic strategy to develop shocks and build resilience

Research done in the 1990s contributed significantly to the perspective of sustainable livelihoods. The work linked poverty, environment, and the need to develop strategies that establish long-term environmental shocks and stresses opposing the short-term projects designed to smokescreen aid, leaving beneficiaries worse off (Scoone, 2007). The UN adopted it, and it became the sustainable development agenda. However, it

caused much uneasiness as it meant concerns with the livelihoods of local people were becoming part and parcel of their essential plan. Folke et al. (2002) and Clarke and Dickson (2003) term socio-ecological systems, and resilience, establishing the sustainability agenda. Folke et al. (2002) and Clarke and Dickson (2003) initiated socio-ecological systems and resilience, integrating sustainability sciences.

It brought about approaches that look at village studies, agroecosystems, gender analyses, participatory appraisals, socio-environmental change studies, and political ecology. Many related studies bring diverse insights as the world now needs solutions to global challenges, and poverty and environmental concerns are top of the list. The year 2020 brought a new dimension with the emergence of COVID-19, challenged nations and still challenging to treat it as endemic. The pandemic and Russia/Ukraine war bring a twist to a hoard of issues yet to be resolved. Peradventure, the West and developed nations will be forced to proffer genuine solutions to sub-Saharan Africa. Most residents from cold and crowded developed countries seek permanent residence in Africa for a natural and humane standard of living.

6.14 Money and politics hindering sustainable development

In trying to find out where perspectives on livelihoods emanated from, the researcher also discovered that there are issues of money and politics behind well-marketed frameworks being implemented in Africa in the name of aid. Though crafted in distant places from Africa, the templates have undoubtedly produced results that foreign aid desires. Prominent Organisations like DfID were instituted as advisory bodies to communicate those livelihood concepts globally, but power and money remain in the West. As professional cadres, DfID employs more imaginative people (Bebbington, 1992). However, a simple integrating approach is needed to channel funding that trickles to the need spent on a range of departments, and structures constituted as DfID or any of these Organisations. These departments reflect power everywhere, representing how funding and capital are spent.

In most cases, it builds industries in the West and sources of raw materials. African countries continue to live in poverty; worse, Africans migrate to Europe or America for employment. It ends up in such a sorry state as, according to Bernstein (1992), global

organisations cannot answer simple questions under livelihood perspectives. A question like, "Who owns what? Who does what? Who gets what, and what do they do" with it?" Politics and power end up governing social relations and property and capital distribution.

6.14 Multidisciplinary Research

On the other hand, the GENE model by Lessem and Schieffer (2010) allows through the four worlds integral approach to regenerate smallholder farmers. The southern path, grounded in ecology and agriculture, ensures that farmers are revived in production. From the four world's perspective, drawing from the West allows economic development, resulting in sustainable micro household integral enterprises.

6.14.1 Integral enterprises

The socioeconomic laboratories will become living laboratories that increase innovation through interacting with various industry and community actors. The living laboratories will be premised on an open innovation process, community involvement, and co-creation of products and services or societal innovations with users. In the long run, livelihoods change demography; Tiffen (2003) specific dynamic drivers incorporating regional economic shifts and urbanization, migration Batterbury (2001), land use and climate change Adger et al. (2003). Bottom-up approaches are needed to support local communities' innovation processes and contribute positively to socioeconomic resilience and poverty alleviation.

6.15 Results of the Integral Ecosystem

The integral ecosystem actions will end in an "integral university" called Heritage Communiversality. For the farmer, it will culminate into an integral economy in the long run as from fulfilment of their social education needs; they want to achieve outcomes that improve vocational skills and knowledge to intensify production. The Communiversality will be used as a platform for human evolution in Zimbabwe. In summary, Trans4m current PhD students and post-doctorates supporting *integral development in Zimbabwe established* a foundation, an inspiring compass to fully

actualise the transformative potential of individuals, organisations, communities and societies. To tap into education and industry sectors, Heritage University would be the meta-ecosystem with three subsystems inter-linked as follows:

According to Light (2000), agencies must provide high-quality services adequately, and communities have every right to expect them. However, community development relies on rethinking, motivation, organisation, local leadership and social innovation instead of service delivery which has previously delivered a partial approach to sustainable development (Light, 2000). Many communities and regions have developed plans and strategies that have yet to progress far, making it imperative for communities to contribute resources and time, staying committed to executing plans earmarked for their transformation.

Light further advised that, often developed by external specialists, many plans have yet to engage communities genuinely and foster local action. Many communities appear to be stalled in planning – with multiple projects set but little change in community outcomes. Planning is essential. Long-term planning is crucial to communities maintaining a vital economy, environment and social situation.

6.15.1 The integral heritage economy: Fusing policy and needs of the farmer

The summarised data from the research and objectives are cited in three strategies of three critical ministries for farmers' development. The farmers' voices and the different policy changes pointed to the following needs:

- a) Technology development peculiar to local needs
- b) Integral knowledge relevant to Zimbabwe's heritage-based economy
- c) Collaborations and multi-sectoral approach when resolving local challenges

The time is ripe as the Zimbabwean Government is going through some transition and economic devolution process to ensure that rural provinces in Zimbabwe become self-sufficient at the provincial level. In this chapter, The Researcher uncovered imbalances within the agricultural sector and communities seeking to establish the context that forms the base for transformation to alleviate farmers from poverty. The context analysed is at household, gender, organisational, communal, national and global levels. Farmers flashed out their diverse situations where they are trapped in

subsistence farming and need to increase production to operate beyond subsistence levels and engage in market-based production.

The challenges are caused and can be tracked to systemised structures deeply ingrained in global systems and historical colonial structures. Culture, social networks, and national economic policies are impacted, and the impact trickles down to the bottom of the pyramid. The imbalances ranged from gender bias to the government's incapacity to holistically play a part in providing a solution to the hunger and poverty problems. It is reflected in many idle lands and a need for more technology justice in the smallholder farming sector.

The following chapters will see the progression of Feminism into PAR, exploring and engaging stakeholders to broaden the ecosystem for wholesomeness and establishment of sustainable social innovation in forthcoming chapters. Focusing on the farmers' experiences and gazing at our psychic life takes place as reflection, turning a glance previously directed elsewhere into social action to alleviate the surface inequality. Every experience can be subject to such review, as can every manner we occupy ourselves with actual or ideal objects – for instance, thinking or in the modes of feeling and will, valuing and striving (Foster,2021). When fully engaged in conscious activity, we focus exclusively on the specific thing, thoughts, values, goals, or means involved, but not on the physical experience in which these things are known. Only reflection reveals this to us. Thus, in our everyday life, we are busily engaged in activities globally and take our world experience for granted. To satisfy being humanistic and phenomenological, we must disengage from the action and attend to the taken-for-granted experience. Focusing on social innovation foregrounds human experience and brings a holistic approach to human treatment, healing and poverty alleviation.

6.15.2 Inclusion of local leadership positive policy change

The integral development compass by Lessem and Schieffer (2015) points towards a progressive circulating compass which transcends from self to enterprise, society and then the Communiversality. The education system is transforming into a crucial sector as it has access to most of the country's citizenry through its education policy and

institutions. On the other hand, the productive sector needs vocational or industrial skills to speak to its population's consumptive yet unhealthy characteristics. Furthermore, the resources available to speak to foreign policies contradict our heritage and local sustenance. The research finding and context of the farmers call for a multi-sectoral and broad-based ecosystem approach. Their context and legacy issues of colonisation and its residual side effects perpetuated by newer and more diplomatic ways that veil evil and oppression yet subtly sustain the colonial effects and mandate simply demands that Africans initiate and revisit critical livelihood pillars. The local–global context justifies establishing a multisectoral team to look at all issues and relevant stakeholders to tackle the mammoth tasks from the farmers' voice, literature review and environmental issues arising from climate change.

The researcher as a “situated knower”, Lessem and Schieffer (2009) recommended a global-localised solution crafted by locals as the required outcome. The worldview requires methodical, comprehensive and yet nimble solutions, complex yet humble to speak to the smallholders' challenges answering everyday needs how they are felt. Yunus of Grameen Bank was a situated knower who simplified cultural yet damaging practices. With his banking background, he was innovative enough to co-create surrogates and develop the required credit pillars like group security. With group lending products, the members secured and policed each for better repayment success. Extending credit to the deemed untouchable poor was through a relational approach and ethos to impact the poor and become an agent of transformation. He used his religious value system and coined from respected community values credit scores, which embrace the poor as an inexhaustible pool of clients. The researcher pursuing the same insight and the farmers collaborating with the new ecosystem players discovered an opportunity to do the same and strengthen the social innovations to speak to challenges in our education system, agriculture, and the local manufacturing industry sectors. Furthermore, local power that has been created will resolve residual effects of colonialism and systems perpetuating poverty.

6.16 Summary of the Chapter

Awakening Awareness was effective as it embraced various aspects that resonated with wholeness. There is no way to avoid the problematic, multi-sector work and

mending long-broken systems, but powerful ways exist to accelerate those efforts. Technology promises the tremendous potential to do that when it is intelligently combined with public sector fraternities. Over the past two decades, a steady build-up of new African community-supportive economic enterprises was witnessed. This approach by Lessem and Schieffer is commonly known as "community wealth building." It creates opportunities that put wealth in the hands of the local enterprise (with ownership vested in community stakeholders), not just investor-driven corporations. The economic divide issue was forged for communal action promoting anchored actions that reinvest in local building wealth in asset-poor communities. They contribute to regional economic stability and stop the leakage of dollars from communities, reinforcing environmental sustainability and equitable development.

CHAPTER 7

CO-CREATION

7.1 Introduction

7.1.1 Community participation through action research through innovation

Combining knowledge creation and using it is considered core to building sustainable livelihoods. The research showed that smallholder farmers need more nimble technology, skills and adequate knowledge to escape the poverty trap. The chapter speaks to the 3rd C – of the 4Cs approach, Co-Creation, which comes after Call and Context. It is matched with the third aspect of CARE (institutionalised research) as the journey reaches the final stages of the transformative research journey. To address challenges and fulfil my calling, TnC established a transformation theory. The theory of transformation guides the nature of interaction to alleviate the farmers' imbalances.

Ban Ki-moon (the United Nations 8th Secretary-General) raised many critical points when he wrote the Sun Movement Strategy and Roadmap (2016-2020); without adequate and sustained investments in good nutrition, the other SDGs will not be realised. The ambition to end hunger, achieve food security and improved nutrition and promote sustainable agriculture is captured in SDG 2, located in the southern world. It awakens the need to take farming as an occupation and establish appropriate livelihood strategies supported by ecosystem-based institutional innovation. As further

reported by Ban Ki-moon, malnutrition does not result from a lack of sufficient, adequately nutritious and safe food only. It results from various intertwined factors linking health care, education, water, sanitation and hygiene. Access to food and resources like information, sustainable markets, women's empowerment programs, and more are essential parts of the equation.

Furthering Ban Ki Moon's assertion in his road map that malnutrition is an often-invisible impediment to achieving other SDGs. TnC linked these assertions to the SDG mapped in the previous chapter and developed a Theory of transformation whose objective was to answer burning issues and establish community tools like farmers' Learning and CARE circles. They will collaborate with Heritage Communiversities and other existing universities through partnerships that have been established to resolve poverty challenges comprehensively.

7.2 TnC Theory of Transformation

The community of farmers offers a reservoir of possibilities and the key to sustainable development unleashing innovative potential. There is a consensus that – there is a need for change. It may seem obvious, but the most crucial reason why numerous existing community development projects need to evolve is that they are not solving the problem they were set up to fix, which is alleviating people living in poverty. In developing the sustainable development plan, the ecosystem design benefited from other disciplines imposed by the research methodology, which requires that the research transcends classic research and establishes social innovation that delivers tangible results, not just statistics. Africa can produce for the world if its land resource is combined with well-meaning strategies that will deliver the SDGs cited as primary and prioritised in the previous chapter for the smallholder farmers to live decent lives. This opportunity to concretise social innovation that responds to farmers' issues will ensure that integral transformation is entrenched in Zimbabwe and the whole of Africa.

The researcher co-created a ***TnC theory of transformation*** to establish intervention tools for smallholder farmers to establish an integrated ecosystem for sustainable poverty eradication. She was mindful that the community of farmers have limited resources, and resource mobilisation was a big challenge; hence, there was a

tremendous sense of duty to start with resources the farmers have access to and create added value. There was potential to derive value and knowledge from the innovative, collaborative network.

The community assets offer a reservoir of possibilities and the key to sustainable development unleashing innovative potential. There is a consensus between TnC and farmers that –there is a need for a New Approach. It may seem obvious, but the most crucial reason why numerous existing community development projects need to evolve is that they enact help and are not disingenuous. In developing the sustainable development plan, the ecosystem design benefited from the discipline imposed by the research methodology, which requires that the research surpasses classic research and establishes social innovation that delivers tangible results, not just statistics and information.

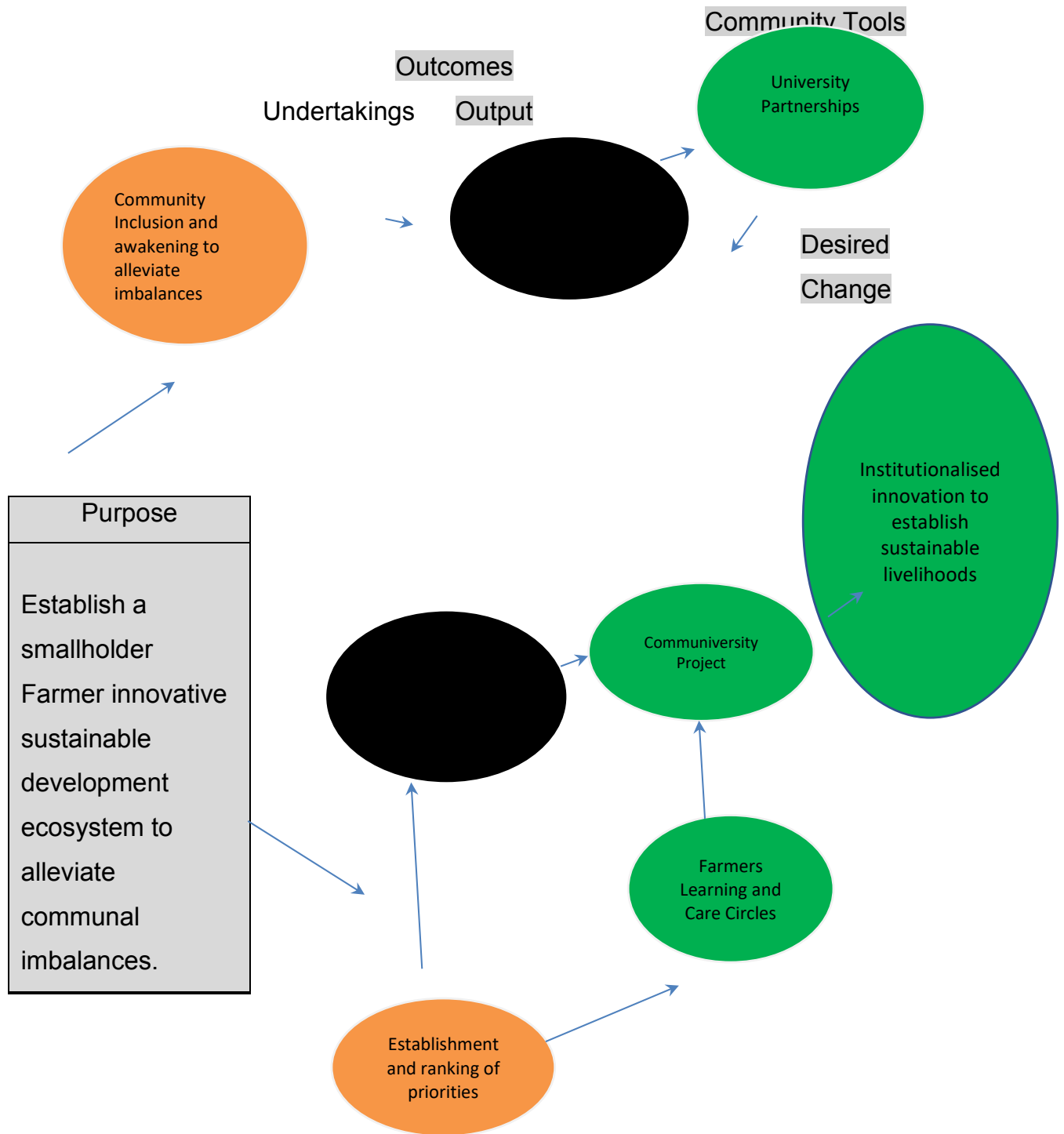


Figure 7.1: TnC theory of transformation
 (Own elaboration)

7.3 Establishment of an Afrocentric Strategic Transformation Structure (ASTS)

According to Escobar, catalysts involved in Communal learning programs and development processes – must have a theory about the forces that drive this inscription. For Gunter (2014), understanding and using nature's brilliance, economy and simplicity, emulating the logic of ecosystems, can achieve success unrivalled. Currently developmental work is massively distorted by globalised industries and politics perpetuating the legacy of colonial masters now wearing different power hats in developmental funding institutions. Gunter says that instead of manipulating life's biology, let us find inspiration in how nature utilises physics. With such natural inspiration, the researcher engages the *Integral Development Compass to tackle the smallholder farmer's challenges and gaps inhibiting transformation and development holistically*. An ecosystem-based approach was employed to tackle the broad issues undermining sustainable development. The aspects making up community tools in the TnC Theory of Transformation embraced all critical stakeholders needed to create a community of practice. Inclusion, technology and people are the key elements.

7.3.1 The integral symbiotic solution

Guided by the integral models whilst standing on the shoulders of giants in social community development like Yunus and adopting the Da Vinci TIPS Leadership Transformative Model, the collaborative approach produced a synergetic solution in answering the quest by local policymakers and farmers to establish a middle-income economy which embraces small-scale farming as follows:

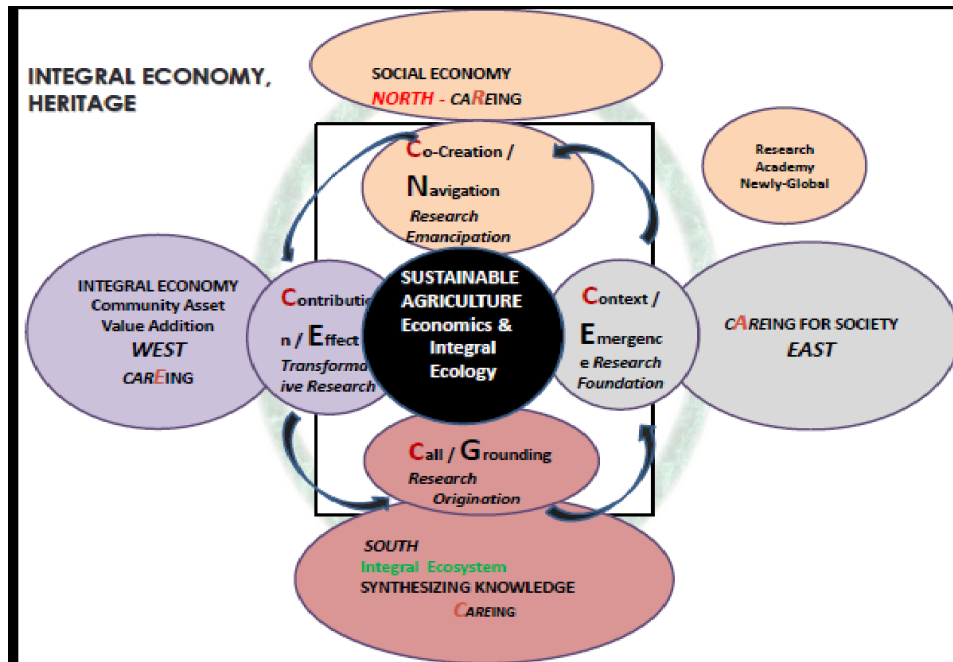


Figure 7.2: A collaborative approach to a synergetic solution responding to the quest by local policymakers and farmers

For each aspect of CARE, components of the 4Cs blend the ecosystem approaches to deconstruct theories and ensure that the community translates challenges into livelihood opportunities. The aspects of technology, information, people, and systems were considered. The researcher was awakened to the far-reaching effects of employing an ecosystem approach which ensures a holistic resolution of challenges through synergy. Each ecosystem participant brings the much-required aspect/expertise of making one whole. Benyu noted that the proliferation in the 1990s of materials exchange brokerages such as the Northeast Industrial Waste Exchange in Syracuse, New York, and BARTER (Business Allied to Recycle through Exchange and Re-use) in Minnesota offers a good ecosystem example. These companies publish up-to-the-minute catalogues of who needs what and who has what, matching companies looking to eliminate waste with those who could use these. Their problem was waste management, and they took a holistic approach, including all relevant stakeholders, integral information exchange and technology in resolving the challenge.

Closer home, the researcher can relate to the Reductionist Worldview by Shiva and Mies (2014), the industrial revolution and the capitalist economy which are the

philosophical, technological and economic components of the same process. Shiva ecofeminism challenges such processes by characterising modern Western patriarchy's special epistemological tradition of the scientific revolution as reductionist because; individual firms and the fragmented sectors of the economy, whether privately or state owned, are concerned only with their own efficiency and profits, and every firm and sector measures its efficiency by the extent to which it maximizes profits, regardless of the maximization of social and ecological costs. It creates the possibility of colonizing and controlling that which is free and self-generative. Shiva, the ecofeminist, environmentalist and food sovereignty advocate, opposes the notion that the poor must follow the path taken by the north when they were industrializing but be allowed to forge the strength in organic matter and food which the West is opposing through genetically modifying seeds stealing from the indigenous farmers the value derived from nature. Her battle to protect the world's seeds in their natural form – rather than genetically altered and commercially controlled versions – continues to be her life's work. Shiva's anti-globalisation philosophy and pilgrimages is comparable to the work of great selfless people like Indra Gandhi.

Zimbabwe is on a devolution journey and can take a leaf from the BARTER Ecosystem ensemble and Shiva's Ecofeminism. Poverty and malnutrition aggravated by lack of integral knowledge exchange and technology justice are challenges causing the primary problems in the farming sector and other classes of people at the bottom of the pyramid. Covid 19 pandemic poses a unique opportunity over and above the global hidden hunger problem. Food insecurity in Zimbabwe requires an Afrocentric solution. During the pandemic, confirmation is coming that the country was sitting on the golden leaf in the form of small grains and medicinal plants. These can be boosted into economic components that constitute community assets. Instead of focusing on growing maize and other non-drought resilient crops in dry regions, a national ecosystem is being established to promote small grains as future grains and increase the harvest of medicinal plants. Such complex strategies requiring long-term plans are not feasible for foreign aid agents and the research results have demonstrated that locals ought to lead in their developmental strategies. Most of the foreign aid templates are short-term, preconceived and prescriptive, promoting interests of their master and not the community deemed to be getting their assistance. This is against the

background where private corporations are only concerned about their profits and efficiencies when dealing with the bottom of the pyramid.

Ban Ki-Moon (2016) states that food insecurity and climate change have an indisputable link. The deficiency of one SDG has ripple effects, leading to challenges in other SDGs. For instance, Hunger in SDG 1 invariably leads to poverty, affecting education in SDG 3 and Health in SDG 4. Most SDGs need to be attended to address challenges when affecting the same group of people wholesomely. Humanitarian aid instead is delivering or attending to SDGs piecemeal. Africa continues to suffer the downstream effects, and poverty is calling for solutions with climate-adaptive food systems. Ban Ki-Moon was promoting the need for comprehensive and holistic delivery of services when engaging the bottom of the pyramid.

7.4 Participatory Action Research (PAR)

The trajectory culminated from a Southerner's participatory action research (PAR). The technological part of embracing innovative solutions is made a reality through aspects found in open-source technological collaborations. The technical design being proffered fits in well as social-entrepreneurs in the established ecosystem allow farmers to play a socio-economic role in the economic arena of their lives by co-creating tools that speak to their unique problems as they are daily felt. This is in agreement with Rahman and Boarda (1985) and their theoretical standpoint PAR.

7.4.1 PAR Tenets by Lessem and Schieffer (2010)

According to Rahman (1985), the basic ideology of PAR is that self-conscious people currently poor and oppressed will progressively transform their environment through their praxis. Others play a catalytic and supportive role but have yet to dominate. PAR's main viewpoint is that the domination of the masses is not only the polarisation of control over the means of production, including control over social power to determine what is valuable knowledge but that one reinforces the other, augmenting and perpetuating this process. To improve the possibility of social innovation, the two should be attacked simultaneously wherever feasible.

Borda and Rahman (1991) further assert that the scientific characteristics of knowledge rest on its social variability depending on consensus as a verification method. The development is for the people. For it to be socially viable and transformative, buy-in and practice by the community resulting in social change becomes the means of verification. At best, PAR can correct that misnomer at the micro level as a philosophy and style of work with the people to promote community building and development. PAR changes people's immediate environment, both social and physical, in their favour. This, however, calls for an autonomous and integral democratic community Organisation.

7.4.1.1 The tenets of PAR

Lessem and Schieffer, through their four worlds' models, guided the different stages required for authentic social innovation. The predominant tents of PAR in this chapter are as follows:

- A. The problem is defined, analysed and solved by the community
- B. As a scientific method, PAR facilitates an authentic analysis of social change
- C. PAR allows the full participation of the community
- D. PAR is aimed at the oppressed, poor, exploited and the marginalized
- E. It creates awareness of people's own resources, mobilizing for self-reliance
- F. The ultimate goal of research to innovation is the radical transformation of social reality
- G. You, as a researcher/innovator, are a committed participant, facilitator and learner in this transformation

7.4.1.2 Why embrace PAR at co-creation?

The farmers' voices reflected deep suffering from intense constraints requiring complex and multi-layered innovations to close the gaps and various missing pillars that surfaced. The diversity of the issues necessitated ecosystem establishment to resolve the poverty challenge from multiple angles while simultaneously speaking to the diverse issues that emerged as gaps. A collaborative innovation network offers the expertise and complexity needed to improve and close the knowledge and skills gaps.

Integral research goes beyond knowing into capacity building, and Lessem and Schieffer (2009) would term it "doing". Relationships built into a collaborative innovation network have opened up diverse communication channels, ensuring that the social solutions are inclusive and satisfy the situation and complexities. The community would remain participative and active. The participation translated community members into solution-driven go-getters and owners of their destinies.

Since foreign and often oppressed power is sustained through the exercise of economic, political and military power, a new way through PAR allows people's participation in shaping their future and addressing the imbalances from all facets. As the research progresses from Feminism, different levels of communication and groups have been formed into ecosystems for the diffusion of knowledge and full involvement of every participant regardless of their literacy level.

7.5 Embraced Institutionalised Research

The context and gaps within the smallholder farming sector called for establishment of integrality in institutions to maximise and concretise social innovations. Institutionalisation has to be tailored to ensure integral knowledge exchange is entrenched in its diversity.

Policymakers were engaged in establishing an ecosystem to holistically deliver lasting solutions to the perennial challenges in the smallholder farmer's life. The research embraced policymakers and three ministries deemed essential as their policies and support directly impact the farmers' livelihoods. Higher and Tertiary Education, Industry and Commerce, Agriculture, Water, Fisheries and Rural Development are the ministries. The research deals with lives, and it proved challenging to transform universities into Mode 2 completely; hence, a compromise was reached, and a learning institution in the form of a hybrid between a vocational and open university was co-created and is called a Heritage Communiversality. Two universities in Zimbabwe will transform their Business Schools into centres of enterprise development. It was welcomed as a step in the right direction as the transformation entails increased and holistic interaction between the three subsystems: knowledge, innovation and business, which will be summarised below in this chapter.

Transformation of university business schools into enterprises for development reengineers universities allowing the research to contribute to the new education system by embracing the two additional pillars innovation and industrialisation as introduced under the new education system 5.0. It will transform the engagement process between communities, industries and the universities themselves. It is hoped that a bridge has been created to close the gap between what happens in industry and the learning corridors. The ecosystem approach holistically contributes through social innovation, starting with the manufacture of small-scale farm machinery and semi-mechanisation of hand-held tools, the University of Zimbabwe and Solusi University pioneered the outcome. To leverage this integral knowledge transfer and concretise the co-innovations, PAR allowed the invitation of a “friendly outsider” and the use of the open-source technology platform.

7.5.1 The ultimate goal of radical transformation of social reality

PAR overlaps consolidated the action research being firmly pushed forward. Zimbabwe is awash with talented people who create and manufacture equipment under the informal “Siyaso “- industry. Farmers approach inventors and fabricators in the Siyaso industry and have custom-made machinery and equipment in line with their needs and budget. Trouble comes when the machinery requires servicing and repairs. One will be fortunate to locate the manufacturer as they are always on the move and have no downstream service providers. This has led to stifled growth and many failures.

The Siyaso industry creates fertile ground for potential Agri-preneurs who can be supported to augment the practical implementation of Education 5.0. Participants from this informal productive sector were brought on board to benefit the nation as they are transformed into a wholesale sector manufacturer of nimble tools and commercialise Siyaso informal manufacturing. Replacement of imports of agriculture machinery and equipment will go a long way in the co-creation of intermediate technology. Guided by the tenets of PAR under section 7.4.1.1 above, the friendly outsider Horace has been engaged to help the community of farmers to access an open-source platform and co-create suitable technology developing designs and drawings of equipment for their

smallholder farming sector. The starting point is the two-wheeled electric tractor which is versatile to mechanise farmers' production process. Farmers hand tools will be improved and motorised speaking to issues of ergonomics and health. The research has long established that giving farmers access to tractors does not adequately improve nor optimize yields. Other production stages that are not mechanised negatively affect yields. Drawing on data and concepts from anthropology and economics, it is evident that this chapter helped researchers and their communities come to terms with reality. It offers opportunities to model social and market disruptive innovations that address wealth inequality, resource depletion, and environmental devastation, primarily due to capitalism and climate change. It provided an understanding of the persistence of social ills like hunger, poverty and lifestyle diseases amongst smallholder farmers in Zimbabwe.

7.5.2 The researcher/innovator as a committed participant, facilitator and learner in transformation

Spending time with farmers exposed the researcher to indigenous knowledge of their environment, and knowledge reframing was mutually agreed as a pertinent action item. The agreement culminated in the establishing new cost-effective products that speak to motorising all production stages at affordable prices. This was in pursuance of sustainable strategies to establish a livelihood-resilient income stream as the core outcome. Once science is fully applied to the community assets, it is envisioned that community members may escape poverty through value addition. Social theories research how humanity and technology impact each other. Whilst some theories focus on how decisions are made with humans and technology, social technology design links industrial democracy, evolving the democratic process, which is the process that has been dictated by the integral research results which are unfolding. It was refreshing to the communities and other ecosystem participants. In farming, technology is driving productivity, whilst it is a fact that humans drive the technology. From the research, farmers with access to technology tend to produce relatively better than those whose land preparation and harvest are done using manual labour. The flexibility to have an amenable process designed and followed as solutions were suggested created a space where trust was built and a community of practice was engendered.

When the research started, the smallholder farmers initially voiced concern against previous researchers who just collected data and information from them using unfit instruments like questionnaires and surveys. The resultant challenge has been that any projects set up during such indifferent research died soon after the departure of the classic researchers due to aloofness to realities on the ground. The integral research sought to evoke transformative social action engaging participatory action, institutionalised favouring down-to-earth co-creations. The nature of the research revived the GENE-ius of the farmers depicting the importance of the different groupings led in the community. Institutionalisation is a means to operationalise findings establishing tools that improve development and make livelihoods sustainable.

7.5.3 PAR is aimed at the oppressed, poor, exploited and the marginalised

As noted by Patnayakuni (2011), "It is widely acknowledged that adopting a socio-technical approach to system development leads to systems that are more acceptable to end users and deliver better value to stakeholders". FAO (2018) reports that "poorly selected or misapplied agricultural machinery can damage, rather than enhance, environmental resources, especially soils. Smallholder farmers require specialised mechanisation services that are both environmentally friendly and productivity-enhancing". The researcher, academia, and the community of farmers engaged in the research unanimously agreed that farmers require apt technology to be researched on them. The productivity levels of small-scale farmers are currently suboptimal due to a lack of equipment and knowledge to intensify agricultural production at two levels; soil and labour. There is an apparent need to intensify production whilst sustainably managing the natural resource now depleted in small-scale farming. Climate change has worsened the situation, increasing variability in weather patterns.

The ecosystem approach created an innovative environment with PAR providing a pragmatic framework as it largely depends on the diversity of research groups working with the poor to contribute to the innovation, works design and cooperative work, enhanced by the open source available to the ecosystem. PAR bridged the gap arising from previous humanitarian work and what is needed for the type of sustainable community development desirable to eradicate poverty in small-scale farmers. The

PAR framework allowed inclusion accommodating the views and needs of the community to be considered in the technology designs being co-created for them. Looking at developmental goals 1 and 2 and linking them to Zimbabwe's 2030 Agenda of becoming a middle-income economy. SDG 1 – (No poverty) and SDG 2 (Zero Hunger) show that sustainable mechanisation- technologies are needed to improve the livelihoods of the smallholder farming communities who derive income from farming. These constitute the majority of Zimbabwe living below the poverty datum line. The two SDGs 1 and 2 have to be looked at inter-alia with SDG 12, which speaks to responsible production and consumption. SDG 12 calls for farmers to use innovative technologies and tools that promote sustainable agriculture, as climate change and environmental degradation threaten human survival.

The research has taken a keen interest in the integrality of ecosystems, intending to deliver solutions to the bottom of the pyramid. The critical difference being delivered by the research is having locals take charge of their destiny and getting their hands dirty and minds busy. Matters challenging the small-scale farming sector, particularly susceptible to the consequences of soil and land dilapidation, have to be corrected through smart technologies and integral knowledge exchange. It will allow farmers to transition into sustainable farming. There is a need to restore nature and resources vital for continued food production, especially now when the same poor farmers have to increase productivity to meet the demand of the ever-increasing food and nutrients required globally.

Farmers gave feedback that there is a need to increase farm power with nimble technology affordable to the poor and fit for their purpose. The open-source architecture allows cost-effective designs to be established and mass-production of intermediate technology by the local industry.

7.6 The Overall Research Trajectory

The action part of the research, aiming to change the everyday experience, has been reached. However, co-creation demanded that the range of participants be enlarged to include established social innovators who came in as "Friendly Outsiders" to equip local social innovators and hasten the innovation process transiting it into

commercialisation. The two parties (locals and foreign-friendly social innovators) co-create the equipment needed to meet the farmers' needs as farm power has to improve. The previous chapter produced an exhaustive description of how the communities have been awakened. Storylines and data gathered give character to the farmer's voice now known, and the technology being co-created delivers researched aspects like ergonomics, electric, cost-effective, apt and small size. PAR ensured that the community remained engaged. Buy in through participation in co-creating tools and processes that they require to sustainably exploit resources within their reach and restore livelihoods at levels that create wealth.

7.6.1 Social action and co-innovation

Employing PAR noticeably allowed the research journey to attend to social issues of inequality in line with five primary development goals (Christen et al., 2004). Cost-effectiveness achieved through digitalisation of part of the farmers' process of ordering inputs and selling harvest will reduce women's dependency on outsiders. Whilst that angle is cost-effective, it will gain innovative social substance with a looping effect resulting from technology-enhanced production as each production stage is mechanised. It will enable farmers to execute their chores efficiently and attain the ideal productivity yield for each crop. It will create a safe place, equalising the playing field and developing safety nets. Technology gives the poor an economic voice to refrain from uncouth societal elements who exchange girls with bags of maize to avert starvation. Removing dependency on the abuser brings freedom and technology justice, creating a haven and opening up vital communication and developmental channels in the social arena of women farmers.

7.6.3 PAR building on integration

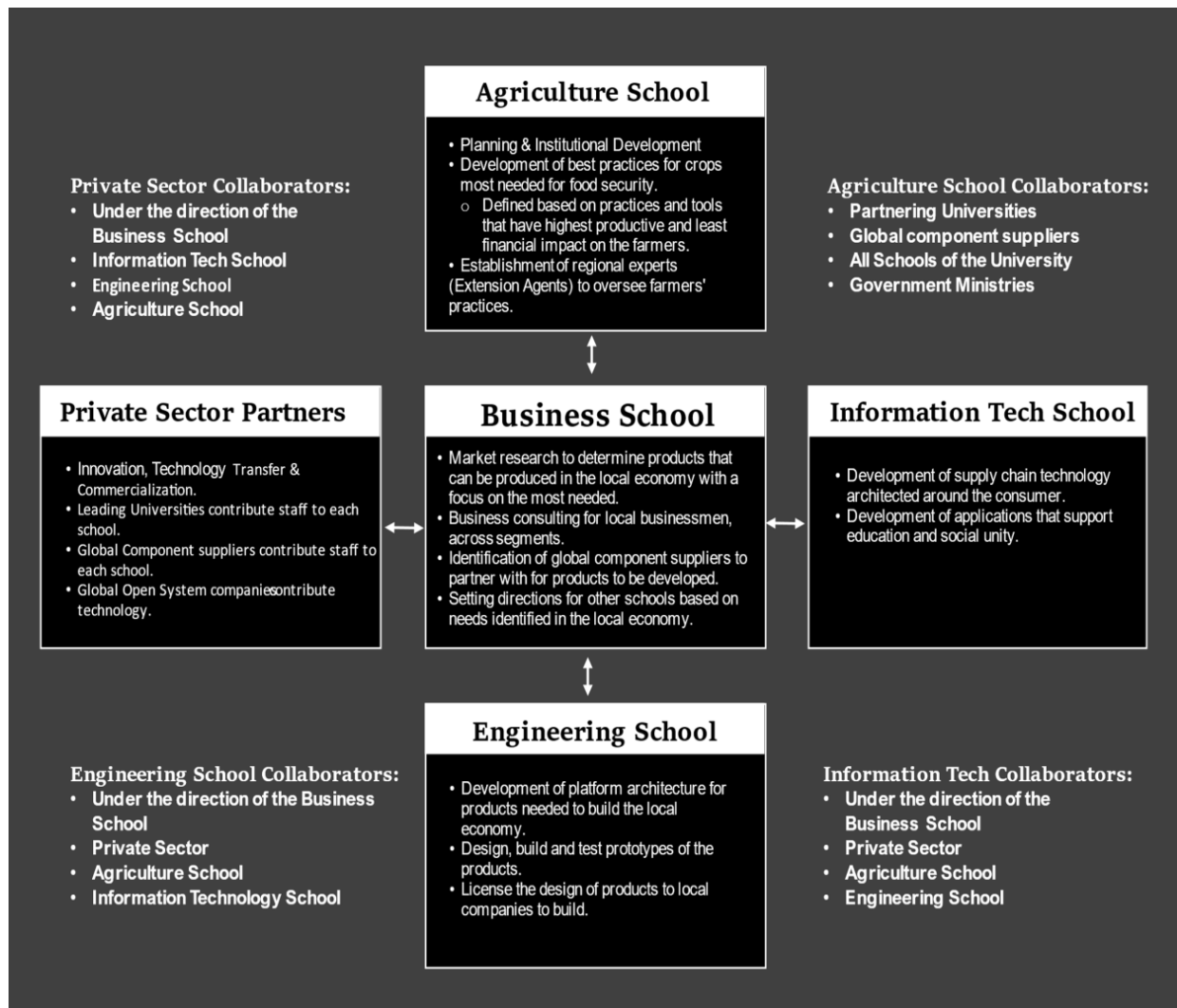
The aspect of PAR that the research adopted was its ability to build on integration rather than fragmentation (Lessem and Schieffer, 2010). As pointed out, such design focuses on developing socio-technical systems within institutions, and the researcher onboarded Mr Horace Clemmons. The latter came in with his Oggun Open-source platform, which enhanced this action research and strengthened the partnership between the researcher, local industrialists and The University of Zimbabwe and

Solusi University. Oggun Open-Source platform collaborates with communities to co-create localised designs starting from their blueprint. It uses the platform architecture to defy the capitalistic product-specific designs which through premium cost structures lockout the bottom of the pyramid whilst failing to deliver customised solutions.

7.6.4 PAR as a scientific method that facilitates an authentic analysis of social change

The University of Zimbabwe and Solusi University are being transformed into centres of enterprise development, concretising the co-creations that will speak to farmers' challenges, focusing on the gap in equipment and technology and lack of skills/knowledge. A compromise was reached where the University of Zimbabwe, standing in for public learning institutions of higher learning, agreed to alter its structure and close the existing gap with industry players by becoming a centre for enterprise development. Solusi will represent private universities and challenge bureaucracy at public universities. Private sector players have a say in producing co-created farming equipment like two-wheeled electric tractors and a wholesale manufacturing sector is being created. We have global supply chains for vehicles and overtime the local production being started is expected to be perfected into a local Agri-Tech Ecosystem Manufacturing Sector. The university students will have an opportunity to work on the technology blueprints and attachments needed to mechanise the smallholder farmers' production cycle. It is expected to transform the mindset and present entrepreneurship as a livelihood option.

Due to its ethos, which is architecture based, the process will not only enhance innovations in the agriculture sector but any other sector that so wishes. TnC signed MoUs with the parent ministry of Higher and Tertiary Education and the work started with the University of Zimbabwe as it was not advisable to transform the whole institution overnight. Three faculties were the starting point and the following is the agreed framework:



Co-established by Horace Clemmons and the Researcher

Figure 7.3: The University of Zimbabwe and Solusi University becoming a centre of enterprise development

A supply chain system and local agriculture manufacturing sector have been set up to champion the local supply chain transformation. The Universities of Zimbabwe and Solusi Business Schools are championing the process, and the researcher will collaborate and be a friendly outsider together with Clemmons using the structure above. Together with other ecosystem players, the Universities have been capacitated to produce designs and drawings and licence industry machine manufacturers to produce and assemble the two and four-wheeled tractors. Each private sector player initiating this ecosystem will manufacture one of the five attachments considered mandatory for the each-farming household to transit from subsistence farming to commercial optimal production levels. PAR will democratise the co-innovation process

making it inclusive and a safe space to co-create solutions practical to the context of farmers in Zimbabwe.

7.7 Grounding Strengthening Integrality

As one grounded in nature and community, the descriptive style brought out the original focus for the researcher through the inner and outer call, helpful in the surfacing of integral issues. The latter have social meaning and personal significance on the part of the smallholder farmer. A close look at the crucial tenets of feminism explored gave the impetus needed to transit into PAR at this stage. As amply summarised by Lessem and Schieffer (2016), the principles translate the core themes of feminism, making outcomes of integral research come to life whilst propelling the social actors to translate the knowledge gathered into meaningful community-building tools and institutions. Smart tools will resolve the paradox of agriculture. Although agriculture feeds people and is a source of livelihood for farmers, at the same time, it is causing environmental degradation and communal decay. The driving force is catalysing the innovation trajectory to co-create the tools that have a long-term view to assist farmers in venturing into conservation agriculture without lowering productivity. The community of farmers who agreed to venture into conservation agriculture provided the tools to intensify labour and the knowledge available to them. They have abundant land and community assets as their resources, yet they live in abject poverty.

7.7.1 The Southern relational research trajectory delivers

The innovation network team took the stance to focus on co-creating implements for the two aspects of agriculture: conservation farming and conventional to respect nature. And so is nature, a feminist core theme. Nature is understood as science where the subject-object split is not used to legitimise the domination of nature. Nature is conceptualised as an active rather than passive dynamic body. Nature requires human cooperation and understanding rather than being treated as a dead mechanism requiring only manipulation and control (Lessem & Schieffer, 2016). Local farmers have learnt from the developed world that if one violates it, the repercussions can be unsurmountable.

7.7.2 Effecting

Effecting is the final stage of the GENE process. The researcher went through the four realms starting in the south. Grounded in the South within the realm of relationships, the researcher interacted with the community as a participant. As a crucial part of the GENE, Effecting is at the end of the journey, actualising the four-world expedition. Emergence was in the East and, through inspiration, the smallholder farmers' level of consciousness was aroused after they realised their context. The farmer called for co-creation of exogenic (new) knowledge and technology to solve low productivity and lack of knowledge and skills. The Navigation process took the researchers northwards, tapping on knowledge and innovation from the North, and friendly outsiders were engaged to enhance the co-creation process. The voyage to the North tapped on the realm of knowledge through science, systems and technology affecting action in the West will result in social laboratories and farming as a business as farmers work with educational institutions to normalise solutions through social innovations. The risks the farmers face are systemic, and legacy issues are deeply entrenched, needing structures and collaborative efforts to deliver holistic solutions. Piecemeal solutions have continuously resulted in broken communities. When fighting a system, fighting as an ecosystem and not individually answers various and multiple issues.

7.7.3 Institutionalisation through PAR at the University of Zimbabwe

Integral research goes beyond knowledge-gathering levels to satisfy the heart of social scientists. The Trans4m CARE process informs the steps to be taken. It was possible to combine the research method of feminism with the CARE process and TIPS. As the journey tapped into the different maps that called for different approaches and inclusive systems, it ensured a systematic way to entrench the different strategies and institutionalise the solutions advocated by Lessem and Schieffer (2015).

7.7.4 Ecosystem approach towards a holistic delivery of sustainability

An ecosystem approach has been deemed the solution to smallholder farmers' burning issue of abject poverty. Establishing sustainable markets for value-added products facilitates a reversal of capitalism, and migration by locals to provide menial labour in foreign factories ceases to be a priority when meeting bread and butter issues. In line with the PAR and feminism tenets, as a social innovator, a researcher is part of the community and committed to the cause of bringing about social change.

7.7.5 TnC outcomes of the theory of transformation: Achieving abundance with what we have

In building an integral ecosystem – inclusive relationships is vital. The north is poised to address farmers' knowledge and technology gaps, bringing in new integral knowledge from indigenous and exogenous sources. The research actively revisits how our community or enterprises respond to continuous technological change and social challenges cooperatively. Smallholder farmers in Zimbabwe are awakened and aggregated into groups based on the key-crop concept. Villages and groups produce keyhole plots for one supplier sharing transport and other related costs, such as obtaining critical mass and volume. TnC, with its innovative network of collaborators, is transforming the agriculture sector. Farmers have repeatedly cited that they lack appropriate tools, and the network through an open-source platform is co-creating a smallholder farming tractor which will transform the production cycle. The tractor will help with attachments/implements to motorise each critical production stage like land preparation, planting, weeding or fertigation and harvesting.

The West speaks of equitable and economically sustainable livelihoods. The community is encouraged to bring indigenous knowledge on business before colonisation, and the famous barter system which promotes self-sufficient communities. Social Innovation creates a local indigenous-based economy that addresses inequality, bringing peace and joy to the community. Hunger, climate change and sub-optimal production resulting from a lack of equipment and productive skills were significant threats, calling for integral knowledge exchange to address skills gaps and access equitable technology.

Working through the gene-ius of the 'western' realm of life-based living economy, we evolve from *growth to sustainability*, and we actively revisit the extent to which our community or enterprise is modelled upon nature, thereby sustainable and restorative, building up human, natural and financial capital in parallel. The role model we surfaced in the 'Western' realm is the '*sustainable enterprise*' embodied by Interface in the USA, a corporate leader within the sustainability movement. For sustainable agriculture, the Ministry of Lands and Agriculture, water and Climate are ably represented by the minister's direct director for policy and input on aspects like funding. The government

owns the most significant bank focused on agriculture production. It is expected through financial initiatives.

The research is timely as Zimbabwe is in a watershed era transiting into a middle-income economy. Since seventy per cent of the population derives livelihoods from farming, the farmers have expressed the desire to become integral producers to sustain agro-based industries locally and internationally. They also want to add value and expand their resources by incorporating indigenous plants into their living assets. Decision-makers interested in going beyond their personal and professional interests and involving themselves in humanising their organisation, community and society should reshape their enterprise and society. The core ministry is expected to voice that ethos. (Pauli, 2014) advises all to always stop and reflect on nature: how every ecosystem has achieved a state of self-sufficiency. A deeper look into our environment turns perceived scarcity into abundance, and diversity is the reality for Pauli. Ecosystems do not evolve toward a monopoly with dominant view players. How does this arise – not by pursuing individual self-interest, as Adam Smith assumed? As the journey progresses, conscious evolution is evoked, and households and communities pursue peace. Challenges like hunger, inequality, and disempowerment will be addressed by scaling up models that have worked in certain pilot groups.

In the south, where the farmers are lodged, nature speaks of natural systems that provide fascinating operational models of efficient production and consumption (Pauli, 2014). He typically describes ecosystems with great diversity worldwide, demonstrating efficient ways to respond to everyone's basic needs with what is locally available. The researcher recognises individuals' power to change virtually anything and everything in their lives through it all. Man is buffeted by circumstances so long as he believes himself to be a creature of outside conditions. Learning and farming CARE Cycles are designed to make farmers realise that they have creative power and may command the hidden soil and seeds of their being out of which circumstances grow. Through integral knowledge exchange, they become the rightful master of their lives (Allen, 1903).

Zimbabwe's tobacco sector has shown that the resources we need to turn our dreams into reality are within us Zimbabweans, merely waiting for the day when we decide to

wake up and claim our birth right and turn our nation into self-sufficiency. The crop is a significant foreign currency earner for the country, and more than 70 000 smallholder farmers participate in the supply chain producing the crop.

7.8 Summary of the Chapter

According to Lessem and Schieffer (2013), "Treating the poor as untouchables and outcasts for the bank's founder, Muhammad Yunus, is immoral and indefensible, and also financially stupid" Yunus's message is always the same: "We can eradicate poverty in our lifetime". This message is coming from a local in Bangladesh. This country is amongst the poorest countries and has become donor-dependent, killing hope for sustainable social change. Grameen Bank's success demonstrates that only locals' political will is needed for authentic social change. In Zimbabwe, through the Trans4m PhD, a similar statement is repeated because, as a community, we can only build what we can imagine. The body goes where the mind has been. The integral value chain will take the community of smallholder farmers from subsistence to wealth creation. Yunus was building such a world by establishing the integral way of doing things: funding, capital, enterprise management, research, development and leadership in agriculture. A situated knower with a feminist slant is a research attribute which enables local community builders to capacitate women farmers and help them cease being donor-dependent—empowering self-sufficiency capabilities by transforming their fields into small enterprises. A bottom-up CARE process was followed to avoid the pitfall of assuming and solving community challenges superficially. It would establish socio-economic laboratories for learning communities and transparent and authentic knowledge exchange.

CHAPTER 8: INSTITUTIONALISED RESEARCH WITH PARTICIPATORY ACTION RESEARCH (PAR)

8.1 Introduction

This chapter progresses with the researcher further exploring PAR and its tenets as elaborated in the previous chapter. The previous chapter led to transformation of The University of Zimbabwe and Solusi University where due to the size of the institutions,

the research contribution of transforming the institution to a centre of enterprise development was limited to the faculties of Engineering, Commerce and Agriculture. To avert the bureaucracy at institutions like universities, the ecosystem with the blessing of the university agreed to start by transforming the University of Zimbabwe into a centre of enterprise development and work with the Heritage Communiversality separately and assist with the accreditation of certain courses. The Communiversality enables social learning in line with the knowledge exchange requirements as surfaced by the community. The bottom of the pyramid and disenfranchised farmers are given a lens through the GENE theory by Lessem and Schieffer to authentically learn livelihood concepts, co-create nimble technologies that speak to their everyday challenges. Learning is grounded in communities and communities navigate with open-source technocrats to establish integral enterprises.

As a separate institution with its own social innovation platforms or forum the Communiversality is being established and through partnerships with an existing university a vocational centre poised as a centre of sustainable development for farmers to learn and acquire production/vocational skills called a Heritage Communiversality is initiated. The Communiversality will operate following the structure of an open university to augment communal learning at the farmer's field/farm. It will create conducive learning communities for farmers including the semi-literate offering its curriculum both in English and vernacular to carry this country forward through sustainable production and self-sufficient homes.

The following metasystem governs the structure of the Communiversality.

8.1.1 The Heritage Communiversy meta-ecosystem: Envisioned outcomes and enacting the integral ecosystem



Figure 8.1: The meta-ecosystem with three Inter-linked subsystems

(Adopted from TIM Review August 2015)

A closer look at the research group shows that all the groups in the economic/ecological ecosystems are given a voice through adequate representation. For most research groups, the proffered insights and innovation bring solutions integrally with social innovations.

The research was broad for two reasons: a non-holistic approach when establishing a co-created solution would continue hindering farmers' progress to eventually attain the desired self-sufficient model at the bottom of the pyramid. Secondly, current research has already demonstrated failed piecemeal solutions, with some extant white elephants testifying against the top-down approach research.

According to Horace (2021), a healthy collaborative environment that produces synergies to resolve social and economic issues will help decolonise minds whilst boosting locals' confidence in owning sustainable nimble processes designed through inclusive approaches. To that end, Horace requested the local team to get an expert from each sector to form a community of practice. The world shifted in the last 30

months due to the Covid-19 pandemic, which has challenged culture and how technology and digital culture are used. The Russia – Ukraine war has put issues of self-sufficiency on the forefront for many governments, and climate change demands urgent action and drastic transformation in all quarters. The role of knowledgeable platforms and the need to embrace digitally enhanced livelihoods are necessities. The research aim was to evoke the GENE- ius of smallholder farmers and establish a self-sufficient community of smallholder farmers. Covid 19 removed the debate on the need for digitalisation and technology enablers in any economy, as movement restrictions made technology a necessity.

The climate change challenges coupled with the Covid-19 challenges will enable the business and its ecosystem partners to use the Social Venture Impact Metric to measure its three required impacts for sustainable development. As the researcher is collaborating with the University of Zimbabwe and Solusi to transform the university and industry relations, the integral ecosystem business model will benefit from the multiplier effect of the multi-faceted impact that is being brought by the innovative network as follows:

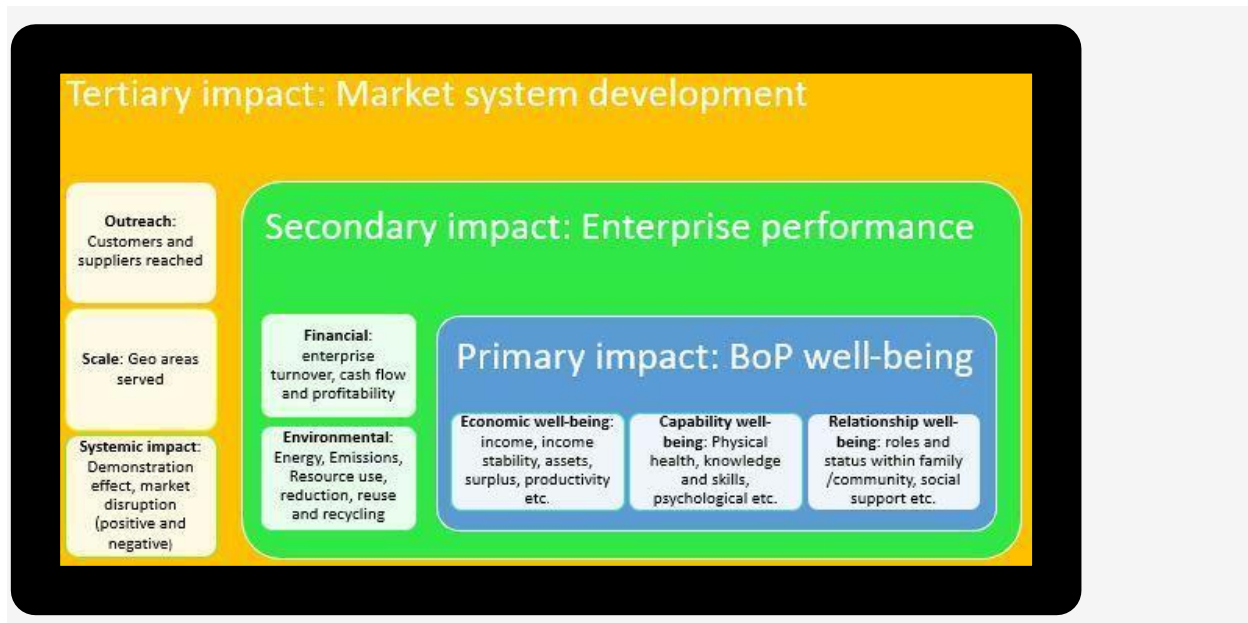


Figure 8.2: Multi-faceted impact that is being brought by the innovative network

(Adapted from the William Davidson Institute)

In SVIM, three levels of impact that are measured:

- i) Primary, the impact of social innovation on low-income/BoP populations; value chains are tackled at the supply chain level. Such a global view allows locals to customize solutions and create sustainable solutions usable by the poor. Its socio-economic impact is sustained through products that address significant global challenges like the hidden hunger problem.
- ii) Secondary, the impact of innovation partnerships, which could be at the enterprise level and measured through assessing both the financial and environmental performance of the business; Various SDGs are addressed as partnerships allow each player/sector to address several issues which, when summed up cover a multiple of challenges housed under different SDGs.
- iii) Tertiary impact is realised when the innovation can catalyse market-level change. This means achieving greater outreach and a critical scale in the market and accelerating the development of a market that reaches an underserved or disadvantaged population. It also means understanding the innovation's 'market disruption' has both positive and negative potential.

Tertiary impacts bring much more systemic change, leading larger businesses and policy programmes to learn from the innovation and join the bandwagon. Positive market system development can usher local economic development and social domino effects. The market-level systemic impact is possible, even though much harder to achieve and measure.

The tool for measuring primary impact (at the BoP level) in SVIM comes from the BoP Impact Assessment Framework. This approach was developed by William Davidson Institute at the University of Michigan to measure performance at social ventures. The following Jarcho Model is effective as energy flow must be harnessed and focused on intended results. The need to institutionalise solutions in a community of practice was established. The Education sector has already set up Innovation Hubs that have to speak to challenges in the community.

8.2 Participation through Positive Policy

Through the current change in education policy, the semi-literate and those in the productive sector who did not qualify to increase their vocational skills will be catered

for through the new heritage-based education system. As progress is made, graduates will increase their minimum board knowledge and become relevant in an economy requiring entrepreneurs and innovators. On the other hand, those who have left school are given an opportunity to exchange knowledge integrally. The East had to step in and deconstruct education and knowledge systems in ways relevant to inspire transformed livelihoods, unbiased and integral. There needs to be more research focused on agriculture station and the indigenous economy. The Innovation Hubs at institutions of higher learning act as the research centres, personifying the value and ethos of integral research and have already been established to work with like-minded researchers to strengthen research on the knowledge-based indigenous economy.

The structure of the Heritage Communiversality categorizes the needs of farmers and the ecosystem sectorizing these under the SDG framework, under business thus, industry, and innovation to concretise research and knowledge to generate new knowledge and much-needed technologies. Three significant aspects are framed into social, business and environmental.

8.3 The Burning Issues resolved using Knowledge for Liberation

Merging the PAR tenets with core themes from feminism, aspects like socio-historical location and taking nature as an active and complex speaks to the depth of knowledge required to come up with meaningful innovations that are global yet nimble to speak to the farmer's small-scale farming levels whilst at the same time address issues of climate change and the complex, powerful relationship oppressing the farmers. The researcher relating research findings to her work experience and the desire to gain from ecosystem approaches dug deeper into the history of the farmers and concurred that there was a deliberate move resulting from the context resulting in:

- 1) Inappropriate economic assistance through aid and grants
- 2) Lack of appropriate smallholder funding in the commercial banking sector:
- 3) Lack of comprehensive policies to support the new smallholder farmer
- 4) A blind eye turned to climate change challenges

- 5) Breakdown in economic value chains and predatory business practices by the private sector.
- 6) Incapacitated rural communities to run rural-based micro-enterprises
- 7) Export of raw commodities as opposed to value-added products

The researcher co-created inclusive models, ecosystems, and social innovations co-innovated with communities, creating social change. This chapter testified that Ubuntu and Nhimbe dignify and strengthen community structures resulting in community development and socio-economic prosperity. This would guide communities into sustainable production in peace with nature, leading to happy citizens and a nobler global society. Farmers are expected to go through a transformation.

8.4 Standing on the Shoulders of Prior Research

Bearing in mind the various gaps in the farmers' environment and the five critical components by Scoones (1988) the collaborative innovation network assisted in responding to the issues highlighted above. In addition, they enabled the researcher to institutionalise co-innovations and solutions so that they remain with the community as the first leg of the research comes to a realisation. Scoone's components as a checklist justified the need for a broad-based response to the issues and many challenges farmers face and the following Nhimbe Agro-Model was mooted:

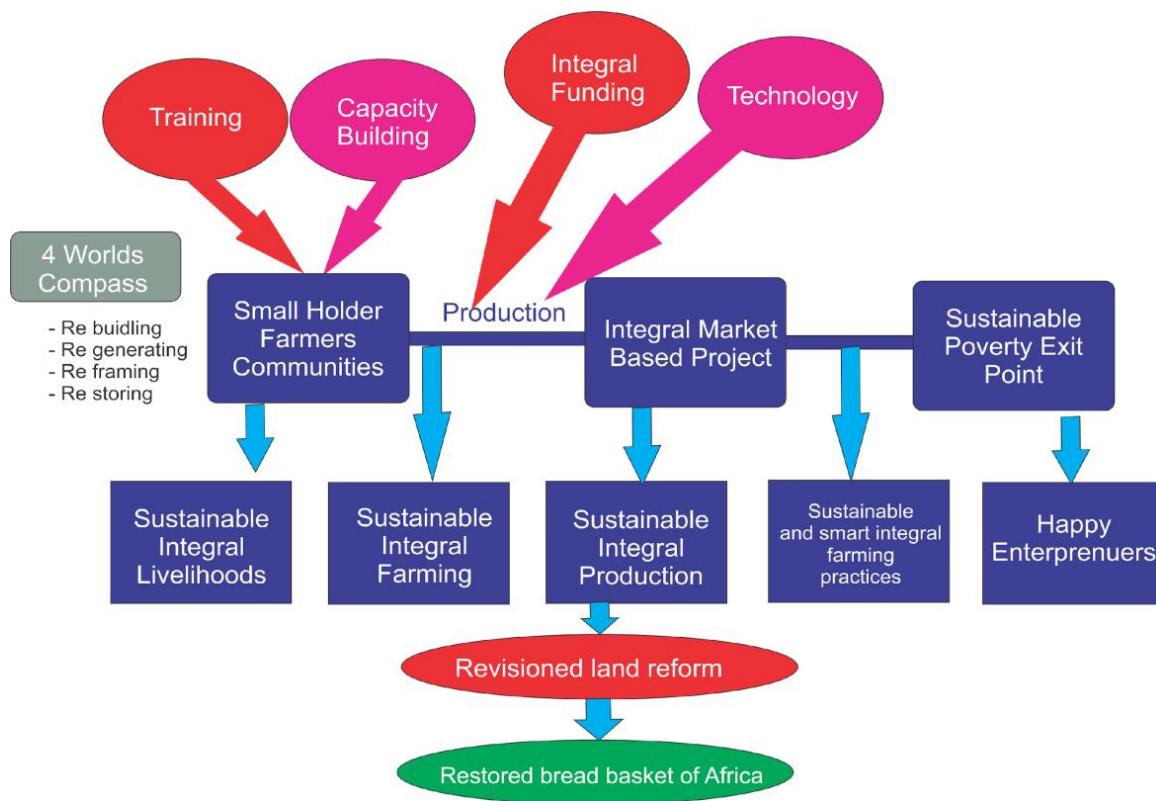


Figure 8.3: The Nhimbe integral ecosystem agro model

(Own elaboration)

8.5 From Heritage-Based Communitarity to Technology Science and Managed Knowledge Exchange

All year-round business models, the 5 to 11 Nhimbe Gore Rose Model as they embrace the harvest from the wild and community asset ethos, are expected to make the farmers escape poverty through all-year-round production while giving them access to sustainable markets. To eradicate poverty, the 5 to 11 Nhimbe Gorerose model seeks to promote highly productive development all year round. Farmers should be able to supply agro-processors and vegetable markets all year round, turning rural provinces into productive zones.

The East informs Nhimbe-based business models. These are expected to establish subsistence and grassroots economics through research circles—the Communitarity learning ecosystem supports market-based enterprises. Zimbabwe fought a global colonial master with the capacity to cut off access to international markets and worldwide financial support. This is one of the reasons why agriculture in the country has almost ground to a halt. As pointed out by Arturo Escobar in *Territories of Difference* (Schieffer & Lessem; Integral Development, 2015). Escobar’s debate has

been characterised by reflecting the perfect imbalance as the global dimension is all about space, capital and capacity and the ability to transform. However, the first point of call for farmers is to reduce the food import bill and supply the local market as foreign currency earnings of the country are well balanced with the country's mineral exports. As smart grains like millet, sorghum and finger millet increase their acceptance, smallholder farmers have huge opportunities to grow by satisfying that local demand. Covid revealed the nutritious benefits of certain wild crops as locals were forced to survive on local produce. These have continued to occupy space in large supermarkets months after Covid -19 has degenerated into an endemic.

8.5.1 The significance of technology in agriculture

The research advocates radical change that will materially, socially, culturally, and economically impact farmers in Zimbabwe, especially women. For the researcher, lessons learnt whilst working illustrated that a system needs coherence and completeness to enhance and radically change the superficial help conditions proffered by aid workers and foreign-based support. The innovative and collaborative network approach sought to drive social innovation and create a platform that concretised ideas to improve the poor's material and physical needs whilst impacting issues threatening sustainable agriculture in Zimbabwe. The open-source platform was institutionalised through partnerships with institutions of higher learning and Heritage Communiversities to transform education and promote entrepreneurial spirit in universities.

8.6 TIPS Seven-Layered Framework: Agility and Harnessed Energy

The introduction of creativity and collaborative approaches from the TIPS framework and the Jarche model guided the flow of energy and ideas into a systemised structure. Technology being one of the strong pillars of the TIPS model, resonated closely with PAR. Combining it with the Jarche Model harnessed the energy flow resolving systemic issues as people and organisations with different power levels interacted for shared values.

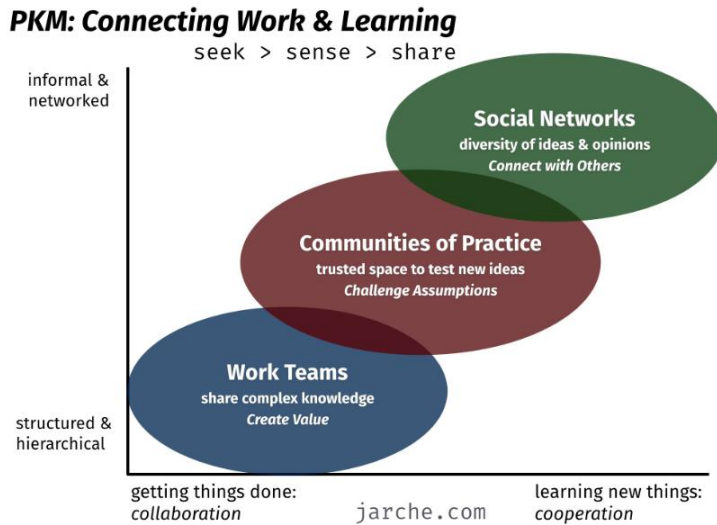


Figure 8.4: The Jarcho Model (2022)

Different work teams were established as follows:

- 1) The academia is led by The University of Zimbabwe and Solusi University.
- 2) TnC leads the local private sector
- 3) External private sector players collaborating through Horace Clemmons.
- 4) The farmers are represented by lead farmers and Agritex Officers
- 5) Policymakers represented by their public sector institution representatives.

The community of practice established allows every participant/sector to lead and be led, collaborate and cooperate whilst learning, working and earning. A safe space has been created, and new business models have been established to create social impact being mooted.

Lead farmers and Agritex brought about the intricate desires of the farming communities on how social innovations should take place. The solutions were systematically built and layered to express daily challenges. The energy was harnessed riding on the community of practice that had been established, bringing onboard stakeholders from diverse backgrounds and sectors. This convincing way of research builds the pillars of genuine concern, assisting farmers in finding their voice whilst establishing ownership. The voiced gaps will be inclusively responded to through innovation systems called Oggun open-source architecture and new authentic relations that have emerged.

The co-innovations are diverse and, at the same time, institutionalised to detangle African farmers from the smoke-screened short-term foreign-based solutions. The broadness is justified because piecemeal solutions and disjointed efforts are why poverty has been perpetuated at the bottom of the pyramid. The solutions are a chain; breakage in one of the joints/requirements weakens the transformation threatening dismal failure. If not holistically and systematically adequately tackled, historical policies that supported colonial systems confining blacks and indigenous people into marginalised communities may result in short-term gains. The historical issues of slavery and colonisation have been modernised into current developmental policies premised on taking Africa as a production base needing external developmental support. Challenges in the farming communities are not only for Zimbabwe; most African states are full of dependent people waiting for handouts.

To successfully attain the various disciplines in research, economics and management integrally, the Communiversity was the noble option. It accommodates the social learning of the semi-illiterate farmers and peasantry at the bottom of the pyramid. The university will capture those in the non-productive sector, mainly 4 to 25 years and the Communiversity, the productive sector and semi-literate, obliging that lessons and materials will also be in the vernacular. Communiversity creates the social networks they require for economic development. To the researcher, the integral PhD approach suggests that some integral work is non-discursive, non-contextual and ineffable experiences have a helpful place in all such questions and relationships; thus, at least helping provide a meaningful linkage between existentialism and mysticism.

Since we cannot debate the need for integral knowledge exchange and researched technology, co-creations embraced the new necessity of infusing mechanization and digitalisation. The digital solutions are being customised to co-create fit-for-purpose simple technology that accommodates current telecommunications infrastructure limitations. It would accommodate and uphold integral knowledge transfer beyond informative and impacting production. Ultimately, income from farming livelihoods and agribusiness will build safety nets. As funding is limited, a four-staged implementation of the local manufacturing of the researched need of Afrocentric equipment process will take place:

- I. This tier is manual hand tools one level above what the farmers currently have. These tools would be well-designed and ergonomic and help make the farmers work more efficiently, faster, and with less stress and strain on their bodies. The primary basis of this system would be a sort of universal wheel hoe
- II. 2. Powered 2-wheel hoe (e-bike technology), Wheel motors for versatility, scalability, adaptability, etc. Swapping battery packs as part of a more extensive system
 - Different versions and permutations on this, from walk-behind to prone harvest models to powered carts for harvest and transport
- III. At level 3, we will introduce a modular two-wheel tractor system that includes internal combustion engines, swappable batteries, and wheel hub electric motors.
- IV. Finally, at level 4, we will offer a 4-wheel tool-carrier style tractor that utilises the same modular components as the two-wheel tractor, allowing for easy customisation and upgradeability. There are both internal combustion engines and electric models.

PAR enlightens communities about their resources mobilising for self-reliance. Moreover, since the ultimate goal is a radical transformation, mechanising each stage of the farmers' production cycle will not only improve yields and profitability. Local manufacture of the tools and equipment will speak to the issue of self-reliance cushioning the country against the global adverse effects of the supply chain being challenged by too many things like climate change, war and Covid 19.

8.7 Social Innovation Implemented to Resolve Gaps Through Co-Innovation Holistically

The fusion of shared values in developmental work, whilst pro-innovation participants specialized in different sectors and areas of expertise, creates a balanced network group. The listed collaborators below provided the resources and expertise needed as listed:

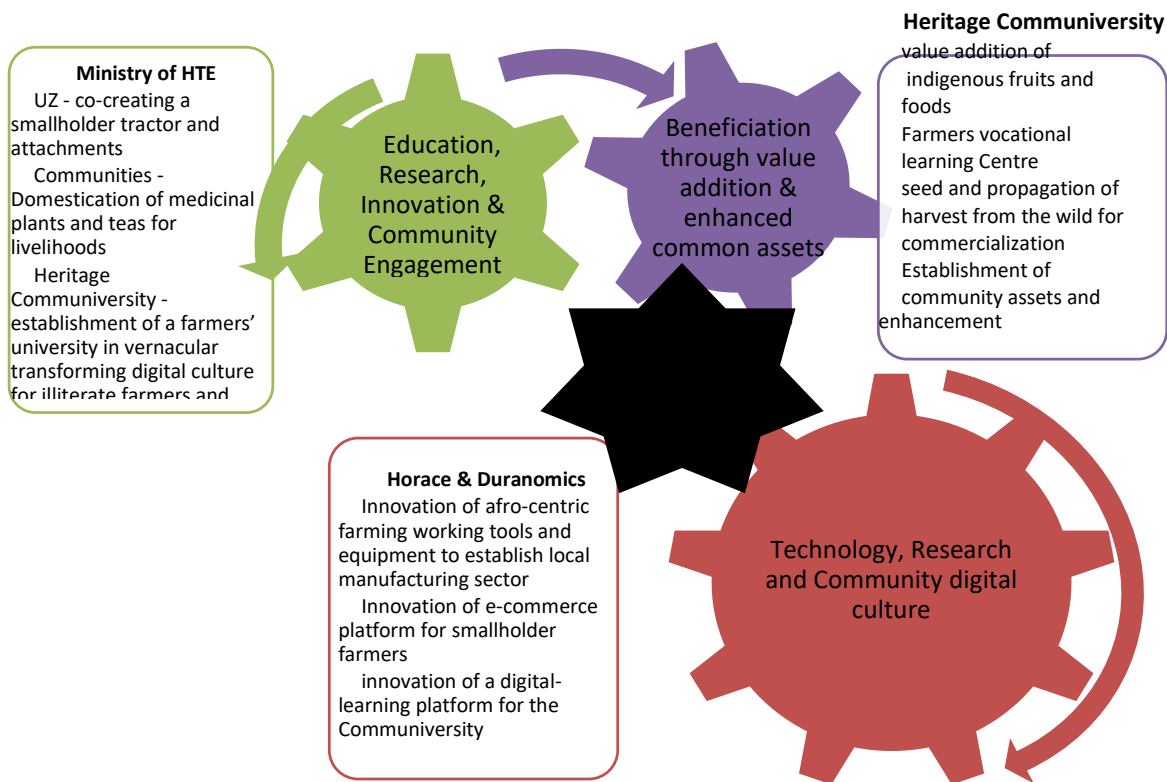


Figure 8.5: Balanced Systems Thinking Innovative Network Group of Collaborators
(Own elaboration)

8.8 Collaborators in the Systems Thinking Innovative Team

The southern relational path, grounded in nature and ecology, focused on agricultural production, which does not cause environmental degradation and communal decay. The community of farmers who are part of the collaborative participants has abundant land as their resource, yet they live in abject poverty. The feminist core theme, and so is nature, is understood as a science where the subject-object split is not used to legitimise the domination of nature. Nature is conceptualised as active rather than passive, a complex dynamic totality requiring human cooperation and understanding rather than a dead mechanism requiring only manipulation and control (Lessem & Schieffer, 2016). The stance was followed through the initial strategy in establishing the Communiversality, as nature gives to the community; the community has to take care of it. The innovation team has split the co-creation of the needed equipment between conservation and conventional agriculture for mutuality between farmers and nature. This will enhance Pfumvudza agriculture, introduced by the government to

encourage farmers to minimise damage when producing food. Pfumvudza is labour-intensive, and difficult to cover large tracts of land at individual and national levels.

8.8.1 The Heritage Communiversality



Figure 8.6: The Heritage Communiversality

(Own elaboration)

The flexibility of the research method allowed a dialogical approach that continually compared and contrasted the research issue, research question and hypothesis, considering the fieldwork of both the researcher and the networking group. The researcher achieved the desired outcome of authentic integral research by establishing a Heritage Based Communiversality. The Communiversality will provide farmers with a vocational learning environment and a surrogate Open University facility/concept. It is an opportunity to capacitate livelihood-based production skills and expand agri-business acumen. As more farmers venture into beneficiation and commercialising harvest from the wild and start a seed bank for such vital indigenous plants.

Heritage Communiversality is earmarked to become a capacity-building centre and will be affiliated with the University of Zimbabwe to facilitate the accreditation and certification of farmers. It would be established on a 10-hectare facility and registered with the Ministry of Higher and Tertiary Education. A Board of Governors was established, starting with five disciplines on e-learning platforms as progress has been slowed down by the Covid-19 pandemic. The curriculum is a first in Zimbabwe. It

introduces enhanced organic farming, tapping into medicinal foods and plants. Vocational skills point to the local machine manufacturing and food processing ecosystem, which has been accommodated to ensure that such can be accommodated in instances where communities desire to be trained as a holistic value chain. It focused on the tangible community common assets and was established to cater for farmers who do not ordinarily fit into the profile of conventional university students. The Heritage Communiversality would operate an e-learning platform in vernacular using voice to encourage even the semi-literate to engage in integral knowledge exchange for transformed livelihoods. Food as a medicine and vice versa enhances our heritage whilst uplifting farmers as they care for the environment that needs nurturing.

Dr Elizabeth Mamukwa's research work in knowledge creation was adapted to tailor-make the curriculum for the smallholder farmers at the Communiversality. TnC was responsible for the atmosphere and structure of an integral university, contributing to creating content in vernacular and curriculum for an African Agriculture Communiversality. It would feed into the farmers' livelihoods and partnerships between universities and the Communiversality partnership.

8.9 The University Partnerships



Figure 8.7: The university as a centre of enterprise development

(Own elaboration)

As the farmers have undergone awakening consciousness and community activation, the research agreed that fate needs to change; phenomenology brought reflection and reaction representing hardship experiences. The feminist slant allowed research to

check the adequacy of what might be pre-established by including smallholder farmers as participants. It authenticated the integrality of feminism research as an approach that promotes inclusive participation of all concerned, allowing contributions by all to reach desired pragmatic social innovation. This approach separates integral research from the other research conducted by conventional universities. Integral research allows the infusion of the East and South worlds richly endowed with intuitive and experiential orientations leading to transformative action. The university partnerships onboarded the farmers' voice, and a small tractor was designed with the help of the open-source platform offered by Horace Clemmons. The project started with co-creating a four-wheeled tractor as a central piece. It was then revised downward to a two-wheeled tractor so that communal farmers with even smaller fields were well-rested and a reasonable price point was achieved. Innovating affordable equipment for farmers was achieved by meeting the three essential factors for smallholder farmers, thus purchase price, cost, and availability. Horace's open design systems allowed the research to achieve that with a bonus. The University of Zimbabwe was co-leading the innovation, adding the minimum body knowledge of the engineering and agriculture graduates and community.

To holistically fulfil the aim of the research, the tractor was made the central piece of the technological innovation. Various attachments to mechanise each production stage would also be co-innovated over time at a crop-wise level, separating conventional and conservation farming. The innovative team aims to produce mundane tools like weeders, planters, harvesters, diggers and threshers at the first level of the tractor co-creation. To ensure that motorisation of the crop production is done for maximum benefit, it will change smallholder farmers' process from hand to powered tools and from single to multi-row. It should speak to ideal productivity levels that result in optimal yields. The research aligned with the national education policy 5.0 attracting official national support. It also spoke to the required transformation, adding to the two additional pillars of innovation and industrialisation. These two were added to the three basic ones: research, education and community engagement. Furthermore, the new tools would accommodate conservation agriculture in the face of the climate crisis.

8.10 The New Smallholder Farming Digital Culture and the Zimbabwe Open-Source Platform

In the South, the feminist research method identified poverty as the burning issue whose causal effect is from lack of equipment, knowledge, infrastructure and oppressive relationship disguised through aid and social agency. Resolution is through established ecosystems collaborating on social innovations and creating location-specific sustainable livelihoods that result in wealth creation overcoming materialism and capitalism. The smallholder farmers in Zimbabwe have land and water resources at their disposal yet live in abject poverty due to a challenging agribusiness environment. The need to change mindset was also tackled through participation and co-creation of solutions. Mindset change will be sustained as communities are given time to test and alter the concepts before implementation.

8.10.1 The new innovative business partnerships



Figure 8.8: Business partnerships

(Own Elaboration)

The impact of such co-created models results in decolonising the minds of locals, structures and education systems designed to serve the colonial masters. Many feminist theorists have argued that women have different conceptions of the fundamental constituents of reality, different assumptions about their relationships with the natural world and distant views of the importance and connectedness of other people. Women are generally more ready to access their own emotions and feelings and have distinct ways of accessing moral responsibility based on the context of human relationships rather than the abstract rights of isolated individuals (Borda & Rahman, 1991). Most women with limited literacy expressed fears about operating the tractor, dislodging and lodge tractors. Their fears were attended to, and the tractor will only have start and go buttons for operating it. The attachments have been simplified for mounting and dislodging. That level of inclusion satisfies the great need for research contributions that will filter down and impact the smallholder farmer level. Driven by the quest to deliver social and technological justice and economic emancipation, an ongoing GENE cyclical process striving for balance and integration has been initiated.

8.12 Business Case of a Relational Feminist Social Innovator and a Situated Knower

The situated knower in Zimbabwe knows that the world is dying from eating refined and super GMO foods. People's health worldwide is compromised against a background where new farmers in Zimbabwe are endowed with fertile land yet idle, living in abject poverty without sustainable markets and needing a supportive farming environment. Due to climate change, droughts and variable rainfall patterns mainly challenge the southern hemisphere. Seeking a local solution with a global reach, Bountiful Foods Brand was started in 2012 and trades as a social enterprise for-profit private limited company called Tafadzwa Ne Chiedza Incorporated P/L or popularly known as Bountiful Foods (Nature's Pantry).

8.13 Shifting Shame through Social-action: This to That Native Strategy

An ambitious business strategy to drive the process of local horticultural and viticulture crops for beneficiation has been established. Communally grown drought-resistant crops that generally do well with little or no fertilisers using the suitable climatic conditions of the country to avert the chemical ripening of fruits and produce are the

traded advantages. More importantly, the researcher set out to demonstrate the essence of integrated social enterprises that strive for integral relationships with producers/farmers. All its raw materials are locally sourced at fair prices. The researcher's business model sought to market Zimbabwe's indigenous fruits and vegetables and small grains to the international community as a choice for healthy food and care. Simultaneously, the model would sustainably improve livelihoods in Zimbabwean rural areas through local production and value addition for the maximum benefit of locals through established indigenous economies. Does the model emerge against the background of failure by foreign-based corporations and aid in proffering long-term solutions as they differ from ours? In his book *The Great Escape*, Angus Deaton, an expert on global poverty and foreign aid and the newest winner of the Nobel Prize in economics, declares that foreign aid does more harm than good. According to Deaton, it corrupts governments and rarely reaches the poor. According to William Easterly, a developmental economist and author of the book, *The White Man's Burden*, the West poured more than \$2 3 trillion of aid into Africa in the last four decades. To this day, poverty and underdevelopment remain a common feature in many recipients' African states. Zimbabwe has not been spared in these statistics, and any meaningful change requires that social change be weaved into the suffering community by local community builders in an integral way.

The researcher's value addition ethos is **called from this to that** model and was designed to tap into the global market, moving the country from an agriculture-based economy into agribusiness by offering zero-processed foods that are nutritious, functional, economical and yummy. The high fibre resonates as a solution and healthy substitute to genetically processed foods causing lifestyle diseases in many nations with no capacity to feed their people with naturally high fibre products. The hidden hunger problem is a global problem offering a local solution to Zimbabwe's smallholder farming community.



Figure 8.9: High fibre foods and healthy substitutes to genetically processed foods

In rural Zimbabwe, on the other hand, a picture of a dysfunctional smallholder sector beyond hope and ability to change is painted by those primarily political opponents wanting to use people's suffering to unseat the current government. Worse still, some foreigners do not let Zimbabwe move forward as a country with black locals owning most of the land. The land reform created a more robust relationship where blacks, including women, had an enhanced relationship with resources and nature, defying the capitalist system they built to control people's lives through controlled menial labour. As an agent for social change, the picture of hopeless smallholder farmers differs from social change agents.

The **strategy** uses sustainable markets as a poverty exit point using value addition and beneficiation—the village key crop projects back up offtake agreements for smallholder farmers to produce crops to supply factories. The factories use zero processing methods to value-add oilseeds and grains to produce nutritious foods for local and export markets.

In conclusion, the researcher spotlights an appropriate quote from Heron (2000), "You and I are linked in a generative web of communion with other humans and the rest of creation. We do not stand separate from the cosmos; we evolved with it and expressed its intelligent and creative force". Through PAR, the chapter broke down each gap

found through integral research and matched it with social action and innovation. Tools and teams were created for social transformation, and tangible results were produced. The next chapter, nine, will discuss Contribution as the research questions are being answered and the aim is realised.

8.13 Summary of the Chapter

The GENE path spirals in each direction from origination to innovation integration of the four paths until the global level is attained. To stay attuned, the socio-economic laboratories converge as a Communiversality, delivering its community building and integral development objectives. The solution-based strategies emanate from feminist research methods. These are employed to move from community marketing to community building and agriculture to agribusiness. The integral SDG map by Lessem and Schieffer (2013) provides a four-world solution from the integral four-world perspective, which allocates SDGs to each of the four worlds according to the strengths of each world. Addressing certain SDGs related to challenges that surfaced in the research would close gaps in the smallholder farmers' environment. The SDG integral map addresses similar issues as ecofeminism, and climate change, touching on nature and environment (communal decay) and vagaries of weather worsened by climate change and agricultural activities.

The open systems platform enabled the research team to devise an e-commerce platform with options to hold meetings using text messages in the vernacular. Farmers could upload their products and communicate with peer farmers. It would be a game-changer as smallholder farmers had challenges reaching their consumers directly. It removes the impediments pitting them against intermediaries. An e-learning platform in the vernacular was dubbed – Agrarian 101 or, in vernacular, *Kurima-Zana-neRimwe*. To circumvent the challenge of data access and the exorbitant prices that come with it, farmers may use voice to communicate. The Communiversality sought to establish technology for Agro-Impact. The platform digitalises the Communiversality's delivery services to disseminate skills for production. Heritage Communiversality as a community could domesticate common assets like commercialising certain indigenous plants and fruits. These platforms were readily received as pilots, helping women cope with the pandemic.

Climate change disadvantages people deriving their livelihood from farming. Most of them are women, causing hunger and further adversely affecting the well-being of families. Such a way of looking at issues promotes the translation of knowledge into practical action relevant to the constituency of smallholder farmers. Digital platforms answered the cry of why there is so much research, yet little impact is felt by those at the bottom of the pyramid, especially in Africa and other so-called developing countries.

CHAPTER 9: CONTRIBUTION

9.1 Introduction

The chapter reveals how the social transformations were leveraged. It continues the consolidation of social innovations and processes established. As the integral research journey is objectified, farmers at household level are getting transformed and self-worth is restored, institutional rebirth is anticipated amongst relevant ministries and universities, and societal transformation through local social co-creations came to life. The integral research models CARE and 4Cs guided the societal innovations whose establishment started emerging and the impact was thought-provoking. GENE underpinned the process and is inclusive as depicted by actors in the community of practice. Locals lead the transformation through TIPS and Open-Source Architecture for locally co-innovated solutions that speak to the context of farmers and policy makers.

The researcher followed the relational trajectory to deliver societal transformative action liberating marginalised farmers, disadvantaged youths, and industrialists through inclusive social innovation, which is pro-beneficiation. The following diagram summarises the transformation trajectory:

THE NHIMBE TRANSFORMATIONAL JOURNEY

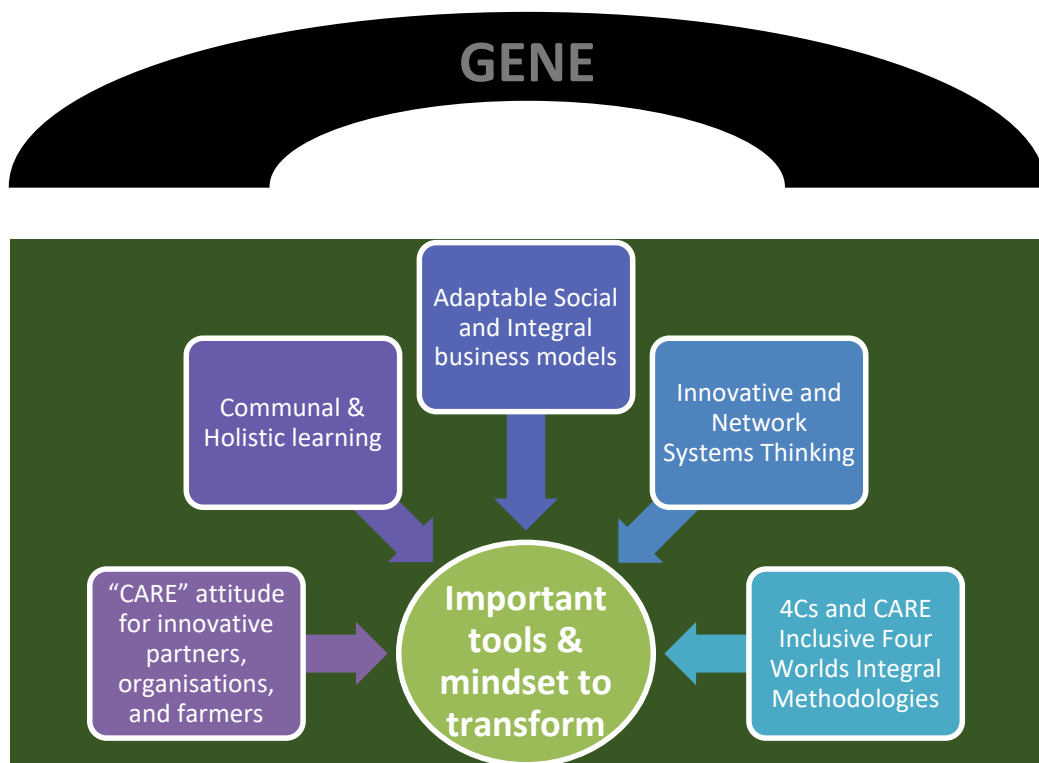


Figure 9.1: The nhimbe transformational journey the nhimbe transformational journey
(Own elaboration)

The core structure was designed to facilitate the resolution of farmer-specific areas of concern. The issues challenging all farmers differ in magnitude yet are uniform, needing cross-sectional solutions that will respond to the similar basic needs despite the size of farming operations.

According to Benyu (1994), biological communities are, by and large, localised or relatively closely connected in time and space. The research awakened us all in this journey that simple behaviour changes like local manufacturing and shopping homegrown forced on all by the pandemic instilled essential aspects like the vitality of the place. Nature taught us lessons; for example, rainwater carries nutrients in a rotting log into the soil, using energy from sunlight lodged in the same place (Benyu ,1994). The energy flux is low, and the distances are proximate. In other words, except for some high-flying migrant species, nature does not commute to work, teaching locals to study their environment and become self-sufficient through new knowledge created and local social innovation. Besides the open–source platform, it was established that locals from different sectors could form communities of practice needed to start a local machine manufacturing sector and utilise local resources to produce the much-needed

equipment and technology to transform the smallholder farmer's life. Value addition and agro-processing of food is enhancing beneficiation and the percentage of locally value-added food stuffs continue to increase in supermarkets. Self-employment is no longer being viewed as a side hustle but a viable livelihood option.

9.1.1 TnC engaging the cooperative orientation

The chapter focuses on the results infused with integral research models as an innovative approach to plant social and economic change in communities. The voice of communities and the burden were tangibly incorporated through the open-source platform and established Heritage Communiversity. A multifaceted design approach embracing ecosystem strategies propelled the co-innovation. New Institutions, and relationships, including technologies, were founded. All research activity aims to produce an integrated ecosystem linked to smallholder farmers' production and income generation.

Unlike foreign-based research, which is usually classical, the integral Southerner's research journey used a bottom-up approach, starting with the community and was inclusive, resulting in tangible social transformation. The open-source architecture was co-opted to strengthen technological innovations critical to the communal desired transformation. As the ministry of Land, Agriculture Water Fisheries and Rural development embarks on Mvupfudza, which is a sustainable way to grow food in the smallholder farming sector, the recently promulgated Nhimbe Technology Ecosystem is investigating ways to mechanise new technology called Mvupfudza diggers as the process requires digging of holes and intense spreading of organic manure. The message to farmers is clear. Lead innovative processes and co-create technologies that ease work and take away drudgery in your daily chores.

9.1.2 Status quo of current research

Research work and case studies depict that foreign experts and academia have creatively despised local know-how and indigenous knowledge (Rahan & Boarda, 1991). At the same time, students from conventional colleges and universities have instructive models that shun most indigenous knowledge and experience as it is not

documented and not peer-reviewed. Most university students graduate holding superficial passes, which are unusable to their societies and even their personal lives, as most are unemployed and fail to establish self-employed livelihoods. They join the bandwagon of the unemployed due to a lack of social innovativeness. Such a vicious cycle sustains the continuation of the colonial mindset through foreign academic models despite persistent failure.

Locals, especially farmers, in nature, mistrust foreign agents with their surveys and questionnaires as such research instruments disregard common sense and realities on the ground. Horrendous research results that have demeaning effects on local people were experienced over decades of classical research by INGOs. The contribution through integral research has given locals the power to own their destinies through participation and involvement in co-creating the social innovations that speak to challenges as they are daily felt.

9.2 Affecting the Social Transformation

The environment offers a reservoir of possibilities, and the key for rural communities to sustainably develop. Inclusion is unleashing the innovative potential within. Arturo Escobar calls it the "vitality of place" (Alexander Schieffer, *Integral Development*, 2015) one crucial dimension for such unleashing is to ensure that co-innovations are used and implemented in line with the voice of the communities. The potential lies in regenerating the force within our smallholder farmers, transforming them through innovations to reverse the local imbalances by refocusing on the place's vitality and becoming highly productive and self-sufficient.

9.2.1 Smallholder context gaps and social innovation brought on board

The integral research ethos led the researcher to co-create new knowledge by responding to the gaps and concerns raised by farmers. The researcher's grounding, the farmer's daily experiences and the expertise of the Nhimbe innovative research network made it possible to establish an open-source platform. Social innovations were concretised to close gaps in contextualising the farmers' lives.

The context was a community of smallholder farmers trapped in poverty due to a variety of challenges split into seven pillars as follows:

- 1) Knowledge and skills gaps
- 2) Lack of infrastructure
- 3) Lack of sustainable markets
- 4) Climate change-induced challenges
- 5) Policy challenges
- 6) Lack of tools and appropriate technology
- 7) Inequality manifested through inappropriate business models and lack of livelihood strategies

Relational models were used to regenerate relevant knowledge turning communities into social scientists. This reframed knowledge is shaping the curriculum of the Heritage Communiversy and turning the context into a global language of SDGs.

For Gudeman,(1998) and Lessem and Schieffer (2015), development is not primarily about capital accumulation but rather about innovation in relationships with your immediate learning community, external community, organisations, society. Furthermore, pursuing an ecosystem-based strategy synthesised with ecofeminism themes deriving knowledge from indigenous work to respond to climate change challenges expanded the resources for the smallholder farmers. Supportive themes like Nhimbe, an indigenous method used to build cooperatives and support each other in farming, were studied and enhanced and the endogenous model to create technology justice and establish appropriate business models to facilitate technology accessibility and appropriateness.

The Nhimbe ethos traditionally was encompassing, and the researcher has enhanced that same spirit through intermediate technologies that will be termed Nhimbe technologies. Digital models will culminate in a modern integral indigenous economy for smallholder farmers. When synthesised with integral worlds, Indigenous and exogenous knowledge eased the establishment of sustainable community-based agro-economies.

To address the gaps categorised in pillars and SDGs, the researcher formed a network of socio-economic collaborators, establishing a knowledge-based economic network to provide expertise and guidelines for an innovative social platform.

Table 9.1: Tabulated challenges and corresponding solutions

	Gaps & Pillars	Globally captured as SDGs	Leading field expert/Organisation	Local institutions engaged in informed	Outlined Social innovations as goods or services
1	Lack of technology to motorise operations and digitally-enabled productivity	12	Horace Clemmons	The University of Zimbabwe, Solusi University and TNC Dvpt Trust	Co-creation of a smallholder tractor for Africa Attachments to motorise all stages of production and marketing
2	Lack of knowledge Skills	4	Tafadzwa Ne Chiedza Development Trust	Solusi University and Heritage Communiversiy	Nhimbe 101-Agriculture E-learning Kurima Zana NeRimwe
3	Funding challenges	12	AFC Group and Ministry of Finance/RBZ	Developmental funders and Government	Catalytic Funding and New Funding Models In lieu of Micro-Credits
4	Lack of integral research for a knowledge-based indigenous economy	4	Tafadzwa Ne Chiedza Development Trust	Heritage Communiversiy	Innovation Hubs and Research Centres at selected universities
5	Narrow revenue streams due to non-value-added operations	1&2	Tafadzwa Ne Chiedza Development Trust	Heritage Communiversiy	Communal value-adding micro-enterprises
6	Biopharma revolution and commercialisation of community assets	7&12	Heritage Communiversiy	Heritage Communiversiy	Nurseries of harvest from the wild plants, bio-chemistry for wild medicinal plants and creation of tangible heritage assets
7	Lack of technology and knowledge to mitigate against climate change and pandemics	12	Horace Clemmons & network	The University of Zimbabwe, Solusi University and local private sector	Technology products that predict weather and facilitate technology justice through nimble mechanisation

The open source paved the way for concretising social innovations that produce valuable goods and services. Furthermore, they are institutionalised, establishing

systems, processes and structures that allow replication and scaling up for impact. For instance, Commercial Banks are not providers of developmental or catalytic funding; hence ignore farmers' constraints continuing the colonial systems and its legacy as gaps are considered credit application weaknesses in smallholder farmers' resulting in financial exclusion. Whilst the study will not offer funding to farming communities, the socially innovative economic structures and products envisioned by social innovators will facilitate and increase accessibility and availability of financial services and equipment to smallholder farmers without incurring debt.

The holistic co-creation of solutions is expected to speak to fundamental issues of income generation and sustainable livelihoods. TnC was restructured during the study to pursue these developmental goals in the social, economic, cultural and political areas. Farmers are no longer treated as subjects but as participants contributing to an innovative ecosystem with no hierarchies. The integral ecosystem, like nature, derives meaning from the interdependency of relationships. It capacitates the farmers to co-create innovations furthering political independence and socio-economic sovereignty.

9.3 Turning the Farmers' Voice into Goods or Services

To establish the smallholder farmers' representative, concerns and gaps in order of priority. The priority list and gravity of the matter shaped the goals for the innovative network system. The smallholder farming communities are participants rather than objects or just statistics.

The gaps and challenges were summarised at two levels: firstly, as missing pillars in Table 9.1 and additionally, as SDGs needing attention outlined in the Figure 9.2. The context and voice of the farmers, together with the gaps, responded to the following:

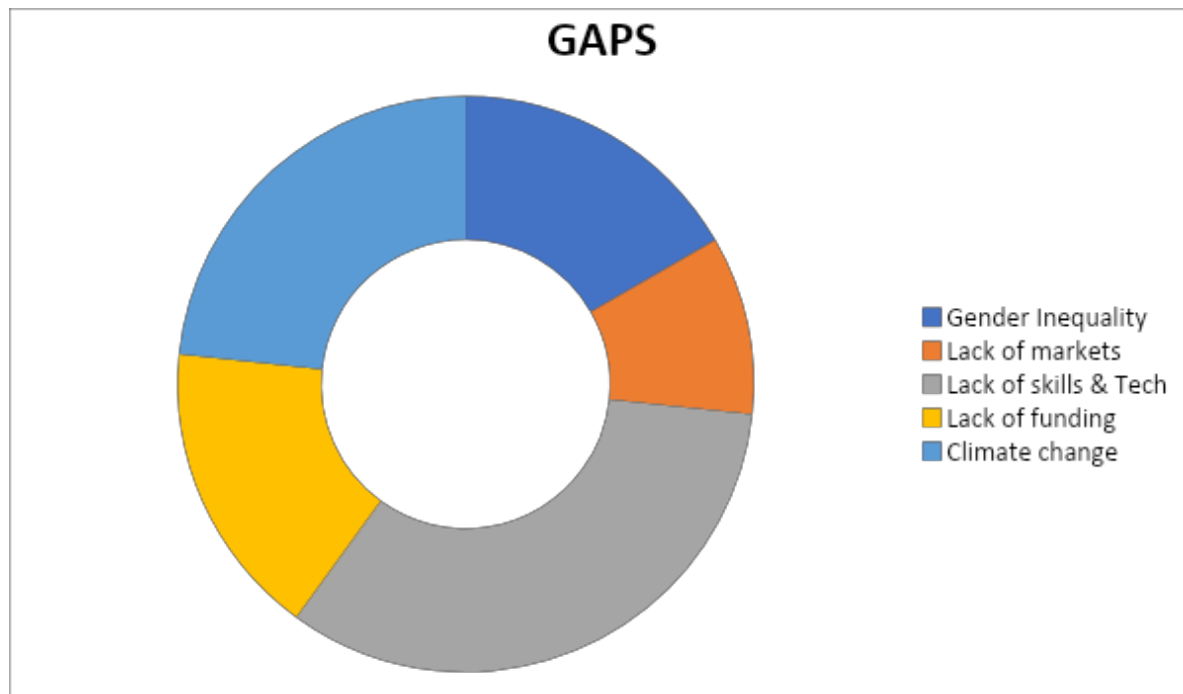


Figure 9.2: Ranked top five gaps

9.3.1 A place for integral research

An ecosystem strategy was employed within the integral development framework. The trajectory ensured that communities become part of the integral innovation network and that all issues and gaps are covered. One critical development emanating from this research is a place for integral research in Zimbabwe institutions of higher learning. The University of Zimbabwe and Solusi University will have both their relationships between faculties renovated, paving the way for linkages with industry in ways based on mutuality. Inclusive partaking of the research meant finding solutions that close all the gaps, especially the consistent showstoppers to the smallholder farmer's socio-economic liberation. The ecosystem approach enabled the community to act on all the issues of concern and enable farming as a business regardless of land size.

Co-innovation generated tools through the TnC Theory of transformation to address challenges that matched the above-listed issues to transform the social and economic context relevant to the community under study. Previous research treated communities as subjects impending transformation and sustainable development. The

research is multi-institutional, and the multi-discipline gave room to collaboration with other desired ecosystem participants resulting in wholeness.

9.4 Emulating Afrocentric Examples at Scale

Tapping from the Centred Enterprise Model, Sekem's Vitality within the Egyptian enterprise community with its vitality of force depicted in its name, a sustainable community was established in the Egyptian desert (Lessem and Schieffer,2010) . In his book, Abouleish describes the transformative impact of the encounter of his original Egyptian – Muslim side with the European-anthroposophical impulse acquired over 20 years with his ultimate vision to grow Sekem beyond a micro-enterprise and become a role model in Egypt. Sekem's case successfully synthesised Muslim, Islamic culture and local spiritual-based economic perspectives.

Taking a leaf from the Sekem's success story, awareness gained through research with a community of local smallholder farmers trapped in poverty was at three levels;

- i) Socially because they were expectant of outsiders to help them change their circumstances.
- ii) Economically, this made the farmers desperate, and they accepted foreign-based models and structures that remained aloof to the circumstances, trapping them further into poverty.
- iii) Technologically, this furthered the economic divide enslaving them as they were converted into production- zones for the West. The technology delivered over the years is unjust and inappropriate to the needs of the smallholder farmers hence their continual deprived state.

Sekem demonstrated that there is one comprehensive way of addressing the needs of those at the bottom of the pyramid, considering their cultural, spiritual and social backgrounds and physical needs. The researcher adds to that trajectory by promoting local knowledge and fusing it with various integral world maps by Lessem and Schieffer to guide how the four worlds can impact Zimbabwe's human life. This time, the involvement of locals leads to social innovation, which can be strengthened by fundamental essentials derived from the Trans4m ecosystem, ensuring that the models delivered are sustainable and meet the development goals (SDGs) holistically.

For Yunus Muhamad, the poor women needed skills for micro-business management and customised group credit. In Zimbabwe, it has become apparent that smallholder farmers need integral knowledge and nimble technology to change from subsistence farming to farming as a business. The research contributes to achieving that desire through co-innovations of researched tools and local manufacturing complemented by establishment of a Heritage-based Communiversity. In many nations abroad, there are universities where foreign students have to learn the local language for a year in order to attend college. Most small-scale farmers receive second hand learning because they are conducted in a foreign language but hunger and poverty know not language boundaries. The Heritage Communiversity will address that predicament and social learning will be in three languages, two of them vernacular.

9.5 The Heritage Communiversity and the Four Worlds Approach

Adopting the approach of the integral world in establishing the Communiversity, the Heritage Communiversity was established as an agent of transformation. Individuals, organisations and society at large are going to be reimagined. The inclusive research trajectory and integral knowledge exchange guided the expansion of resources by adopting the wild as commercial community assets, addressing various SDGs. Using appropriate ecosystem strategies (Scoones, 1988) as a checklist, proper tools were established to enhance livelihoods within the context of the farmers under study.

Having a Sekem view of Zimbabwe, local indigenous plants and small grains are adequate to establish a knowledge-based economy with community assets creating a heritage-based version with a feminist slant. Feminist research promotes solving life issues as the only way to emancipate the marginalised.

The Grameen Bank example inspired The Nhimbe trajectory, bringing solutions for community-based, emancipatory indigenous economies on board. During the research, women smallholder farming communities in Zaka have demonstrated the added value and profit from indigenous plants. Elements on the SDG integral map and southern world entrenched in nature and ecology saw the community being capacitated to sustainably harvest from the wild and export Zumbani, a local wild bush tea. They started making organic manure from organic matter collected from the forest. They ran evergreen organic nutrition gardens to feed their families, selling excess to the community to meet other household budgetary requirements. The fusion of various

integral works by other Trans4m PhD students will result in Zimbabwe developing and growing custom-made models befitting the regeneration of the small farmers in Zimbabwe.

As an agent for social innovation using her social laboratory - Bountiful Foods, the researcher speaks to issues of social transformation in a way that delivers economic transformation by establishing a 4P approach.

9.6 The New 4P Approach

The 4P approach allows ownership of capital, where a wide range of stakeholders between private ownership and public goods is exchanged with absolute authority and autonomy for smallholder farmers. The 4P approach adds producers (the smallholder farmer) onto the generic 3P approach, which speaks to price, product and place. The producer needs to be remembered as marketing, and classical economics deliberately guides the world not to do so. The new integral ecosystem demands trade relationships of each player in the value chain to go beyond the usual economic value chain, which usually ignores social and cultural issues that undermine sustainable trade. Feminists create an integral advantage for the communities they work with and build up additional handles to make it sustainable for the BoP.

The new Government in Zimbabwe is devolving the traditional centralised economic structures, giving the researcher's PhD research journey a chance to act out integral means to benefit the bottom of the pyramid through the 4P approach. The ecosystem approach encouraged all to embrace the private sector and government through different relevant Ministries. We are transforming the University into an enterprise centre to bridge the gap between the public and private sectors. Faculties at the same university ought to relate with their business school because when the students graduate, the bottom line is they need to earn a living and create wealth using the knowledge they learn at school.

In this journey, the integral research method sought to understand farmers' challenges. It goes deeper into understanding the extent of the damage caused by the challenges, the coping mechanisms already in place, and what can be done to

sustainably institutionalise the positive impact of these collaborations and social innovations that have been co-created with the communities.

In a case study by Borda and Rahman in 1991, the integral methodologies helped overcome the sense of helplessness, as recorded by Dr Sithembiso Nyoni, the Honourable Minister of Women's Affairs and Enterprise Development in Zimbabwe. The former colonial rulers left a lot of cultural, material and psychological dependence on Zimbabwe, leading to a lack of responsibility to use natural and public resources for the common good of all. In 1991, the country lacked institutional mechanisms and strategies to redress the imbalances; sadly, it is still the case today. According to Dr Sithembiso Nyoni, the major constraint was the international colonial tradition. It left people with huge imbalances that drained their best energy, especially those in the communal areas and the urban elite. Black people were left with a sense that they could not help themselves. The feeling of helplessness is what the former colonial masters thrive on, coming back guided as donors and funders with aid templates summarised in surveys tailor-made to gather needs and aid fabricated to deliver the assistance that fails to trickle down to the communities. The significant contribution of the research is having locals lead the social transformation and write their templates that speak to challenges and poverty and how it is felt. The bottom-up approach opposes the top down whilst giving back power to the bottom of the pyramid.

9.7 Local and not Foreign Experts to Lead Social Transformation

The foreign aid industry uses surveys to gather community needs superficially. This method is dehumanising, distant to the southern world and a cheat, to describe the least of its effects. Solutions are confined to what is contained in the template. The education system has been loaded with a curriculum that produces incapacitated graduates only for employment and not entrepreneurial work to perpetuate the colonial mind. Economic and social oppression is perpetuated in Zimbabwe, thus polluting people's best energy. Across Africa, this oppression leaves locals thinking they can do little for themselves across Africa.

As further proffered by Dr Nyoni, the development of such a people cannot be achieved through a system or continue to be designed by experts who continually identify the smoke only from the burning land of the people to be helped.

9.8 The Creation of the Integral Ecosystem

A breakup of the subject-object relationship into subject/subject creates an asymmetric binomial, bringing the concept of (Lessem and Schieffer, 2015). Through the onboarding of communities as participants, all the issues and constraints challenging the groups were recorded, and progress was made when the farmers were further engaged to proffer solutions to the surfaced issues. A significant contribution of the research was to approach the bottom of the ecosystem, acknowledging that their multifaceted challenges need a broad-based design to holistically attend to their deplorable poverty-stricken state. The Nhimbe Ecosystem has been collaboratively designed and is tackling the many issues needing attention as reasons to collaborate more and not to turn away and assist the farmers.

9.8.1 Issues found in the smallholder farming sector

Some of the issues that surfaced and attended to include:

- a) Subsistence farming practices resulting in low productivity
- b) Peasantry organisations lacking collective infrastructure, knowledge and skills to engage in farming as a sustainable livelihood
- c) Cyclical production cycles due to reliance on rain-fed water and lack of equipment to enable all-year-round intensified land and labour production
- d) Agriculture being taken as a political party activity with political agitators acting as proselytising agents to enrol members through input distribution
- e) Lack of technology and catalytic funding to transform poor, debt-ridden farmers into sustainable commercial producers
- f) Production is not market-led and uncompetitive due to high local costs of production
- g) Climate change challenges
- h) Mindset challenges – local farmers are convinced they need more external help for them to establish sustainable livelihoods through farming

9.8.2 Institutions, partnerships and structures created supporting the ecosystem strategy

In answer to these issues, the researcher redesigned TnC's organisational structure to answer the problems of socio-economic sustenance and now operates as follows:

TAFADZWA NE CHIEDZA TRUST SOCIOECONOMIC LABORATORY



Figure 9.3: TnC Trust’s socioeconomic laboratory

(Own elaboration)

9.8.3 The Heritage Communiversality

A Communiversality, a first in Zimbabwe, is poised to initiate new integral relationships with conventional universities through social innovations revitalising smallholder farmers by converting them into learning communities for integral farming businesses. The Communiversality co-works with learning institutions interested in embracing people in the productive sector in farming and related businesses like agriculture machinery and crop value addition. It will enhance the new education policy 5.0 and embrace the semi-illiterate and the bottom of the pyramid delivering vocational learning in vernacular and English. As socio-economic laboratories are developed, the Communiversality's designed meta-system will support three facets: learning/knowledge, innovation and businesses.

9.8.4 The Heritage Communiversality strategic structure

As an agent of transformation, the Communiversality delivers a message for mindset change. The message is simple: when dealing with people with low incomes, a holistic approach is the foremost approach and is mandatory for sustainable development. Secondly, locals should lead their transformation using the vitality of a place's principles.

COMMUNIVERSITY CLUSTER

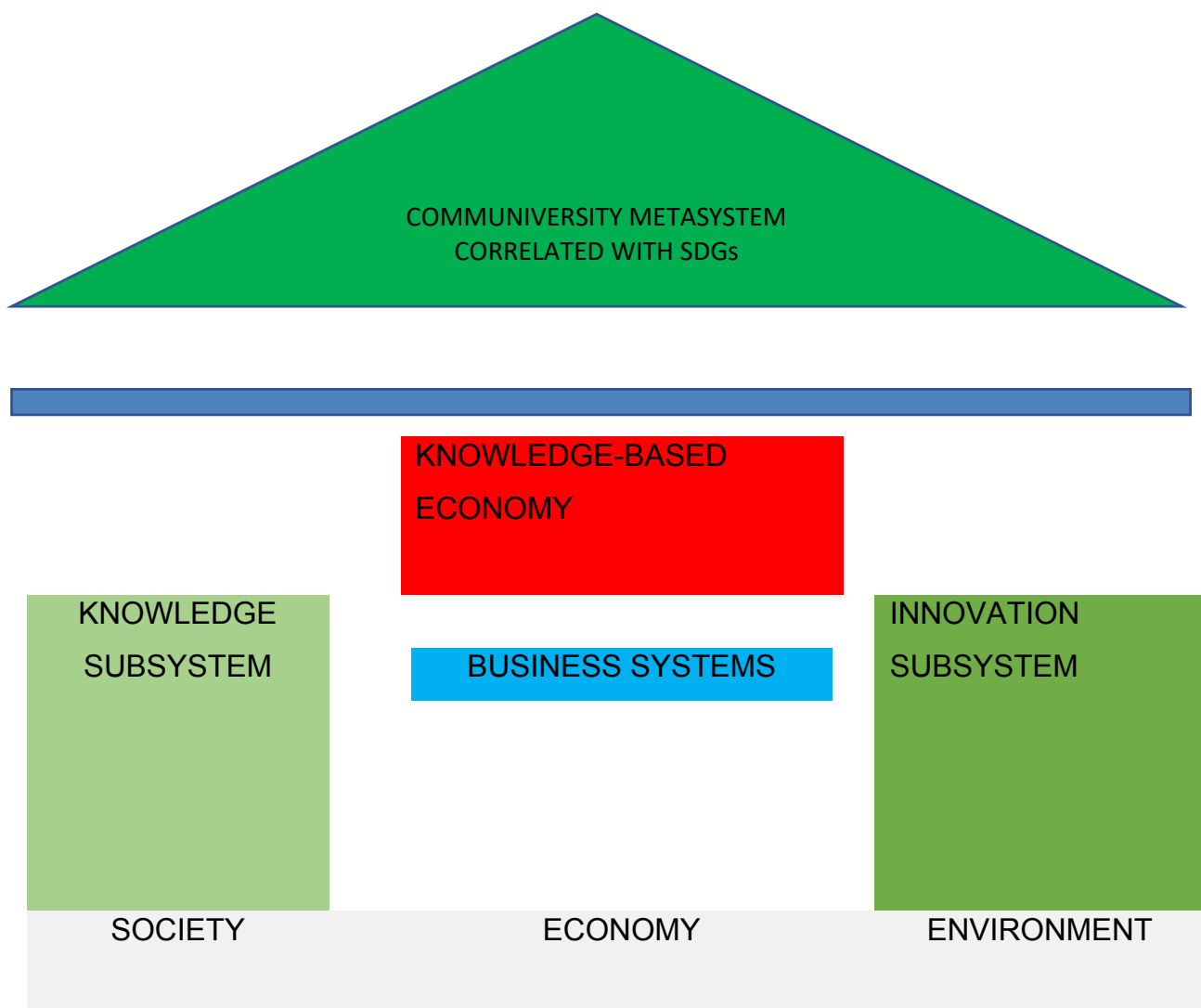


Figure 9.4: Co-created inclusive models, ecosystems and social innovations for social change

The structure allows farmers' learning at the Communiversality or in their places of work to take place. The researcher will work on Accreditation after the initial stages of the establishment of the Communiversality. The Communiversality brings learning to farming communities elaborating on integral knowledge as knowledge exchange is

transformed from book knowledge into life skills. Actors like the researcher with their development trusts like TnC and other integral enterprises provide socio-economic laboratories where the research findings are turned into solution-based models to redress imbalances and space to act out these innovations.

9.8.4.1 Food as community's integral livelihood

Speaking to issues of sustainable livelihoods and expansion of resources through tangible heritage assets, an evergreen model where farmers learn integrated farming, making them productive all year round, is being instituted. Most smallholder farmers are productively engaged five months a year due to their reliance on rain-fed water. Expanding their production cycle into other facets like value addition and wild harvest will help them transition from cyclical resources.

9.8.4.2 Food as the new frugality: The innovative economy

Zimbabwe has small grains and medicinal harvest from the forest which have been commercially ignored for centuries. The Communiversity will focus on small grains as the future grains. Moreover, industrialise the grains innovating value-added food products to expand their product range. Creativity will simultaneously make the products functional, economical, and palatable for sustainable markets, thus strengthening production and farmers' income base. Several drought-resistant fruits will promote live fences for farmers, establishing a home and communal orchard to build resilience against climate change and seasonal hunger whilst establishing windshields for farms.

9.8.4.3 Food as Medicine

The pandemic has forced rural communities to realise the golden leaf in wild plants. To that end, the Communiversity focuses on medicinal foods and plants, generating seeds to commercialise plants like Zumbani, Artemisia, Aloe Vera, Nyevehe, dried cowpea leaves, moringa, neem and African teas. Such will be value-added and marketed to build sustainable villages and farms.

9.8.4.4 Food as suppleness: *The integral ecosystem*

The study will turn food waste into other home and farm requirements like energy and furniture. Other industries like biochemistry are envisioned, and food items like shampoos, lotions, and cosmetics will be produced from food waste components currently being thrown to waste. Heritage Communiversality has acquired IP and a licence to manufacture agriculture equipment and support conventional and conservation agriculture farmers.

9.8.4.5 Food as education: *Heritage Communiversality*

The Communiversality is a centre for learning for all smallholder farmers as the curriculum is offered in vernacular, online and on-campus, augmenting learning circles based in farming communities.

9.8.4.6 Food as a culture: *Integral knowledge*

The focus is on the value addition of various traditional foods. An incubation centre is being established to capacitate farmers to add their products to their communities, expanding the post-harvest activities for additional income and reduced post-harvest losses. A blue economy is aimed at waste recycling initiated for a collective economy.

9.8.4.7 Food as a guard/armament: *Integral research and knowledge*

The Communiversality is supported by a research academy called Duranomics and will focus on collaborations to develop the indigenous knowledge-based economy. In answer to the needs of farmers who lack productivity and eradicate poverty, the simple 5 to 11 Nhimbe Goreros model co-created with farmers sought to promote the development of highly productive farmers all year, turning rural provinces across the country into productive zones. In the south, the Communiversality sought to capacitate communities with self-sufficient community-based models. Economic models on subsistence and grassroots economics will be entrenched to become social

businesses through study circles that build ecosystems supported by market-based enterprises.

9.9 Starting with What We Have

Globalisation is an issue of concern, as alluded to by Arturo Escobar in his work on *Territories of Difference* (Alexander Schieffer, Integral Development, 2015). The perfect imbalance characterises his debate, as the global dimension is about space, capital and capacity and the capacity to transform. At the same time, the local extent is restricted to geographical location, labour as a resource and backward tradition. Zimbabwe fought a global colonial master with the capacity to cut off access to international markets and worldwide financial support. Building an indigenous economy will go a long way in mitigating such cruelty and instilling food sovereignty whilst giving locals a sustainable economic reason to live locally.

Lessons to redress such are from *Cascading nutrients and energy, which is nature's method for transforming apparent scarcity into sufficiency and, ultimately, abundance*. Learners picture a cascade, like a waterfall, as a flow of nutrients that requires no power source, merely the force of gravity. The waterfall offers a visual metaphor to help us comprehend how nutrients are transported from the species of one biological kingdom to another for the benefit of all. *Absorbed minerals feed microorganisms; microorganisms feed plants; plants feed other species, with the waste of nourishing another*. Cascading energy and nutrients lead to sustainability by reducing or eliminating external inputs such as energy and removing debris and its costs, not just as pollution but also as an inefficient use of materials.

9.9.1 Remaking knowledge with solutions in new ecosystem-based relationships

The new relationship between smallholder farmers and educational institutions starting with the University of Zimbabwe and Solusi University provides enormous possibilities for combining the two types of knowledge, thus explicit and implicit, without tilting the favour towards academic ability, which has been used over the years for exploitative purposes by donors and foreign funding bodies.

The centrality towards participation has been to direct the interplay and allow the ordinary people to have sufficient control over the generation of new knowledge. It remakes the current learning and science for their communal transformation and be in charge of their destiny without leaving the country. It is effective as it will undo the helpless state of mind left by the colonial masters and perpetuated by their progeny and economic power controlling the means of production. The detractors of any meaningful development are many, and so are the victims of poverty as they form the majority on earth.

Embracing like-mindedness in new ecosystem-based relations creates platforms to embrace new policies like devolution towards self-sufficient provinces getting localised strategic direction by locals taking centre stage. The message is to build an indigenous economy for an upper-middle-class economy by 2030.

Working together towards the transformation of the Universities of Zimbabwe and Solusi as centres of enterprise development, help engage meaningfully with all critical stakeholders, students, policymakers, industry, academia and the farming community themselves.

9.9.2 The multidisciplinary approach

The research's multi-disciplinarity gives room for fresh ideas and has antecedents that could provide forerunners and co-create a self-sufficient economy, especially within the agriculture sector. It is a new dawn, and local players can chart the way forward for holistic resolution of issues. The researcher awakened a fellow PhD doctor Elizabeth Mamukwa to the strategic ecosystem call to achieve the Communiversity ethos. Dr Mamukwa will actualise her research on knowledge creation and management. It will ensure that knowledge exchange for the Communiversity is integrally done, creating micro-business-minded farmers. Dr Mamukwa established the Calabash of Knowledge, where relationships are grounded in Ubuntu, a befitting multi-directional analogue for the Heritage Communiversity.

CALABASH OF KNOWLEDGE

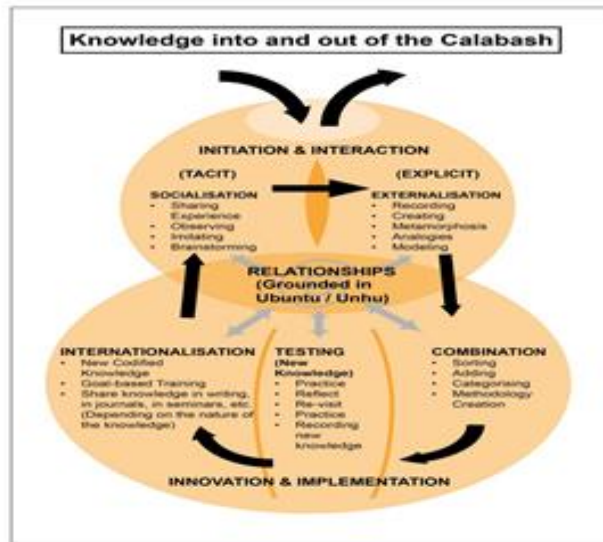


Figure 9.5: Mamukwa's Calabash of Knowledge

(Adapted from Mamukwa, 2014)

To make the Heritage Community inclusive, it will deepen the use of technology to enrich the North, where intermediate technology is innovated and exploited for societal transformation, whilst in the West socio-economic laboratories are.

9.9.3 Social change after co-innovative PAR in Zimbabwe

The research results promise poverty resolution, the sticking burning issue in rural Zimbabwe. Change of process where resolution is through writing our own socially innovative template is what is on the cards. The solution called for establishing an extended core value chain that the researcher terms the Integral Ecosystem. Lamb (2010), in his work on the three/folding – going beyond Capitalism and Socialism proposes three equally important yet seemingly contrasting spheres. Culture, law and economy, where the latter does not have to dominate others as is the case now.

Stakeholders must work together, bringing mutual respect and a shared commitment through authentic collective participation in seeking new knowledge and synergistic experiences. PAR brought autonomy to the whole ecosystem as challenges were not taken as reasons for relegation but rather caused to look for solutions as locals fight

for their culture and personality as a people who are unique and not defective or helpless. As advised by Kothari (1984), and Restrepo (1988), PAR researchers recognise the importance of autonomous movements and defend the articulation of local life as a worthy goal that is not sometimes shared by academia and INGOs. Gaventa, Nyoni, Gianotten and de Wit advised that building autonomy is a delicate affair as it strips the oppressor of his power and is made to understand how to internalise oneself. Clastres (1987) further advises that democracy includes the power to speak since the cry of people with low incomes for life and dignity is a condition *sine qua* for any contemporary ethical stance.

9.10 Summary of the Chapter

In line with Lamb (2010), Zimbabwe is journeying to build an associative economy that transits from the invisible hand to social responsibility. Developing a modern integral market is based on the components required to establish an indigenous economy where the economy is not the dominant factor but rather a vital force. It is an opportunity to transform Zimbabwe into a high-productivity agro-based nation and sustainably deal with poverty. As Borda and Rahma (1991) advised in PAR, the information can be immediately processed, confronted, and verified by motivated and fully aware participants. Creating an innovative network supported by experts speeds up social innovation into goods and services. At this point, the participants are motivated and have been informed through the research results. Institutionalising the innovations into organisations like the Heritage Communiversity will ensure that the new knowledge gained is preserved, used, and managed for social transformation. Locals are now poised to write their locally-driven template using lessons from nature and principles from the vitality of Place by Arturo Escobar. The change in the local education policy has created opportunities for industry, local social agents and academia to tap on external social entrepreneurs like Horace and open-source platforms to co-create technologically based solutions that will speak to low productivity and deliver researched technology to the ecosystems.

CHAPTER 10: EMBODIMENT AND EFFECTING

10.1 Introduction

This section is the final chapter of the Research journey. It enacts the last aspect of the **CARE** model: the research-to-innovation is actualised, and the contributions are embodied and affected thus implemented. Tapping from the four worlds, the North provided the innovation and integral knowledge exchange needed to buttress all the changes. Rao (2010) introduces the Indian concept of 'pandan' (heartbeat). Spandan is operationalised through diagnosis, discovery, and development, enabling organisations to achieve an optimal balance between what is defined as transactional and transformational and the terminal human values. It leads to management and organisations developing sensitivity to the needs of others, which they come to understand.

When such organisational sensitivity becomes integral to its work ethic and culture, an organisation can temper its commitment to task with humanity and become functionally humane. Innovation should not end up as textbooks, as with the academic fraternity. Innovations co-created along with the communities the researcher was researching have been institutionalised, and the embodiment thereof is discussed.

As amply summarised by Lessem and Schieffer (2010), the purpose is to catalyse integral transformation and impact people through innovative ways by co-creating ecosystems which communities can use and feel the impact culturally and economically. A singular, compelling focus has continually driven the researcher's entire life: to *make a difference in the quality of other people's lives*. An opportunity to use technology (northern world), regenerate knowledge (east), entrench skills development, and redistribute wealth through enterprise development (west) to communities in the south will be fulfilled. Inspiration continues from the East as Zimbabwe is a Christian nation strong in culture and Christian-based beliefs.

10.2 Catalytic Innovation Primary Qualities

According to Christensen et al. (2004), catalytic innovation has five primary qualities:

- 1) It creates systemic social change through scaling and replication,

- 2) Meet the need not served,
- 3) Offer more straightforward and cost-effective products and services,
- 4) Generate resources, even intellectual capital, initially unattractive to incumbent competitors and often ignored or discouraged by existing players as social change initially seems unprofitable.
- 5) The most essential feature of social change is that it must benefit the poor or oppressed.

The social ideas and innovations for the Research were broad-based to achieve the five listed primary qualities and were given a concrete form through four tangible institutions:

- 1) The Heritage Communiversality
- 2) Integral Partnerships with the University of Zimbabwe
- 3) Collaboration of Trans4m researchers and educators
- 4) Meaningful engagement with industry players and the private sector at local and global levels. The social enterprise promotes value addition and turning food and culture into a business as communities increase their wild harvest, thereby widening their community assets and resource base.

There was a realisation that the farmers' voices, gaps, and concerns commonly spanned across and were broad. The Research was at home with it because that is the fact of the smallholder farmer's life. For the Research to be impactful and result in social transformation, it pursued an embracive model which would cater for all the needs and aspects required to attain self-sufficiency.

Furthermore, the Research adopted an ecosystem strategy to become a sustainable reality through authentic collaboration with various experts sharing a similar ethos in sustainable community multi-sectoral development. Embodiments that holistically spoke to the farmer's voice were sought, and promising social innovations were initiated through inclusive and participatory innovation. To which the Research strove to respond, the smallholder farmers' voices came out as *disempowered, misunderstood, impoverished, and often overlooked*.

From that voice, the need was to identify what was causing the state of disempowerment and the environment that resulted in the farmers feeling misunderstood and often overlooked. The state of poverty for most farmers was evident; various statistics by international organisations like FAO (2016) and the World Bank (2018) endorsed their state of impoverishment. Lessem and Schieffer alluded to a southern relational path with a research trajectory that included four research pathways: descriptive, phenomenology, feminism, and participatory action research methodologies. The trajectory allowed the research to include the farmers collecting facts and data. More importantly, the effects of not having an enabling environment to escape the snare of poverty without adequate equipment and technology were well understood. Phenomenology allowed the Research to go beyond data collection and restriction by other methods and to use the five senses. Through stories and expressions, tears, and even silence, the community told their history and everyday experiences, allowing the researchers to enter that intimate space that questionnaires and surveys would not permit. Feminism took the Research to another level allowing the woman researcher and other women to co-create equipment which was size appropriate, affordable, and easy to the mantle and dismantle, ensuring that stamina did not stand in the way for the weaker farmers. Ergonomics issues came into consideration as the smallholder farmers' tractor for Zimbabwe was co-created. PAR allowed participation and inclusion from start to finish of Research, and farmers contributed to the initiated social innovations. They saw themselves using them to transform their livelihood strategies and resources and overcome the poverty scourge.

10.3 Appropriateness of the Four Worlds Approach

The GENE theory motivated progression through being, becoming, knowing, and delivering Christensen et al. (2004), catalytic innovation's five primary qualities (Lessem & Schieffer, 2010). This journey changed the researcher's mindset of doing business from community marketing to community building as the research trajectory was re-emphasised using the participatory method. The quest to deliver an appropriate ecosystem-based approach when working with farmers to tackle poverty-related issues became a reality through Open-Source Architecture and embracing the open-source collaborative framework. Lessons learnt from nature endorsed the need to holistically administer solutions regardless of the intended beneficiaries' class or

creed, emphasising the imperativeness of locals charting an innovative social journey for their liberation and wellbeing. Nature need not commune to work, and neither do Zimbabweans also. Available resources, when sustainably exploited, form ecosystems adequate to relinquish rural homes from poverty.

10.4 Nature of Embodiments

This chapter summarizes how the newly co-created structure was institutionalised, transiting from Research to innovation to ensure institutional sustainability. According to Steiner (1994), there are three competing principles. Thus spiritual/cultural, political/legal, and material/economic each have a legitimate role in modern society and operate in a healthy society. In embracing Steiner's three competing principles, mimicking the natural ecosystem created was a perfect example to ensure that each of the three principles was embraced and used as a contributor to emancipate smallholder farmers. In addition, those doing business with the farmers would also incorporate each aspect of the three competing principles. Stakeholders occupying the quadrants of the integral ecosystem were encouraged to come on board, acknowledging the need to depend on each other. Once acknowledged as the vital ingredient, interdependency resulted in relationships based on trust and social responsibility, forming the three-fold collaboration to serve the needs of the weak and low-income farmers.

10.4.1 Roles and responsibilities in the embodiments

The integral development trajectory was cognisant of Rudolf Steiner's perspective of societal three-folding. Giant (2018) understands that the state is too big for minor problems and small for significant challenges. According to Steiner, the three-fold social order emerges from business, government, and cultural interaction. The Research had the prerequisite of differentiating between an associative, communal, and world economy. To that end, the Research saw the need to establish an integrated multi-layered localised ecosystem for the smallholder farmer's sustainable development to attain self-sufficiency. The goal encompassed culture, the government as policymakers, and business associates as collaborators. Co-innovators embraced indigenous knowledge in agriculture and food.

10.4.2 The eminence of broad-based social innovation

Smallholder farmers are individuals at two levels, that is, at the household level and sector level. The Research established that farmers needed the four pillars identified through the Da Vinci TIPS model to fill household and sector gaps. Such a wide range of needs and aspects could only be fulfilled through an ecosystem strategy that consisted of a system network of collaborators concretised through an open-source platform.

10.4.3 Going the extra mile for completeness

The embodiments offered extra aspects over and above business, culture, and economic issues. The Research reflected a desired socio-economic enabling environment supported by the following:

- a) Local co-creation and manufacture of appropriate technology and equipment;
- b) Integral knowledge and skills exchange; and,
- c) Sustainable markets and infrastructure.

Each gap was attended explicitly to, including the uneven literacy levels as follows:

- 1) The knowledge and skills gap will be addressed through an e-learning platform administered by Communiversity Agriculture 101. An e-learning platform catered for a vernacular flavour called *Kurima Zana ne Rimwe*. Offering the learning methods in English and vernacular for the Heritage Communiversity shared with CARE Circles reflecting the inclusion of farmers who felt overlooked.
- 2) The skills gaps were covered through incubation and mentoring. Farmers advised that they learned by observations, and lessons would be better

demonstrated. Farmers' desire to learn better through observation was amply covered through incubation and vocational training.

- 3) The Communiversality acquired 10 hectares in Dowa, where skills development and food processing capacity building and incubation would cover five hectares. The five hectares were earmarked to consist of nurseries and fields to initiate commercialisation of some of the harvest from the wild and turn them into a communal commercial enterprise, as was the case with Rooibos, the South African bush tea. These would complement demo plots in the communities, and the nurseries would support scaling up as seeds and seedlings would be supplied from there.
- 4) The gap in sustainable markets was tackled twofold. Some farmers would become processors through lead-crop concepts, while others would cooperatively grow similar crops and supply agro-processors, quasi-government boards, or export to shared customers/contracts.
- 5) The issue of infrastructure was split into two: roads and equipment. The Communiversality partnered with the University of Zimbabwe and co-created two tractors. Thus, two-wheeled, motorised, and four-wheeled were earmarked for smallholders with land sizes above 30 hectares. The collaboration gave the research team a foot into local institutions of higher learning. The Universities of Zimbabwe and Solusi are being transformed into Centres of Enterprise Development. The transformation will renovate the university's engagement with industry and communities, starting in agriculture.

The tractor was the central piece to the co-creations, and the process allows up to 20 attachments to motorise each farmer's crop-wise production process up to the harvest stage. The attachments are further separated into conservation and conventional agriculture as farmers prepare to embrace mechanised conservation agriculture to heal the land and environment, building resilience against the climate crisis at our doorstep.

The social entrepreneur who volunteered to co-create the technology, Horace Clemmons, continually emphasised that the tractor was a way of thinking, not just equipment. As a technocrat, he brought an innovative mindset, enabling the community of practice to innovate further. Over and above the tractor and complex equipment, the learning cycles and heritage learning space established the e-Commerce platform, which is expected to cut intermediaries making integral knowledge more available. An e-learning platform for farmers was created to take advantage of Horace's thought that all technology should be an enabler and remove the distractions to sustainable development.

10.4.4 Acknowledging challenges like climate change and productivity in the co-created tractor and technology

The kind of smallholder farmer tractor was co-innovated, with Horace taking cues from his blueprint. While the co-innovated two-wheeled tractor is smaller than the imported ones and estimated to be competitive, it promises to land at a cost which is within reach of most communal farmers. It pushed the innovators and improved the two-wheeled walking tractor to one-driven, producing a two-wheeled driving tractor.

10.4.5 Technology justice for sustainability

Attachments were split into conservation and conventional agriculture to enable smallholder farmers to take advantage of the current national drive to partake in conservation agriculture. The move needed to be holistically implemented as it needed more critical aspects and used synthetic fertilisers and pesticides. Using organic, recycled fertiliser materials prepares farmers for sustainable agriculture, building resilience against climate change and soil depletion.

The transition may take years, and farmers know the need to transit now and preserve the land as a legacy for future generations. Developing conservation agriculture-specific attachments will ensure that farmers can marry indigenous agricultural practices and knowledge with modern technology, thereby commercialising organic and conservation agriculture to escape poverty. More importantly, motorising every production stage would go a long way in attaining ideal yields, which speaks to

production costs and profitability whilst gaining access to the global organic food market.

Market research has intimated that organic and healthy foods are too expensive and out of reach for many consumers who want to change and eat healthily. On the other hand, farmers cry about low yields due to the mundane work and lack of appropriate equipment to achieve their tasks. One immediate need for some farmers is to arrest soil depletion while feeding their families and producing excess for trade. This needs to solidify the move to co-create equipment appropriate for the farmers' land size and correct the depletion of soils. The social innovation and intermediate technology being established offers a solution to the cries coming from the farmer, consumer and soil.

10.4.6 Embodiments of concepts and models

For sustainability, the co-created social innovations call for processes and structures to be put in place as the Research attracts diverse stakeholders. A systemic approach to engagement and participation becomes mandatory as the Research affects four levels of the economy.

At a policy level, this engages three key ministries. These are the Ministry of Agriculture as the custodian institution of farmers; Ministry of Industry and Commerce as the responsible authority for machine manufacturing and value addition. The third one is the Ministry of Higher and Tertiary Education due to its parentage to universities. Looking at the contribution and input from Horace, the minimum body knowledge of students in engineering and agriculture will be definitely affected against a policy background where universities are now mandated to increase the students minimum body knowledge.

This research sought to reinvent the local agriculture machinery manufacturing industry as locals could manufacture motorised equipment for our market needs. Most electrical equipment is imported, and local farmers must fit into imported tractors and other extensive equipment offerings. The attachments currently available were earmarked for animal and draft power, and current agricultural machine manufacturers focus on manually drawn equipment. The price for the big tractors is too high for most farmers, and the tractors come with no attachments; hence land preparation and

combine harvesters are the two most covered processes leaving other processes crucial to commercial farming for the smallholder farming sector unattended.

10.4.7 Codifying Approaches and Models for Community and commercial impact

There are three concepts that the Research sought to codify and use as the social innovations are institutionalised and, in some instances, commercialised. The 4Cs, CARE, and TIPS concepts establish processes, practices, structures, and systems to strengthen the embodiments and help innovators realise their embodied ideas through communities of best practice.

10.5 CARE Approach

To enact the CARE approach, especially to the point of embodiment, TnC coined roles and developed the technical design to govern partnerships and networks. The word embodiment means an idea is concretised.

The CARE concept became tangible in the smallholder farming community by establishing learning cycles called Communal Farming CARE Learning Circles. The Circles had the following structure and roles: Facilitator, Stewards, Indigenous Researchers, and Educators to educate the farming communities and exchange knowledge integrally. The responsibility of the CARE Farming Learning Cycle was to make the links between the Heritage Communiversality, the business fraternity, and other social laboratories on behalf of the community of farmers. The structure would help engage the formal and informal organisations and institutions that can leverage community resources and assist farmers in achieving positive community-based outcomes.

10.6 The 4Cs Approach

The 4Cs approach was used to structure the engagement from call to contribution. The exact process was codified into procedures and used at the Heritage Communiversality and Community CARE Farming Learning Cycles. Recruitment and engagement processes with partners and stakeholders would be guided by such models as 4Cs, hopefully upholding the spirit of social transformation.

10.7 TIPS and Systems Thinking

Structure and systems help achieve the desired outcomes, and TIPS was used to instil a system thinking culture directing ideation to innovation. The Research managed to onboard partners and stakeholders from diverse backgrounds, such as farmers, renowned social entrepreneurs, students, universities, and government ministries. With such a profile of participants in the Research, a system to administer the co-created innovations was essential. As an integral research PhD. TnC embraced previous Research by other Trans4M fellow post-doctorates and researchers by assigning roles and responsibilities to fellow social scientists.

10.8 The Trans4m Research Network

The fusion of the four-world approach, TIPS, CARE, and 4Cs, requires codifying into processes and procedures to guide the formation of inclusive partnerships. Integral Research and its multiplicity faced with real-life issues can only transform and interact with other institutions through governed structures. A shared understanding of the integral approaches played out well among the researcher, co-PhD candidates, and post-doctorates. The Heritage Communiversity formalises diverse research backgrounds and unifies different pillars of Research into one integrated whole. Responsibilities and roles were emerging in subsets ready to set up a sustainable, inclusive system.

10.9 Dr Elizabeth Mamukwa and Knowledge Management

Elizabeth Mamukwa or as affectionately known, Dr Liz, fits into the role of a catalyst. Various research studies on entrepreneurship have shown that the continent needs more integral knowledge management and exchange; hence, many good innovative ideas go to waste. Africans lack self-confidence, and most are affluent in imported things shunning wisdom in the indigenous knowledge and traditions/cultures. Calabash principles are grounded in Ubuntu, a befitting analogy for Heritage Communiversity.

Informed by the calabash of knowledge model, Elizabeth Mamukwa synthesised how knowledge could be managed for impact in the farming community. Knowledge

creation and management is a big piece of the Heritage Communiversy and Duranomics Research Institute as it supports smallholder farmer development.

10.10 The Livelihoods Strategy

The Research established that the smallholder farming sector requires four different strategies in line with the environment and resources available to them:

- 1) For households and wards to become self-sufficient micro-farming enterprises
- 2) Provision of labour and services to the farming communities
- 3) Provincial-level farm products' value addition, or better still, on-farm value addition
- 4) Nhimbe Financial Inclusion instruments and local agro-processing companies.

The research used previous research studies, and a checklist from Scoones (1988) was adopted for this current study as it is holistic. The community of farmers and agro-processors survived in a polarised state. They also came from a colonial background that taught them they were earmarked as peasants and employees. The same people now own large tracts of land-living in a transition country. Education 5.0 would complement The Heritage Communiversy as a platform to offer the productive sector, farmers' learning space, and integral knowledge to expand their community assets value, adding them to products with a competitive advantage in sustainable markets. Vocational training in value addition and farm waste recycling would be the order of the day to enhance income while reducing input costs. The once centralised economy that benefitted the former colonial masters was now being devolved into provincial states making each province a self-sufficient economy. Expanding peculiar community assets by capturing harvests from the wild and processing them into superfoods was a vast opportunity.

10.11 Realities Experienced during the Research

This Research was discursive, leaning more on a cyclical journey than the linear presentations outlined in various textbooks. The journey is best represented by the

socially innovative tree with slow growth, organic-bearing fruits attuned to their natural conditions. The Nhimbe Ecosystem is metaphorically befitting to represent this social journey. It can withstand the vagaries of weather, and climate change effects continue to bear fruits for society to enjoy and benefit from.

The issue of going integral was profound. As has been the trend with many social movements, profit-making and corporate responsibilities are at odds with communal goals. Many companies smoke screening the CSR value to look good to society. Going integral requires social- structural adjustments within corporate organisations. Recent developments show a mutual dependence between society and corporations, implying that business decisions and social policies must create shared values (Porter &Kramer, 2006).

Successful corporations need a healthy society. Most corporations, even those with a shared value theme, still only interact with society on a for-profit basis. They need to go beyond the numbers authentically. For the researcher, more than the shared value viewpoint is needed. Companies must integrate a social perspective into their strategic core frameworks to understand competition and develop their business strategy.

More must be done; suppliers to large corporations, especially low-income groups, must receive more support, and the value chain should be extended into an ecosystem. Interdependence becomes the critical factor to be recognised by all and cherished, as depicted below:

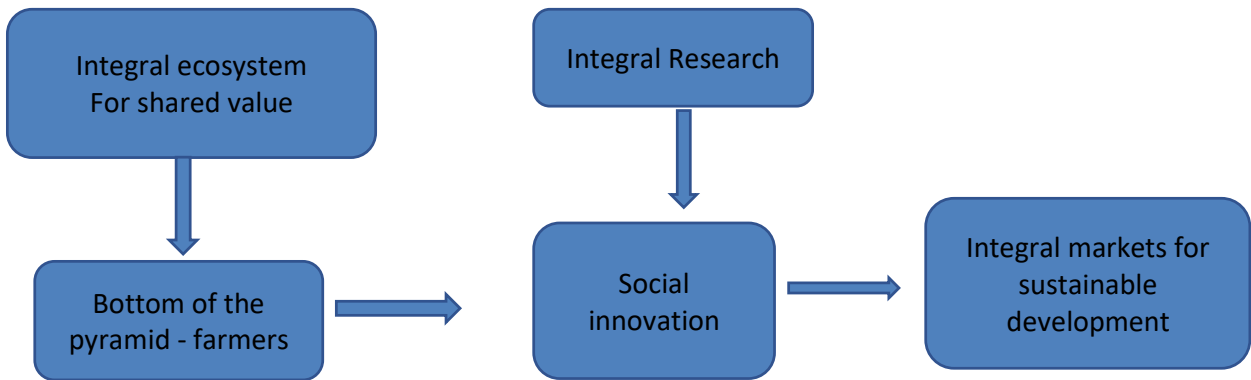


Figure 10.1: Interdependence ecosystem of suppliers to corporates
(Adopted from Steiner 2014)

The embodiment of the research-to-innovation in the life of the researcher/innovator is a crucial prerequisite for sustainable social innovation (Schieffer, 2016). The *aha* moment for the researcher was when the change so much awaited had to start with her. If not like everyone, she would wait forever for the required change to come. The transformation started with her mindset change, which called for quitting her executive job to create free space to think and do things differently and independently. To impact more people and engage professionally, an enterprise was created. The first stakeholder to be in touch with was the community, which expanded into society and the global village.

10.12 The Integral Ecosystem for Sustainable Development

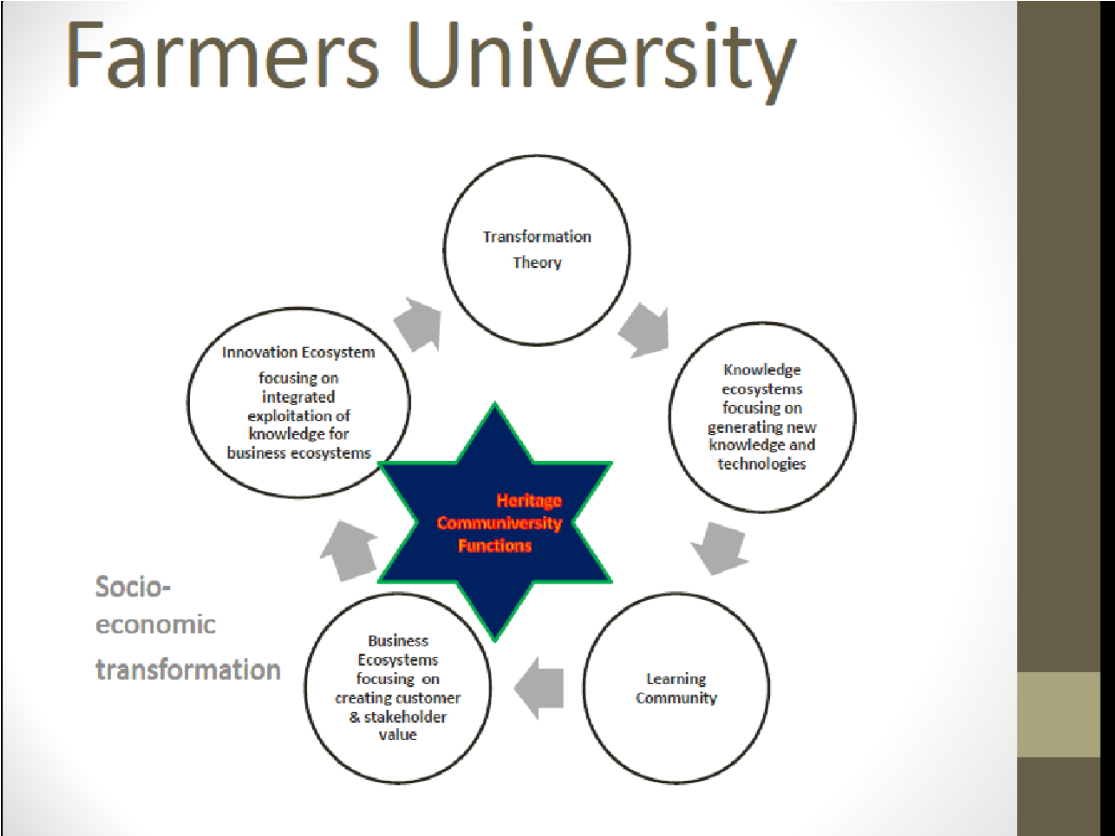


Figure 10.2: A famers’ university for an integral ecosystem for sustainable development

(Own elaboration)

A farmers' university aligns with the five-helix model of the quintuple which adds the natural environment to knowledge creation, production, application, and diffusion, transforming innovation sensitive, to social ecology to meet the context of society, Etzkowitz & Leydesdorff (2000), . It is an analytical framework for sustainable development and social ecology, relating knowledge and innovation to the environment.

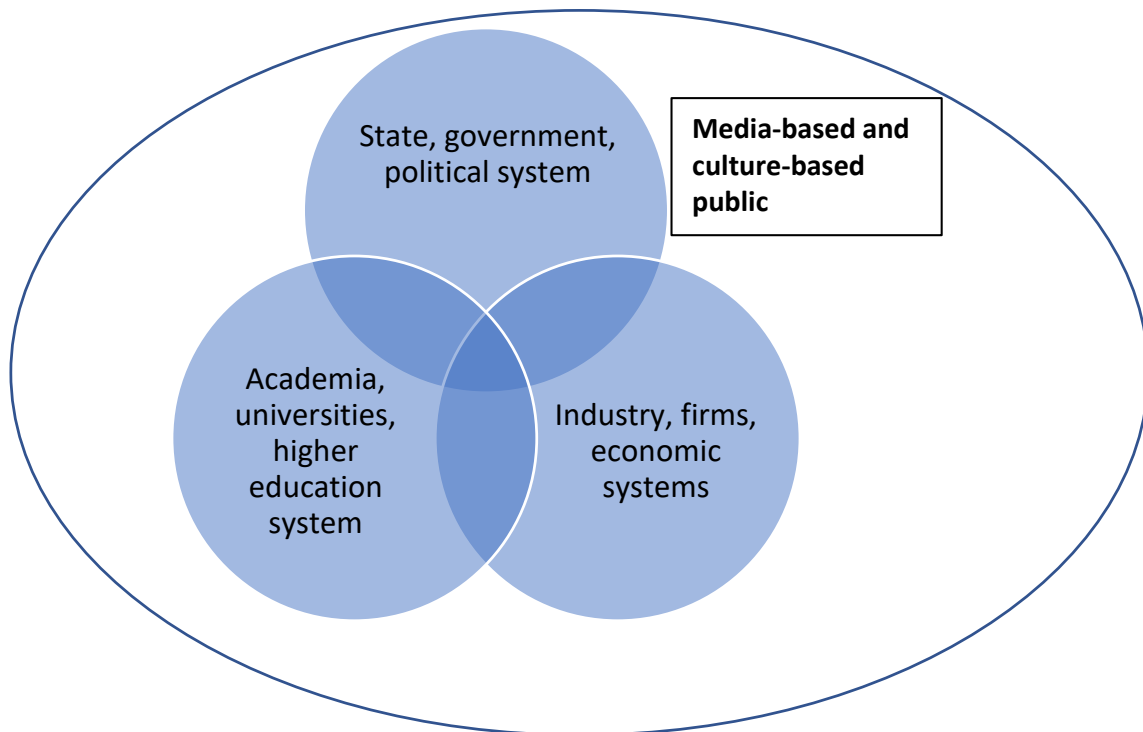


Figure 10.3: The natural environment of society
(Adapted from Etzkowitz & Leydesdorff, 2000)

Steiner (2014) recommended that we depend on each other's work to meet our material needs. As isolated individuals, most of us would hardly survive because we are consumers and producers in a complex worldwide web of interdependence. We create laws and agreements to regulate our formal relationships, and we all have a legitimate expectation to participate in choosing such rules. Entrepreneurship and the dynamics of innovation framed the policies and strategic decision-making process at the inception of Heritage Communiversities. Through entrepreneurship and establishing an indigenous economy, will only poverty be sustainably dealt with in Zimbabwe. Ordinary people are discouraged and have gone through a lot, and informal business methods and the Aid industry have bred 'shortenism. Shortcuts to success, and many

people live for now with no strategy for the future. A blame game is the order of the day. In Zimbabwe, the experience of working up with cash balances in banks converted into nothing has left many masses needing more confidence in banking systems and most structures meant to be conduits for development and trade.

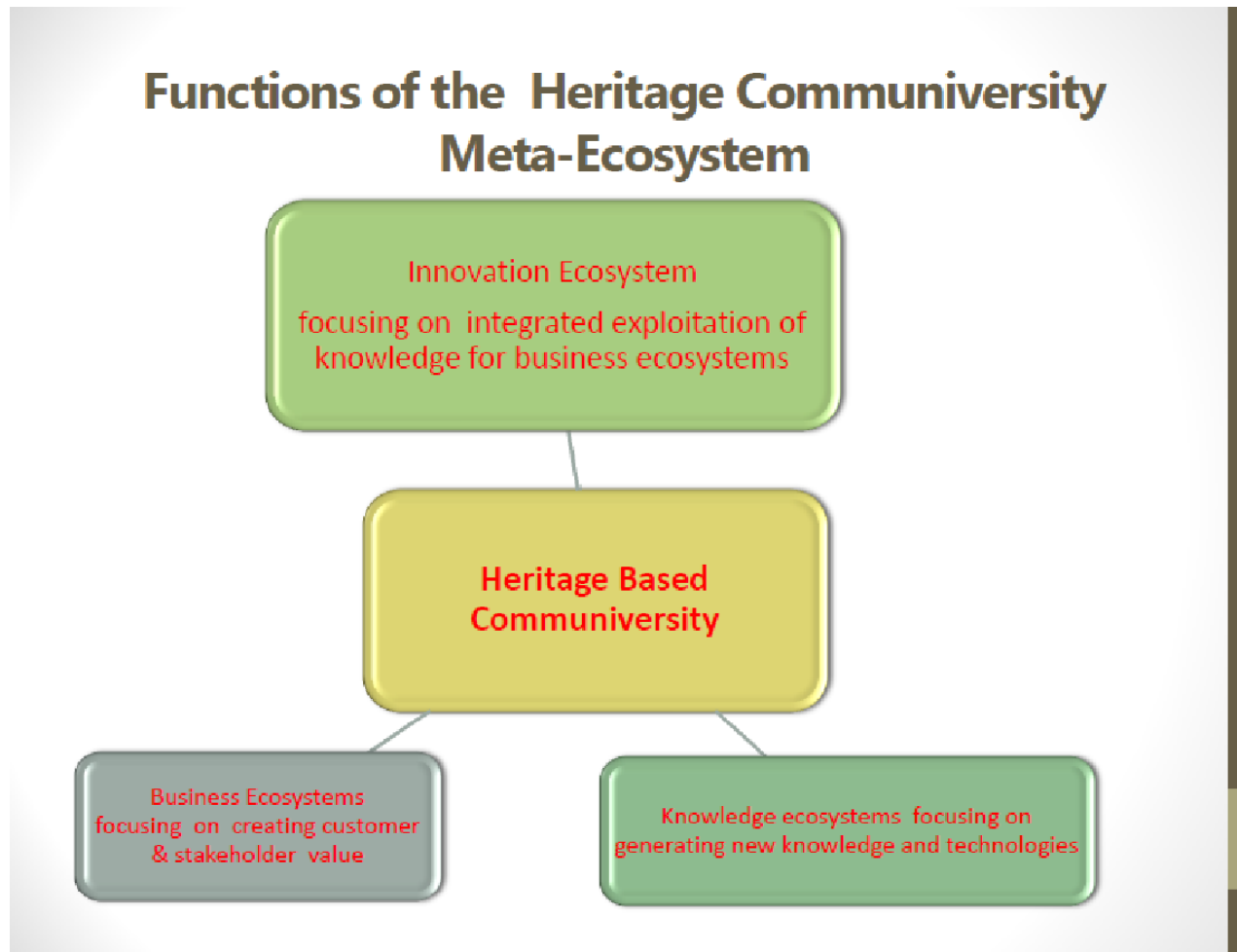


Figure 10.4: Functions of the Heritage Communiversality

It could be termed integral community building for Zimbabwe in particular. Through an ecosystem approach, the various stakeholders' social innovators, industry, policymakers and the community co-innovated social innovations believed to transform the nation of Zimbabwe. As the researcher re-vision the land farmer's regenerated livelihood strategies, all her co-creations could be summarised into the customised funding and business exchange model frugal but need all to play their part as depicted below:

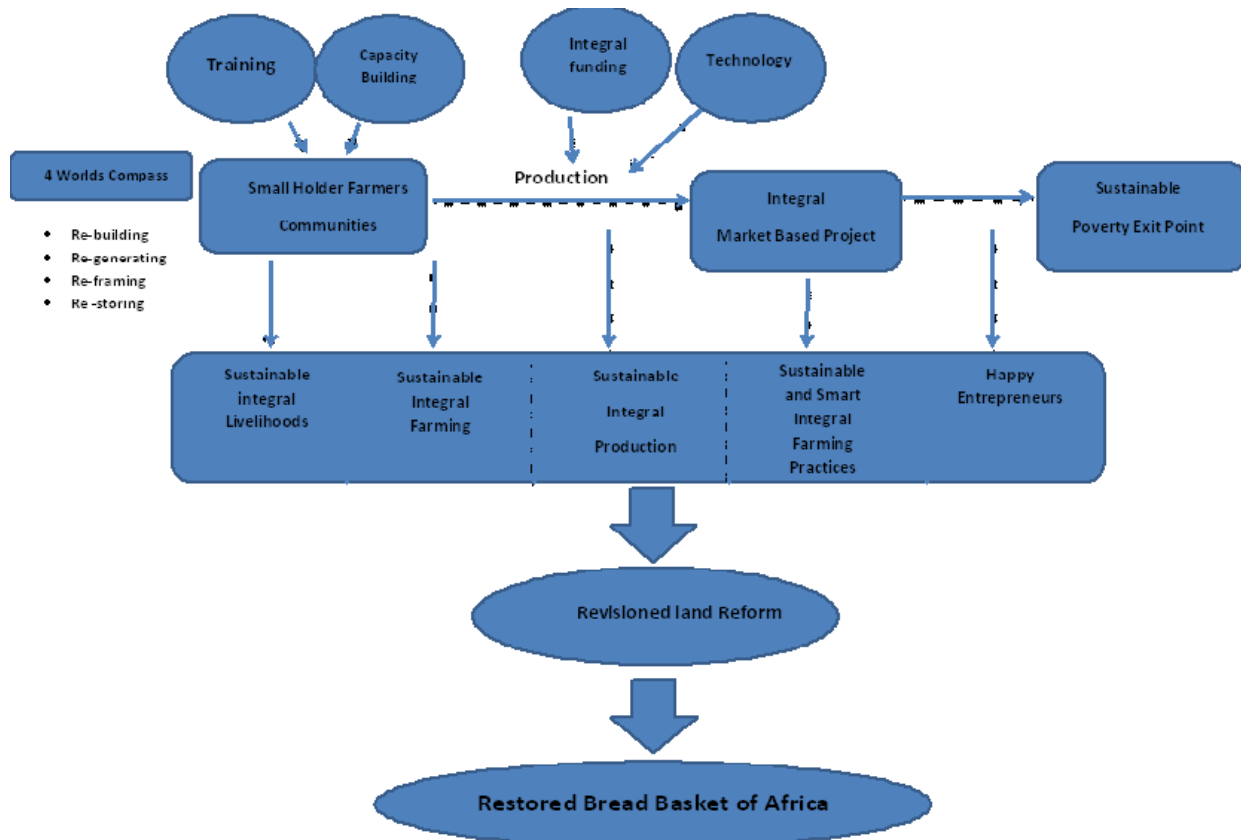


Figure 10.5: Customised Ecosystem Funding and Business Exchange Model
(Own elaboration)

The customised funding and business exchange model indicates how a balance between the spiritual and the material, and the natural and the social, on the other, eventually achieve an integral ecosystem.

10.12.1 Livelihoods strategy in place of employment

Technology motorising all stages of production would make this a reality. Farmers would be enabled through technology justice to produce above subsistence levels and attain optimal production. In place of employment, locals are supported to be self-employed and follow their best-suited livelihoods strategy.

10.12.2 Self-sufficiency and vitality of the place

Commercialising indigenous medicinal plants and foods and creating community living assets supplement food resources and income for farmers. An example of Zumbani tea has demonstrated the potential of this bush tea.

10.12.3 The Heritage Communiversity

The education and research centre has been registered with the relevant ministry. The co-creating of the industrial-skills curriculum will provide farmers with vocational learning and incubation required to consolidate their skills. This would be a centre for integral knowledge creation and exchange. The centre would enable endogenous knowledge creation and exchange, pursuing the establishment of an indigenous economy led by educators, researchers, and communities.

Taking a leaf from economic growth in countries like Nigeria, poverty and unemployment blight the lives of many locals amid plenty, raising inquiry about more integral approaches to sustainable development. All social scientists interested in sustainable development must go through the integral journey to bring a business mindset and envisaged change.

10.12.4 The Centrality of the Heritage Communiversity

The end effect of the Communiversity is to establish and scale-up learning communities so that development is enhanced through technology and integral skills transfer for it to be sustainable and viable. The ultimate purpose of the journey was to build a community of practice, participating in local and global research networks. It would help develop an Inter-Institutional Ecology/Genealogy. Of paramount importance is how such institutionalisation takes place in ways that promote a potent force for institutional transformation and dissemination of transformative Research and education. It should be for both indigenous and exogenous, within and outside individual enterprises/communities so that fully-fledged "embodiment" occurs. Through learning, communities focus on community building and can be capacitated in an Afrocentric way. The integral ecosystem model embodies all the co-creations of technology, management, systems, integral Research, and science that bring the four

worlds on board. Previously, these aspects were spasmodically brought to communal people; hence inadequate social innovation was achieved.

Through the integral ecosystem, ultimate transformation is holistically achieved and summarised in the researcher's model, the integral ecosystem that imitates the natural ecosystem. The open-source engineering and innovation challenged the disadvantaged communities to move from grants seeking to social innovations and operate an integral ecosystem. The system brings on board wholeness and healing through the holistic resolution of issues that inhibit development and wealth creation at the bottom of the pyramid. The interdependence requires *Nhimbe*, but *Nhimbe* without production and harvest takes low-income people back to poverty; hence this is embedded with *muchero*, a fruit. For fruit to be produced, the plants in the wild demonstrate a lot of cooperation and interdependence. God, in his wisdom, ensures that The Nhimbe Ecosystem is farmed and fed in His way, lacking nothing and producing fruits that have no side effects after eating. However, most are nutritional and medicine to the body and soul. Paradoxically, the same tree sheds its leaves that fertilise the ground and give it nutrients to bear fruit, meaning the farmers are expected to carry their load and produce for a profit without free handouts.

The social journey embraced communal learning taking it to another level and deconstructing education for optimal productivity through knowledge management for optimal production.

The concept of 'open-source tractor and designs for attachments brought forward by Horace Clemmons availed flexibility of hydraulic and electrical controls with great potential for people with limited literacy who need work and motorise their operations. Sustainability livelihoods will be enhanced through motorised operations for sustainable profits. The pandemic obliged the digital culture change as most businesses in the informal sector, including smallholder farming, could not trade. Integral technology is helping farmers re-learn production skills through e-learning platforms as the digital culture changes. The Heritage Communiversity, besides deconstructing pillars, will help to redefine the new education system 5.0 to include the productive population who would not ordinarily find themselves learning and pursuing integral knowledge. Education 5.0 has been redefined to speak to poverty whilst the students' minimum body knowledge is being enhanced.

10.13 Conclusion

In the final analysis, Lessem (2010) argues that the failure of a society to develop globally is not due to its economic limitations in isolation but to the failure of nature and culture, technology and economy, to co-evolve in unison under the rubric of an integral polity, altogether aligned with that particular society. This approach made TnC develop the desire to release society's genius. In this case, the research demonstrated how pursuing integral advantage may arise by cementing all the missing aspects in the ecosystem solution-based template.

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