

**Determinants of Population Development in Planning for Southern Africa**

**By**

**LERATO MMOTLANA**



Submitted in fulfilment of the requirement for the degree

**Master of Development in Planning and Management**

In The

**Faculty of Management and Law**

**School of Economics and Management**

At The

**University of Limpopo**

**Supervisor: Dr MM Selepe**

**Submission Date: October 2021**

## **DECLARATION**

I declare that determinants of population development in planning for Southern Africa is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references and that this work has been submitted before for any other degree at any other institution.

.....

**Mmotlana Lerato**

.....

**October 2021**

## ACKNOWLEDGEMENT

Writing this dissertation has proven that perseverance is key to success, I have overcome significant academic challenges and succeeded. This study would not have been conducted without the assistance, patience, and advice of the individuals listed below. They are the ones to whom I owe my heartfelt thanks.

To God be the glory, great is your faithfulness to me. Your mercies have continuously poured into this work and kept me content.

Dr Selepe who without fail took over the wheel to mentor and supervise me despite his many other academic and professional commitments notwithstanding limited time constraints. His support, wisdom, knowledge and commitment to the highest standards inspired and motivated me despite many challenges we might have faced.

To my late father Mr Motlana, who till his last days he ceased not in his support and encouragement. Your exhaustive belief in me and my study showed in your loving and unselfish care towards me.

To my family, friends and academic support systems who continuously support and are patient with me. Your sacrifices and love greatly proved that discipline and compromise go a long way even if there were times when I contemplated giving up.

A special thanks to the University of Limpopo and the Department of Development Planning and Management for granting me this opportunity.

Lastly to Prof Tsheola and Dr Ramoroka who worked with me from the inception of my study till their departure from the University, your efforts are paying off. I thank you.

This dissertation is my proudest work in academia.

## **DEDICATION**

To God for all his glory, this dissertation is a special love letter to my late father, Mr W.M Motlana your words of encouragement will live with me forever as you rest in eternal peace.

Dr Selepe your efforts in ensuring that this endeavour is a success is greatly appreciated and noticed.

To my extended family and friends, I greatly appreciate your support.

Love-Kgabo!

## ABSTRACT

Population development planning has continued to be a battle for both developed and developing countries, as such it has been used as an exploitative tool and a political instrument to manipulate societies. China has offered a perfect example with its one-child policy. Although china's one-child policy has been in use for over 35 years, and this approach was to control the fertility rate under the notion of planned and facilitated economic growth. The temporary brake measure saw its epic fail in the current 21st century; this resulted in the loosening and relaxed approach of the two-child policy as a measure towards population development planning. The relaxed policy and the Chinese withdrawal from controlling the reproductive systems of communities came soon after the realisation of the current underdevelopment within the country. The support from political allies and the rushed policy implementation was likely fuelled by the lack of understanding in terms of population development and planning. To solicit the incision of the study, qualitative data analysis, thick descriptions and classifications were utilised. Thick descriptions involved the expressions of meaning, contexts and, where relevant, intentions relating to conceptions, approaches and determinants of population development were planned. Contexts included the geographic, cultural, policy, historical, demographical, legislative, social, economic, political, and environmental and so on for Southern Africa and its states. Planning is value-laden; therefore, intentions relating to the adoption of family planning policies and their confusion with population development planning in Southern Africa will be discussed. For quantitative data, PCA was used to analyse the data into a variety of summary statistics. Irrespective of varied reasons presented as the culprit of ineffective population development in planning, this study argues that determinants of population development should be primate to attendant planning in Southern Africa.

## TABLE OF CONTENTS

DECLARATION .....	ii
ACKNOWLEDGEMENT .....	iii
DEDICATION .....	iv
ABSTRACT .....	v
TABLE OF FIGURES .....	x
CHAPTER ONE .....	1
INTRODUCTION AND BACKGROUND .....	1
1.1 Introduction .....	1
1.2 Statement of the Research Problem .....	4
1.3 Research Questions.....	5
1.4 Aim and Objectives .....	6
1.5 Definition of Terms .....	6
1.5.1 Population development .....	6
1.5.2 Planning.....	7
1.6 Literature Review .....	<b>Error! Bookmark not defined.</b>
1.6.1 Competing conceptions of population development.....	<b>Error! Bookmark not defined.</b>
1.6.2 Conceptions and approaches to development planning.....	<b>Error! Bookmark not defined.</b>

1.6.3	Population development planning discourses for developing countries	
	<b>Error! Bookmark not defined.</b>	
1.6.4	Determinants of population development in planning for developing countries .....	<b>Error! Bookmark not defined.</b>
1.7	Research Design and Methodology .....	<b>Error! Bookmark not defined.</b>
1.7.1	Research design.....	<b>Error! Bookmark not defined.</b>
1.7.2	Description of the study area .....	<b>Error! Bookmark not defined.</b>
1.7.3	Kinds of data required.....	<b>Error! Bookmark not defined.</b>
1.7.4	Target population.....	<b>Error! Bookmark not defined.</b>
1.7.5	Sampling design .....	<b>Error! Bookmark not defined.</b>
1.7.6	Data collection techniques.....	<b>Error! Bookmark not defined.</b>
1.7.7	Data analysis methods .....	<b>Error! Bookmark not defined.</b>
1.7.8	Validity and reliability .....	<b>Error! Bookmark not defined.</b>
1.8	Significance of the Study.....	9
1.9	Ethical Considerations .....	9
1.10	Summary and Thesis Outline.....	10
<b>CHAPTER TWO .....</b>		<b>12</b>
<b>THEORETICAL INCISION OF THE STUDY.....</b>		<b>12</b>
2.1	Introduction .....	12
2.2	Competing Conceptions of Population Development .....	13
2.3	Conceptions and Approaches to Development Planning .....	21

2.4	Population Development Planning Discourses for Developing Countries .....	26
2.5	Determinants of Population Development in Planning for Developing Countries.....	33
2.6	Conclusion .....	35
<b>CHAPTER THREE.....</b>		<b>44</b>
<b>POPULATION DEVELOPMENT WITHIN THE SOUTHERN AFRICA CONTEXT .....</b>		<b>44</b>
3.1	Introduction .....	44
3.2	Competing Conceptions of Population Development.....	45
3.3	Conceptions and Approaches to Development Planning .....	50
3.4	Population Development Planning Discourses for Developing Countries .....	52
3.5	Determinants of Population Development in Planning for Developing Countries.....	78
3.6	Conclusion .....	84
<b>CHAPTER FOUR.....</b>		<b>86</b>
<b>RESEARCH FINDINGS, ANALYSIS AND INTERPRETATION.....</b>		<b>86</b>
4.1	Introduction .....	86
4.2	Document Analysis Findings.....	86
4.3	Conclusion .....	96
<b>CHAPTER FIVE.....</b>		<b>97</b>
<b>SUMMARY, CONCLUSIONS AND RECOMMENDATIONS .....</b>		<b>97</b>
5.1	Introduction .....	97

5.2	Summary.....	97
5.3	Recommendations .....	98
5.4	Conclusion .....	99
	<b>REFERENCES.....</b>	<b>100</b>
	<b>APPENDICES.....</b>	<b>115</b>
	Appendix A: Domains, Variables and Indicators of Population Development Policy and Planning.....	115
	Appendix B: Confirmation of Editing Services .....	119

## TABLE OF FIGURES

Figure 1: The correlations between the main domains of population development planning .....	88
Figure 2: Collinearity Statistics based on the competing concepts of population development.....	90
Figure 3: A model summary of domains as approaches and conceptions to population development.....	91
Figure 4: ANOVA statistics for domains of population development planning.....	92
Figure 5. Depicts unstandardized Coefficients and Standardized Coefficients of the domains of population development.....	95

## CHAPTER ONE

### INTRODUCTION AND BACKGROUND

#### 1.1 Introduction

Population development, albeit central to human existence, has remained scarcely understood (Bradshaw & Brook, 2014; Josephson, Ricker-Gilbert & Florax, 2014; Allen, 2017). Societal progress is itself predicated upon decision-making processes about population development (Tsheola, 2011, 2012a). The processes in question denote the phenomenon of population development planning, which has historically been conflicted with family planning (Horton & Peterson, 2012; Muhoza, Broekhuis & Hooimeijer, 2014; Diachenko & Zubrow, 2015; Mukaba, Binanga, Fohl & Bertrand, 2015; Norling, 2015; Feng, Gu & Cai, 2016). For the same reasons, the past half-century has been dominated by demographic approaches to insights into fertility, contraceptive prevalence rate, discrepant behaviour, fecundity, women's reproductive intentions and demand for family planning services (Horton & Peterson, 2012; MacQuirre, 2014; Muhoza et al., 2014; Mukaba et al., 2015; Norling, 2015; Rossouw, Burger & Burger, 2012). The concept of "Unmet Need for Family Planning" has come to captivate fertility research, simultaneously becoming a key indicator for Millennium Development Goals (MDG's) which have been superseded by the Sustainable Development Goals (SDG's) (Lomazzi, Borisch & Laaser, 2014; MacQuirre, 2014, Norling, 2015). In this way, the necessary search for determinants of population development remained frustrated whilst planning continued to be poorly informed.

There exists a multiplicity of variables that shape national population development (Ohadike, 1992; Bradshaw & Brook, 2014). However, the complexity of the interactions of the multiple variables that impact national population development has eluded policymakers, especially in developing countries (Canning & Schultz, 2012; Mukaba et al., 2015). Therefore, state population development planning has always been based on narrow simplistic determinants, which are not reflective of the complex reality of human existence (Hayes, 2006; Ezeh, Bongaarts & Mberu, 2012; Norling, 2015). The latter implies that ideal population development planning would entail consideration of a multiplicity of variables and their interactions in at least six domains,

which are demography, economy, social fabric, politics and administration, environment and governance and institution (Ohadike, 1992; Canning & Schultz, 2012; Ezeh et al., 2012; Bradshaw & Brook, 2014; Robinson, 2016).

As part of the formally colonized continent, Southern Africa's population development has merely emulated Western traditions that conflated population development planning with family planning. Uche (2015:191) observes that "African states and governments appear to have imbibed a culture of mimicking what is in vogue on other clines". That observation remains true for population development planning, which is shaped for Southern Africa by external forces. To this extent, Southern Africa's external relations are, in addition to demographic approaches, crucial for understanding determinants of population development and adequately informing attendant planning (Peh & Eyal, 2010). Given the vogue of "China's economic involvement in Africa" as noted by Peh & Eyal (2010: 4729), it could have been understandable if Southern Africa's population development were reflective of the Chinese planning.

Indeed, it could be expected that as "China's economic and political involvement in Africa has increased exponentially" (Peh & Eyal, 2010: 4729), Southern African states would equally look to the East for population development planning inspiration. Evidently, Southern African states have appeared to hold a fragmentary approach that does not discern the intricate linkages between economic development, financial credits and infrastructure, on the one hand, with population development planning, on the other. Even as China's ideological stance on state capitalism captivated countries such as South Africa, Southern Africa continued to mimic population development prescriptions of family planning which are preached by the West. China's phenomenal economic growth which impacted "Africa's broader economic development policies" (Peh & Eyal, 2010: 4729), did not sway the Southern African states' perceptions on population development planning as a rights-based Western family planning. Western perceptions of China's increased presence in Africa has simultaneously grown negative to suggest that it was disruptive of development, repetitive of the West's old colonial policies and/or a brand-new form of colonialism (Peh & Eyal, 2010). African states have instead continued to treasure China's presence for financial credit and

investment in infrastructure projects, rather than for the one-child per couple policy. In this way, Southern Africa has demonstrated that population development remained fragmentary as Western-style family planning.

Also, population development planning has been exploited as a political tool for control of societies (Haase et al., 2014); and, China has offered a perfect example with its erstwhile one-child-one-couple policy (Hayes, 2006; Feng et al., 2016). For instance, population policies of countries such as Indonesia, the Democratic Republic of Congo and India are founded on the theoretical assumption that demographic variables are primate to determining national development (Hayes, 2006; Feng, Cai & Gu, 2012; Mukaba et al., 2015). To be precise, the thinking is that high fertility rates inhibit population development, which has however been conclusively dismissed by a variety of studies (Banister, Bloom & Rosenberg, 2010; Canning & Schultz, 2012; Feng et al., 2016). Thus, the question of the variable(s) that should inform population development planning, especially for developing countries that have experienced harsh strands of colonialism and apartheid such as South Africa, remains unresolved. Apartheid South Africa has itself presented the worst evil of such population control wherein certain sections of the population were subjected to birth control mechanisms ranging from pills and injections without securing consent (Seekings, 2013; Norling, 2015). Arising out of apartheid population planning, a democratic South Africa could have been expected to be progressive. However, as Seekings (2014: 1) notes, "Contrary to the predictions of mainstream political theory and the expectations of the majority of observers on South Africa, the formal foundation of representative democracy offered only a moderate push to pro-poor policy formulation and execution." This population policy orientation entails birth control-based planning which is justified through the "Unmet Need for Family Planning" research. The study seeks to examine determinants of population development that should be primate to attendant planning in Southern Africa.

## 1.2 Statement of the Research Problem

The study argues that, notwithstanding the fascination with birth control-based family planning, population development is in reality shaped by a diversity of determinants that are generally ignored in attendant policy and planning. Dismissive of the idea of “perfectibility of human society”, Malthus argued that “inequality was a spur to improvement – a spur that welfare blunted” (Allen, 2017: 30). In essence, this interpretation of Malthusian doctrine shows that the current fascination with family planning for birth control is misleading. Even in 1798, population and food supply were understood to be having a direct oscillating relationship over time (Bradshaw & Brook, 2014; Allen, 2017; Curtis & Jones, 2017), thereby eliminating a sense of cause-effect inevitability. This interpretation implies that population development is not just a function of food supplies; and, that the ongoing misunderstanding of the Malthusian doctrine has resulted in unquestioning reverence for Western-style birth control-based family planning. Beyond the doctrinal bases, Malthus’ argument was equally theological because he believed that “God would not provide” and that unfettered reproduction “was not always sensible” (Allen, 2017: 30). Almost 220 years after 1798, research has not unravelled the determinants of population development; and, Southern African states have continued with family planning-based policies. As already stated, Malthus did not believe in pro-poor policies and/or welfarism; therefore, lending the doctrine for justification of contraception, because vice and wars were deemed immoral and/or unethical.

The irony for Africa is that of a rich continent endowed with mineral and biodiversity wealth, whereas the majority of the 949.5 million people in the 48 Sub-Saharan African countries “remained trapped in poverty” during 2015 (UNDP, 2016; Allen, 2017; Curtis & Jones, 2017). According to Nally (cited in Allen, 2017: 31), Malthusianism is “more about the condition that underwrites population growth, (and) the landholding situation”, because the world does “produce more than enough food to feed the population”. In this way, the Malthusian argument allows for discerning of “large-scale problems and phenomena” (Allen, 2017: 31) relating to population development and planning. Malthus doctrine provides a perspective on current global problems relating to population, development, food production, planning, trade relations, environmental

management, human rights and health issues. That is, Malthus provides the basis for research problems rather than solutions. Even when Keynes worked on the “relationship between debt, finance and the production and consumption of food during and after the First World War in 1912 and 1914 ... (he unavoidably turned) to Malthus” (Allen, 2017: 30-31). That confirms the unity, rather than fragmentation, of population development with the six domains of human existence. To this extent, population development planning cannot degenerate into birth control-based family planning. Equally, political debates related to famine have inadvertently relied on versions of the Malthusian doctrine, arguing that “a population boom and ... (inadequate) land coupled with an ecological crisis and repeated failures of ... (crop) harvest caused mass starvation” (Allen, 2017: 31).

The Cambridge Global Food Security Initiative forecasts that the global population would reach 9 billion by 2050 whilst “food security” has become an enduring challenge for humanity (MacQuirre, 2014; Allen, 2017; Curtis & Jones, 2017). Given that population involves people who strive for development, integration of the two concepts in the era of widespread poverty, inequality and discriminatory societal progress, invokes the notion of planning. The latter would remain a pipedream that would evaporate hopes of the majority of developing countries’ population if it is not informed by genuine determinants of population development. The study, therefore, seeks to apply statistical modelling of the Principal Component Analysis (PCA) to establish the interrelationships of a variety of variables wherefrom determinants of population development would be identified for planning in Southern Africa.

### **1.3 Research Questions**

The general research question of the study is: how should population development planning be determined in Southern Africa? Specific research questions are drawn from the general research question as follows:

- What are the competing conceptions of population development?
- What are the conceptions and approaches to development planning?
- What are the population development planning discourses for developing countries?

- What are the determinants of population development in planning for developing countries?

#### **1.4 Aim and Objectives**

The study aims to investigate the determinants of population development planning. To operationalize this aim, objectives are developed as follows:

- To analyse the competing conceptions of population development;
- To examine the conceptions and approaches to development planning;
- To uncover the population development planning discourses for developing countries;
- To establish the determinants of population development in planning for developing countries; and
- To recommend possible strategic measures that would shape the processes of population development planning for developing countries.

#### **1.5 Definition of Terms**

For the study, population development and planning are defined hereunder, because of their specialised concepts.

##### **1.5.1 Population development**

Population development refers to the attainment of three core values of enhanced standards of living, high self-esteem and total freedom of choice, which are shared by the most in society (Bradshaw & Brook, 2014; Mukaba et al., 2015; Robinson, 2015, 2016). In such a situation, societal progress is commonly shared, whilst inequality and poverty are at their lowest levels, and most are empowered to be able to productively take and make use of available opportunities. The study avoids a narrow understanding of population development because it would dedicate to mere birth control-based family planning rather than genuine population development planning.

### **1.5.2 Planning**

Planning refers to the process of decision making that seeks to conceive measures, inclusive of the allocation of resources, for dealing with future uncertainties (Ohadike, 1992; Tsheola, 2011; Canning & Schultz, 2012; Ezeh et al., 2012; Bradshaw & Brook, 2014; Robinson, 2016). This definition avoids the simplistic thinking about population size and absolute resources scarcity because it evokes a sense of social, economic, demographic, political and administrative, governance and institutional as well as environmental context. Planning involves “anticipation of the future and formulation of systematic programs of action for the attainment of the goals set through policy ... objectives” (Theron, 2008: 46; Tsheola, 2011: 84). Tsheola (2011: 84) concurs with Conyers & Hills (1990: 62) that planning is “a process that involves making decisions about alternative ways of allocating available resources to achieve particular goals ... in the future”. To this extent, this definition of planning as a process of decision making accurately captures a broader and deeper understanding of the integrated concept of population development planning.

### **1.6 Theoretical Framework**

The theoretical framework for population development consists of four theories. Population growth plays a different role in each of these theories. Firstly, for the neoclassical economists, high population growth is a neutral factor; it has no intrinsic effect on the environment. How population growth affects the environment depends on whether free market policies are operative. In an efficient market, population growth can serve to induce innovation and the development of advanced technologies. In an economy full of distortions, high population growth can exacerbate the effects of these distortions. Secondly, for the classical economists or natural scientists, high population growth is the independent factor causing environmental degradation (Jolly, 1994:61-62). As an increasing population puts pressure on fixed available resources to maintain or increase the population's standard of living, environmental degradation occurs as resources are depleted. Empirical work has generally centred on estimating the carrying capacity of land to determine what size population can be supported, given available resources. Thirdly, for many dependency theorists, high population growth is a symptom of a deeper problem, poverty. Environmental degradation and

high population growth are linked, not in that one causes the other, but in that their root cause is the same: unequal distribution of resources maintained by distorted political and economic relations (Jolly, 1994:61-62). Fourthly for Analysts that see population as a proximate determinant, high population growth is an exacerbating factor. It strengthens the effects of the environment degradation. The degree to which these causes, such as distortionary causes and polluting technologies, damage the environment is intensified by the number of people. It is argued that although these theories present very different world views, they are not necessarily mutually exclusive. Each one presents a partial view of why environmental degradation occurs (Jolly, 1994:61-62).

According to Campbell and Bedford (2009) Notestein's Classic theory of 1953 on demographic transition, and the many variations that followed, have centred on couples' decisions about family size. They assume couples perceive the advantages of having a smaller family when influenced by any of a number of possible kinds of change, such as urbanization, economic change (up or down), education, improved economic opportunities or reduced infant or child mortality. It is stated that in 1957 Leibenstein and Becker in 1991 led the development of micro-economic explanations for family size. In these theoretical explanations, couples or families are seen as weighing the costs and benefits of having a next child.

Both of these groups of theories are based on an assumption that it is natural for couples around the world to want many children and that they change their minds when some change in society occurs, such as the distal factors of improved education, or the education of girls and women in particular, or increased wealth, economic opportunity or reduced infant and child mortality. Increased poverty is also seen as one of these distal factors (Campbell & Bedford, 2009). Behind these theories is an assumption that when this exogenous change occurs, couples will find a way to achieve their smaller family size, through the proximate determinants of contraception, abortion, age of marriage or breastfeeding. In analysing these relationships, demographers in the classic theory group have had a plethora of easily available economic and social datasets demonstrating a high correlation between total fertility rates (TFRs) and the data on the distal factors, which are viewed as causal or driving

factors (Campbell & Bedford, 2009). Similarly, economists make use of ample available data to demonstrate the impact of couples' decision-making when the value of having another child declines for a range of possible reasons. However, correlations are not necessarily causal.

The evidence that barriers to fertility-regulation methods and correct information make a significant difference in the ability of couples, and especially women, to follow up on any decisions to have a smaller family has not come from large, smooth datasets as exist for socio-economic factors (Campbell & Bedford,2009). For a number of reasons, including confidentiality and concealed bias by providers and other members of traditional communities, it seems likely that factors which are difficult or impossible to measure may be more influential in the timing and pace of fertility decline than the factors where ample data are within reach (Campbell & Bedford, 2009).

### **1.7 Significance of the Study**

The study will provide theoretical information and data that may be a vital component in population development planning for a democratic Southern Africa, and ideally reach conclusions that provide empirical data to enhance existing knowledge and literature. Furthermore, expand literature to reach a plausible conclusive thesis; the study may deliver convinced and informed solutions in identifying suitable approaches to the identification of determinants of population development planning that are ideally ethical and grounded in reality, rather than politics of domination and subjugation. The study will provide practical and experimental essences through statistical modelling which will show the interrelationships of a variety of variables for population development planning.

### **1.8 Ethical Considerations**

The study was conducted with integrity and principled professionalism in applying expertise objectively, accurately and justly. The University Plagiarism Policy was be upheld at all times by ensuring that scholarly ideas materials are acknowledged adequately. Given that the study would rely on existing information as captured in the literature sources and reports, the chance of any known harm, physical or otherwise,

occurring are virtually nil, especially because scholarly sources would be handled with care.

### **1.9 Summary and Thesis Outline**

The study is divided into 5 chapters forming a sequential whole. Chapter 1 serves as an introduction and background to the study. In this chapter, the research problem is identified and listed. Pertinent issues regarding population development are identified as follows:

- Competing conceptions of population development;
- Conceptions and approaches to development planning;
- Population development planning discourses for developing countries; and
- Determinants of population development in planning for developing countries.

The aims and objectives of the study are formulated based on the 4 issues identified for research purposes.

Chapter 2 deals with the dominant conceptions of population development which are drawn from interpretations of the Malthusian doctrine. The general premise of the Malthusian doctrine focused supplementary on the correlation between population growth and food production, noting the impact of population growth on the attrition of food production and supplies.

Chapter 3 concerns population development within the Southern Africa context. The main objective of the chapter is to establish to what extent is the population impacting poverty, the economy and the environment.

Chapter 4 presents the theoretical and statistics findings collected from the secondary sources.

Chapter 5 provides a summary, conclusion and recommendations based on the research as a whole.



## CHAPTER TWO

### THEORETICAL INCISION OF THE STUDY

#### 2.1 Introduction

Population forecasting in terms of future growth and trends as guidance to planners and theorists has been a notion used for many decades. This philosophy has not addressed the complexities of population growth and development planning (Anderson, 2006). Understandably, integral parts of population studies in history have not fully understood the role it plays as a development tool. Presently, studies are attentive to the evolution of population and development though still limited to the interrelationship that exists in various variables which were not unanimously accepted (Ohadike, 1992).

Literature on the determinants of population development planning is sketchy. The majority of works involve the conception of population development planning as a synonym of family planning (Horton & Peterson, 2012; Muhoza et al., 2014; Mukaba et al., 2015). The predominant assumption is that demographic properties hold preserve as determinants of population development; therefore, agitating for the exclusive reliance on birth control-based family planning (Alpermann & Zhan, 2019). Henceforth, population development planning has generally been exclusively shaped by concerns with “Unmet Need for Family Planning” research which focuses on population growth, fertility, fecundity and birth rate. Indeed, the resolution of problems of food supplies requires innovation and creation of new tools which are themselves “embedded in a social context” (Allen, 2017: 31).

Acknowledging the complexity of the Malthusian doctrine, the Cambridge Global Food Security Initiative’s food security research focuses “on sustainable production, resilient and efficient processing, distribution and supply and ethical and healthy consumption” (Allen, 2017: 31), rather than mere tons produced. This chapter of the study seeks to argue that there is a complexity of significant domains consisting of drivers of population development, beyond demographics, which need to be considered for planning purposes. For this reason, this chapter examines competing conceptions and

discourses of population development for developing countries as well as approaches and determinants of the attendant planning.

## **2.2 Competing Conceptions of Population Development**

The dominant conceptions of population development are drawn from interpretations of the Malthusian doctrine. The general premise of the Malthusian doctrine focused supplementary on the correlation between population growth and food production, noting the impact of population growth on the attrition of food production and supplies (Burger, 2020). Central to this doctrine is that the human population grows exponentially and food production arithmetically, devising vast influence in demographic models and studies used to study human population and development (Hodgson, 2016; Burger, 2020). Generally, Malthusian argument provides a perspective on global problems relating to the conception of population development, planning, food production and population growth. However, the latter phenomena do not account for the current crisis of tenuous population development that fails to recognize the multiplicity of variables that shape global population development planning (Tsheola & Mmotlana, 2018).

Furthermore, the Malthusian doctrine highlights that; to a certain extent high consumption of resources will eventually lead to them eroding, and a population without competition will lead to overpopulation. In addition, such a population will become weak as the supply of natural and unnatural resources runs low (Canning & Schultz, 2012). As such, the latter assisted in founding arguments of scholars deliberating population development from a socialist perspective and economic freedom allowing growth and development. Boserup postulates that accelerated population growth has been historically advantageous to agricultural production, and that population pressure requires the utilisation of land for production, this will act as a favourable measure in intensifying development (Ohadike, 1992; Josephson et al., 2014; Diachenko & Zubrow, 2015). Marxists proposed a more socialist perspective in interpreting population development which is not fashionable, the theory blamed under-development on capitalism. Insinuating that the relationship between population growth and economic development should be harnessed without deteriorating agriculture production, sluggish industrial growth and increasing trends of

unemployment (Block, 2021). Dumont's proposition to population development and understanding the concept was that underdevelopment is birthed by the mismanagement of resources by the government which leads to conflicts in developing countries (Ninalowo, 2003; Oyekanmi, 2005, 2009). However, the repudiation of population development by economists such as Serge was alleged to be an attack on the conception of population development. The French economist postulated for the disposal of the practice of population development, he argued that such a concept and practice is an advanced tool of colonialism on third world countries by developed America and Europe (Ohadike, 1992; Ninalowo, 2003; Oyekanmi, 2005; Oyekanmi, 2009; Josephson et al., 2014; Diachenko & Zubrow, 2015).

Malthus's two expectations based on the doctrine were undeniably characterized by distinctive nature; firstly, production and supplies of food are vital for human satisfaction and survival; secondly, the urge of the human population to reproduce and multiply. Failure to satisfy the need for survival will ultimately lead to hunger, pandemics, war and death (Canning et al., 2012; Burger, 2020).

These academic contributions influenced population development in many countries based on the principle that population development is multi-disciplinary in nature and there exists a multiplicity of variables that shape national population development (Ohadike, 1992; Bradshaw & Brook, 2014). However, the existence of imbalances in the relations between population development and policy planning including the complexity of the multiple competing variables and their interactions has eluded policymakers especially in developing countries (Canning & Schultz, 2012; Mukaba et al., 2015). In an attempt to understand and achieve population development, attention has been given to the rapid population growth.

Rapid population growth has remained a development concern for both state planners, thereby understanding the role of drives in other domains other than demographics (Ohadike, 1992; Bradshaw & Brook, 2014). In addressing population development, consideration should be given to the nexus of at least six domains (Ohadike, 1992; Canning et al., 2012; Ezeh et al., 2012; Bradshaw & Brook, 2014; Robinson, 2016; Allen, 2017). Although rapid population growth has been a developmental issue for both planners and available resources; over the year's population development

planning has assisted in addressing both social and economic issues (Ohadike, 1992; Bradshaw & Brook, 2014). Nevertheless, in addressing population development consideration must be given to the major components of population growth and levels; this includes but not limited to fertility, mortality and migration (Ohadike, 1992; Ezeh et al., 2012; Bradshaw & Brook, 2014). Furthermore, delicate attention must be given to the competing concepts of population development and their interactions. These concepts are the six main domains, which are demographic, economic, social, political, environmental and institutional features (Ohadike, 1992; Canning et al., 2012; Ezeh et al., 2012; Bradshaw & Brook, 2014; Robinson, 2016).

Moreover, environmental issues have remained at the core of population development debate; comprehensively, population and the environment have an unspoken relationship and the significance of this relationship receives acknowledgement from the Malthus doctrine (Geels, 2014; Dogan & Seaker, 2016; Nasir, 2020). The Malthusian doctrine developed incredulity in respect to rapid population growth and consistent pressure of demand for production of supplies for survival. Attention should also be assumed towards population development and environmental degradation and sustainability, noting that population growth leads to demography proceeding to adopt novel shape. Ehrlich postulates that population will move from one area to the other on earth this is inclusive and not limited to other planets, “the extremely remote possibility of expanding into outer space offers no escape from the laws of population growth” (Ehrlich, 1968; Ehrlich & Holden, 1971; Kiel & Matheson, 2010; Nasir, 2020). Although, the environment has a way of remedying itself the persistent burden of rapid population growth could lead to the erosion of natural resources. Odum and Odum argue that nature has the cycle of “succession” and “recession”, or growth and degrowth. The cycle of life is described as different stages of nature from growth to death; the main stages are explained as, the beginning of growth with ample access to resources leading to the second stage of expanding the available resources in anticipation of a turning point, the third stages recognize a decline in natural resources which will lead to the decrease in population growth and the final stage of natural resources unable to restore their quality (Odum & Odum, 2001; Odum & Odum, 2006).

Environmental issues have wrought population development in the new era, given consideration that they have an interaction with other concepts for population development. Scholars have raised trepidations that rapid population growth, particularly in developing countries has left nature and the capacity of ecosystems in distress (Nasir, 2020). With the existence of sustainable solutions that account for population control, the main idea is that resources should be sustained at the same rate as the increase in the population. Emphasises on sustainable consumption could be argued but also questioned as a solution that does not benefit the population and economic development.

Economic activeness is significant to population development. Understandably; development is ambiguous, the outcome of population development is correlated to economic activities that lead to ultimate growth and development. The recognition of this correlation motivated the reason for studies to argue for economic domains to be considered when planning for population development (Liu & Hu 2013; Golley & Wei 2015; Peterson 2017; Wongboonsin & Phiromswad 2017; Bucci, Eraydin, & Muller, 2018). Nevertheless; the relentless increase in fertility rates has impacted the demographic characteristics negatively, the negativity is coagulated by the increase in non-working demographics and the decrease in population development. Despite the dogma of increased population primarily leading to increased production, this without fail has proven to produce negative results (Nasir, 2020). Non-working demographics fail to delight in the benefits of an active economy; China has presented a flawless pattern of the latter, the productive demographics presence in the economy is commonly bursting with middle-aged to old-aged individuals (Feng et al., 2016).

Scholars have presented arguments differentiating the competitiveness of concepts in population development. The difference amongst developed and developing countries may be understood as, sluggish population growth affecting population development in developing countries due to the upsurge of poverty and decrease in population growth, in the case of developed countries amplified old aged population leading to the production and economic development of the country (Wesley & Peterson, 2017; Wongboonsin & Phiromswad, 2017). These arguments predisposed the ideology that there is a distorted relationship between population development and

economic growth and development; for this reason, this depicts either a positive or negative result in the relationship. Undeniably; the significance of economic domains ponders on population development (Bucci et al., 2018).

The undeniable momentum in demographic changes and global human population, with continuous requirement of earth's resources to support the needs of the population, has made it impossible to find a plausible approach towards population development planning (Bradshaw & Brook, 2014). Over the years, advocacy towards fertility, the reduction has gradually become a common approach towards population development planning because of the belief that lower human population would be manageable and easier to plan for in terms of resource availability and allocation (Ezeh et al., 2012; Horton & Petersen, 2012; Bradshaw & Brook, 2014). Therefore, family planning was adopted as a probable solution and a critical element to reproductive health and understanding of reproductive freedoms (Horton & Petersen, 2012).

According to Little (2016), the total human population on the planet's surface is 7 billion individuals. It took around 12 years for the world's population to increase from 6 billion to 7 billion people (United Nations Population Fund 2011). The globe is rapidly filling up, to put it simply. The population is expected to increase from 7 billion to 8 billion by 2025. What will be the demographic makeup of the population? Where is the densest population concentrated? Where is it experiencing a lull? Where will people be able to live? It is necessary to look to demography, or the study of populations, in order to better understand these issues. Fertility, mortality, and migration are three of the most important factors that influence the difficulties discussed above. The fertility rate of a society is a statistic that tracks the number of children born in a certain period of time. It is commonly accepted that the fertility number is lower than the fecundity number, which quantifies the number of children who may be born to women of reproductive age. The crude birth rate (the number of live births per 1,000 people per year) is used by sociologists to quantify fertility. The mortality rate, on the other hand, is a measure of the number of people who die, just as fertility is the number of individuals who carry children. The crude mortality rate is a figure calculated by dividing the number of deaths per 1,000 people per year by 1,000 persons per year. When combined, fertility

and death rates provide researchers with a better understanding of the total growth that is occurring in a community. Considering the movement of persons both in to and out of a location is another significant issue to examine when doing a demographic analysis. This movement is referred to as migration in the scientific community. In the context of migration, there are two types of movements: immigration, which refers to the movement into a region with the goal of establishing permanent residency, and emigration, which refers to the movement out of a region with the goal of establishing permanent residency in another location. When people migrate, they can do so voluntarily (as when university students study abroad), involuntarily (as when Somalians fled their drought- and famine-stricken region of their country to seek safety in refugee camps), or forcibly (as when refugees flee their homes in the aftermath of a natural disaster) (as when many First Nations were removed from the lands they had lived in for generations). Therefore, the population growth rate, or how much the population of a particular region grows or shrinks in a given period, is determined by the number of births and deaths, as well as the number of people migrating to and from a particular nation. Population growth rates are calculated using the formula: 
$$\text{Population Growth Rate} = \frac{\text{Current Population} - \text{Initial Population}}{\text{Initial Population}} \times 100$$
 When applied to this situation, it is calculated as the ratio of the current population divided by the initial population (at the start of the period) (then multiplied by 100).

Increased population, according to Jolly (1994:61), has no inherent influence on the environment and hence has no effect on neoclassical economics. The extent to which population expansion has an impact on the environment is dependent on whether or not free-market policies are in place. Growth in the population can contribute to stimulate innovation and the development of cutting-edge technology in a competitive market. In an economy characterized by distortions, rapid population increase has the potential to intensify the consequences of these inefficiencies. A high population growth rate, according to classical economics or natural scientists, is an independent factor contributing to environmental deterioration. As the world's population continues to grow, increased pressure is placed on fixed resources in order to maintain or improve the population's quality of living. As resources are exhausted, environmental degradation develops as a result of resource depletion. The majority of empirical effort has been focused on assessing the carrying capacity of land in order to determine what size population can be sustained given the available natural resources. The high

rate of population increase, according to many dependence theorists, is just an indicator of a more serious problem, namely poverty. Not because one causes the other, but because their underlying cause is the same: uneven distribution of resources perpetuated by warped political and economic connections, environmental deterioration and rapid population increase are interconnected.

In recent decades, there has been a dramatic increase in the amount of research conducted on the link between population expansion and economic activity growth. A large number of analysts believe that economic progress in high-income nations will be moderate in the next years, in part because population growth in these countries is expected to fall considerably in the coming years. Others contend that the expansion in human population has been and will continue to be a source of concern since more people eventually deplete the finite resources available on the planet, diminishing long-term potential growth in the process. According to the United Nations Development Programme, population increase has an influence on a variety of factors, including the age structure of a country's population, international migration, economic inequality, and the size of a country's workforce, among others. Each of these elements has an impact on and is influenced by the level of economic growth in a certain country or region. According to the authors Wesley and Peterson, the goal of the article titled *"the role of population in economic growth"* is to examine the consequences of population increase, total production growth, and per capita output growth for economic inequality, international migration policy, and overall economic development. Using long-term historical data and doing a review of both theoretical and empirical studies on the link between population increase, total output growth, and per capita output growth, this goal will be achieved (Wesley & Peterson, 2017:1).

Due to the fact that population growth and per capita gross domestic product growth are totally unrelated to one another, higher rates of population expansion should result in higher rates of economic expansion. Economic well-being can only be improved by increasing per capita GDP, and this will remain the case for the foreseeable future. If population growth continues at its current rate, it will either contribute to higher overall economic growth or lower total economic growth, depending on the nature of the implications on per capita gross domestic product. If, on the other hand, population

growth has an influence on per capita output growth, larger rates of population growth would contribute to either higher or lower overall economic growth, depending on the circumstances. The correlation between population growth and real per capita GDP growth numbers during a two-decade period was  $-0.1849$ , indicating that these two variables were not associated during that time period. As a first and first consideration, a simple correlation between two variables tells us almost nothing about the real world of commerce. The link that exists between the factors under consideration. Economic theories have apparently been developed to support both the assumption that population increase slows per capita output growth and the opposite view that population growth supports better economic development, as well as the idea that population growth encourages greater economic growth. Wesley and Peterson (2017:9) argue that, whereas productivity development is obviously tied to the "economic component" that is the source of gains in the quality of living, population expansion's impacts on GDP per capita are not (Wesley & Peterson, 2017:9). Despite the fact that both capital and labor are involved in the production of services, they do not account for the entirety of economic growth on a global scale. It is referred to as "multifactor productivity" when describing the "Solow residual," which is the proportion of output that cannot be explained by the inputs (MFP) (Wesley & Peterson, 2017:6-7). There are several aspects of this measure that are discussed, including efficiency gains as well as other economic factors that may have an impact on production, such as boosting returns to scale or changing resource allocation. The amount of output that can be obtained from a unit of combined inputs is defined as the amount of output that can be obtained from a unit of the combined inputs. In order to calculate MFP, it is necessary to first determine the value of total output (GDP) as well as the contribution of the combined inputs, which include both capital and labor. MFP is then calculated as the amount of output that can be obtained from a unit of the combined inputs (with MFP calculated as the amount of output that can be obtained from a unit of the combined inputs). Even though they are two independent concepts, MFP and per capita economic growth may be connected, at least in part, since the same variable (GDP) appears in the numerator of both metrics, despite the fact that they are two distinct notions (Wesley & Peterson, 2017:6-7).

### **2.3 Conceptions and Approaches to Development Planning**

Conceptions of planning, just like those of development, are complex, slippery and elusive (Dale, 2004; Theron, 2008, 2009; Tsheola, 2011, 2012a). There is universal agreement that planning is a “future-orientated” normative process “focused on anticipation and reduction of ... uncertainty” (Tsheola, 2011: 84). To this extent, planning is intricately interconnected with “management of change” in the sole interest of ensuring that objectives are met (Theron, 2008, 2009; Tsheola, 2011, 2012a). To be precise, Theron (2008: 64) conceives planning as “an attempt to reduce the uncertainty about what will happen in the future through the management of change, to realize desired objectives”. The latter invokes the concept of development (Tsheola, 2011, 2012a). That is, planning is goal-directed wherein development is the target (Tsheola, 2011, 2012a). The concept of development planning is, therefore, organically integrated in the sense that it is impossible to imagine planning outside development. Historically, the concepts of planning and development have colluded to create an erroneous perception of the inevitability of “goodness” and societal progress (Dale, 2004; Theron, 2008; Tsheola, 2012a). It is in the latter observation that approaches to planning become pertinent to development; hence, the *raison d’être* for the integrated concept of development planning.

Likewise, the conception of development planning appears to have received courtesy in the forefront of policymakers and modern politics; reality has given the world a harsh awakening in a spectacle of rapid population growth, economic growth and development, unsustainable development and demanding effects of modern lifestyles (Wheeler & Beatley, 2004; Hamin & Gurrán, 2009; Zhao, 2010; Yigitcanlar & Teriman, 2015). In crux development planning as a profession could be understood to have fixated on economic development but in practice, it is more concerned with demographic and population studies. History has proven to be against modern practice in development planning, industrial revolution and development rigorously advocated for economic growth and prosperity (Hu, 2018).

In recent years, approaches to development planning profession stanch ed supplementary on rapid population growth and economic development. Industrialization as an approach to development advocated for the intervention of

coordinated planning and action; moreover, the push for such drive were influenced by successful profits of development planning efforts by the governments towards the transformation of states (Levy, 2013; Yigitcanlar & Teriman, 2015, Hu, 2018).

Although; development planning holds importance and the conception and approaches keep evolving, family planning and economic development associations have turned to influence development planning alongside the conceptualization of the competing concepts of population development (Hu, 2018). In addition, development planning has renewed interest in economic development and population growth in pursuit of faultless population development planning collaborative with intergraded competing concepts of population development (Anderson, 2006; Ezeh et al., 2012; Bradshaw & Brook, 2014; Robinson, 2016; Hu, 2018).

In addition, development planning is one of the typologies of planning that are constructed based on the planning goals. Typologies of planning are constructed on the basis of planning goals, activities and operational levels (Dale, 2004; Theron, 2008, 2009; Tsheola, 2011, 2012a). Out of planning goals, four types of planning are drawn thus: town and regional planning; wartime planning; anti-cyclical planning; and, development planning (Dale, 2004; Theron, 2008, 2009; Tsheola, 2011, 2012a). The latter is at the center of the study; and, it has to be deduced that development planning is just one of the categories of the planning goals.

According to planning activities, there are three categories of planning, which are: design of planning exercise; professional position; and, the role of stakeholder participation in planning (Dale, 2004; Theron, 2008, 2009; Tsheola, 2011, 2012a). In other cases of planning activities classification, three types are established as follows: socio-economic planning; natural or environmental planning; and, engineering planning (Dale, 2004; Tsheola, 2011, 2012a). In terms of operational levels of planning, spatial scales such as the personal, household, local, regional, national and international at which the planning activities are undertaken, are crucial to the classification. There are three types of planning arising from operational levels thus: project or activity level; sectoral; and, integrated area planning (Dale, 2004; Theron, 2008; Tsheola, 2011, 2012a).

Following Dale (2014) and Theron (2008, 2009), Tsheola (2011: 85) confirms that the existence of “a plethora of conceptions of development planning” points to the multiplicity of complex development planning approaches. However, literature has universally supported two broad approaches to development planning, viz: object-centred technical planning and process-centred planning (Dale, 2004; Theron, 2008; Tsheola, 2011, 2012a). Respectively, the two broad categories of development planning approaches are also denoted blueprint planning and social learning planning (Dale, 2004; Theron, 2008; Tsheola, 2011, 2012a). Blueprint and social learning planning approaches are, respectively, aligned to regulatory and advocacy planning approaches (Tsheola, 2012a). While the regulatory planning strategy "seeks to supply pure private market products," the advocacy planning approach "hopes to provide for pure public services," according to the National Institute of Standards and Technology (Tsheola, 2012a: 172). As a result, whereas regulatory blueprint planning "relies on private markets," advocate social learning planning "relies on a public entrepreneur... representing the interests of a certain social group," notably the poor (Goodall, 1987 cited in Tsheola, 2012a: 172). It is this multiplicity of planning approaches and development planning approaches that creates much confusion and controversy in the discourses about population development planning, especially in relation to developing countries. Hence, the next subsection demonstrates that population development planning discourses have remained unresolved.

### **2.3.1 China's Population Planning**

China has been one of the few countries that enforced harsh fertility control measures, and then later followed by other countries such as India, Bangladesh, Vietnam etc. (Feng et al., 2012; 2016). The Chinese one-child policy was highly favoured and influenced by politics as an ideal approach to population development planning, as such the policy adopted extreme measures to control birth and fertility rates (Gu et al., 2007; Feng et al., 2012; 2016). China's population soothed with the conclusion of the civil war, greatly influencing the strict enactment of abortions and sterilization; a result of the latter was substantial population growth in the early 1950s. Subsequently, the precincts of family planning with regards to sterilization and abortions were detached

from population planning (Feng et al., 2012; 2016; Wang et al., 2017). The intensified upsurge of fertility rates in the early 1960s during a period of prodigious famine chartered the Chinese government to reinforce its family planning policies and laws through an administrative document, these family planning policies and laws gave birth to China's unprecedented one-child policy (Liang, 2014). With over 400 million births prevented and some under strict regulation and control of ratios between males and females; the legitimacy of this policy was restored (Gu et al., 2007; Feng et al., 2012; 2016).

Although china's one-child policy was in use for over 35 years, this approach towards population development planning was under the notion of controlled fertility and facilitated economic growth (Gu et al., 2007; Feng et al., 2012; 2016). This temporary brake measure saw its epic fail in the current 21st century; and further resulted in loosening and relaxation of the two-child policy as a measure towards population development planning (Feng et al., 2016). The relaxed policy and the Chinese withdrawal from controlling the reproductive systems of communities came soon after the realisation of signs of underdevelopment (Feng et al., 2016). It is likely that the support from political allies and the rushed policy implementation as an approach towards population development was fuelled by a misunderstanding of Malthusianism (Feng et al., 2012; 2016). Other countries such as India drew much influence from the Chinese's approach towards population development planning to the effect that reducing fertility rate would create conditions for economic growth and, by extensions development (Samuelson, 1954; Banister et al., 2010; Canning & Schultz, 2012).

According to Makheto (2020), development planning encompasses the predetermination of a nation's vision, mission, policies, and programs in all facets of life, including social, human, political, environmental, economic, and technological factors, as well as the means by which these goals will be achieved, according to Makheto (2020). In economic development, development planning is the purposeful management and direction of the economy by a central authority in order to attain set objectives within a specified period of time. To plan for development, one must be mindful of the direction one is taking, with established goals in mind and predetermined ways to reach those goals. An activity in which the government selects social

objectives and then sets numerous targets before putting up a framework for the implementation, coordination, and monitoring of development is known as development planning. In order to accomplish development, planners employ a variety of frameworks or methods to planning, which are described below. Blueprint approach, is one of the techniques or styles to development planning. The blueprint approach to planning is a method by which a planning agency manages a program in order to achieve its objectives with certainty and in accordance with established objectives, with the understanding that modifications during implementation are not anticipated. Essentially, it is a long-term planning strategy that can span five years or more in duration. The typical, centralised, or top-down method to planning is referred to as the top-down approach. The planner must be able to manage important components of the program environment, leaving no opportunity for the environment or sections of it to operate in ways that are inconsistent with the goals and objectives of the planning agency and the program. It is defined as "the project, including its identification, formulation, design, appraisal, selection, organization, implementation, supervision, termination, and evaluation, which is treated as the fundamental unit of development action." It is further defined as "the project, including its identification, formulation, design, appraisal, selection, organization, implementation, supervision, termination, and evaluation." (Makhetho, 2020:30). Blueprint planning refers to the process of creating precise blueprints for all of the work that one expects to do before beginning any of the work. Implementers will know exactly what they need to do, in what order they need to do it, and at what cost they need to do it until the plan is done. Blueprint planning entails the creation of a precise description of the anticipated future scenario as well as the implementation of that description. The blueprint technique is derived from the 'capital city,' and as a result, it is a top-down strategy that is created by professionals in static analysis. The initial phase is data collecting and planning, and the primary source of finances is the federal government itself. The programs are being implemented widely, and management is concentrating on allocating money in order to execute projects on time and in a standardized manner. Communication is primarily from the top down, in the form of instructions and reporting from the bottom up, and leadership is positional and constantly changing. It is connected with proper professionalism, but it also generates dependence syndrome, which results in faults

being buried deeper in the system. According to the criteria listed above, the blueprint planning technique is should be avoided at all costs (Makhetho, 2020).

## **2.4 Population Development Planning Discourses for Developing Countries**

For many developing countries; the national plan was adopted between the years of 1950s and 1960s, national development plan held a significant position in population development planning (Keynes, 1931; Robinson, 1933; Keynes, 1936; Samuelson, 1954; Polanyi, 1957; Coase, 1960; Arrow, 1963; Chimhowu et al., 2019). The national development plan emphasized coordinated efforts for national development and economic development to certify complete population development planning. Population development planning has been exploited as a political tool for control of societies (Ohadike, 1992; Hayes, 2006; Norling, 2015; Robinson, 2016); and, China has offered a perfect example when it implemented its one-child-one-couple policy (Feng et al., 2012; Feng et al., 2016). Whereas some of these mechanisms were justified through environmentalist notions founded on Malthusian doctrine, they remained inhumane and unethical (Ohadike, 1992; Seekings, 2014; Norling, 2015). As a demonstration of its weaknesses, China's one-child-one-couple planning was recently reviewed to one where couples are allowed to have two children (Feng et al., 2016).

### **2.4.1 Typologies of Development Planning Discourses for Developing Countries**

Furthermore, for developing countries development planning discourses subsequent to the national plan have demonstrated that it established a homogeneous set of plans. Instead, competing concepts for development that are distinct were imprudent (Chimhowu et al., 2019). The national plan followed different types of development planning discourses, these planning discourses were informed by different determinants of population development planning. Type-A is top-down planning discourses encompassing robust data that is limited to social embeddedness; Type-B planning discourses are bottom-up collaborated plans with robust data and ample

social embeddedness; type C is top-down planning discourses that are frail with incoherent and limited social embeddedness; lastly; Type-D planning discourses with exhibited frail indication base and narrow social embeddedness, Type-D planning discourses were bottom-up plans (Seekings, 2014; Munro, 2017; Yazlyyev, 2017; Chimhowu et al., 2019).

Subsequently, planning discourses that shadowed Type-A planning shaped the formation of hundreds of plans, type-A planning discourses are techniques subjective to top-down planning encompassing robust data that is limited to social embeddedness. National plans that were predisposed to the latter planning are habitually in controlled teams with more consultancy, technical and expert-led teams either in more financial sectors or economic driven countries and states that furnish global entities (Ohadike, 1992; Seekings, 2014; Munro, 2017; Yazlyyev, 2017; Chimhowu et al., 2019). The contents of such planning necessitated attention to detail; and for this reason, such plans are designed for a more expert-led audience that is more technical and economically erudite. Occasionally, such technicalities would be simplified to accommodate populace that is unprofessional and less proficient (Ohadike, 1992; Seekings, 2014; Munro, 2017; Yazlyyev, 2017; Chimhowu et al., 2019). Moreover; population development plans in this cast depict limited social embeddedness, the former provides a vibrant explanation to the nature of the plans that are restrictive to the inclusivity of views from all populace in the society but limited to the influence of a selected few that are more proficient with more political sway, expertise and elites in the global spectrum (Ohadike, 1992; Fainstein, 2000; Seekings, 2014; Munro, 2017; Yazlyyev, 2017; Chimhowu et al., 2019).

Evidently, the sophistication of such development plans encompass faults in practice, resulting in the non-existence of shared vision from the entire populace and the effect of accountability and confidence in the bureaucratic processes and the economic domination processes (Hayes, 2006; Norling, 2015; Robinson, 2016). Type-A planning is distinguished by the methods it contains with features of economic modelling, scenario building and/or the use of input-output models. Countries following the implementation of such models and planning discourses include Togo, China and

Saudi Arabia amongst other examples (Hayes, 2006; Norling, 2015; Robinson, 2016, Chimhowu et al., 2019).

Furthermore, the second type of planning follows more of a bottom-up collaborated planning with robust data and ample social embeddedness. Type-B development discourses are attentive to the creation of environments that embrace broad-shared social values. These types of development planning discourses define such broad-shared social values through the engrossment of creating social consensus about values and actions towards a developed and common future (Seekings, 2014; Munro, 2017; Yazlyyev, 2017; Chimhowu et al., 2019). National plans ensuing Type-B development discourses have a set of values, actions and pathways of a common developed future that is broadly shared by the populace; additionally, the latter process is practicable through national plans that are intended to build a consensus for development deeply rooted in shared societal values (Seekings, 2014; Munro, 2017; Yazlyyev, 2017; Chimhowu et al., 2019). Nevertheless; the hindrance of such development planning discourses must be noted, without an unswerving agreed practice, methods and values from the society, the practicality of development being accomplished may take longer or not even exist. Societal preferences in respect of shared values and actions of development take precedence for such planning discourses. Observing these flaws, unrestrained judiciousness has not given premise to the idea of achieving SDGs through national plans as default *modus operandi* (Hayes, 2006; Canning et al., 2012; Norling, 2015; Robinson, 2016; Chimhowu et al., 2019).

National development plans with the characteristic of Type-B development discourses are commonly found in developing countries such as Uganda and Ghana amongst other examples (Chimhowu et al., 2019). Substantially, such development planning discourses demonstrate evidence of inclusive planning and participation of the entire populace with no regard to political supremacy, corporate influence and bureaucratic elites. Type-B plans typically have evidence of wide social consultancy considering values and actions of development. Such development planning discourses involve extensive communication and negotiations with multiple stakeholders for development, the availability and accessibility of these kinds of national plans is

usually public knowledge for inputs from both internal and external structures (Seekings, 2014; Munro, 2017; Yazlyyev, 2017; Chimhowu et al., 2019). National plans characterized by Type-B development planning discourses have continuously shown a balance between economic and social variables as determinants of population development. The consultancy in regards to the broadly-shared values and actions of development and inclusive growth is concentrated on the previously disadvantaged groups such as women, young people and the elderly (Ohadike, 1992; Seekings, 2014; Munro, 2017; Yazlyyev, 2017; Chimhowu et al., 2019).

Type-B development planning discourses collaborate local, regional and national development priorities in the context of societal share values and actions for development. In recent years, national plans have incorporated SDGs as a true reflection of inclusive and sustainable growth. Type-B development planning discourses intended on enforcing a strong relationship between professionals and lay audience in the society (Ohadike, 1992; Seekings, 2014; Munro, 2017; Yazlyyev, 2017; Chimhowu et al., 2019). Type-B development planning discourses embrace SDGs aimed at assisting development and sustainability, SDG 16 (peace, justice and strong institutions) and SDG 17 (partnerships) ensuring that development discourses comprehend the importance of incorporating such practice in the development planning process and not just penned in the plan. Understandably, incorporating SDGs in the national development plan is the closest to a perfect development planning discourse (Ohadike, 1992; Seekings, 2014; Munro, 2017; Yazlyyev, 2017; Chimhowu et al., 2019).

In addition, to these different typologies of development planning discourses is Type-C which follows more top-down planning discourses that are frail with incoherent and limited social embeddedness. National plans inclined towards type C development discourses are premised on the linear rationality that reinforces principles of Type-A development discourses (Seekings, 2014; Munro, 2017; Yazlyyev, 2017; Chimhowu et al., 2019). The detriments of both these development discourses are that there seems to exist no competency, evidence of their practice is fragmented and they lack evidence of practicality. Type-C development discourses are often a product of corrupted states and their incapacity to drive population development. Zimbabwe

provides evidence of the latter in its national development plan which was driven from the top rather than reinforcing its self in evidence-led national development planning discourses (Ohadike, 1992; Seekings, 2014; Munro, 2017; Yazlyyev, 2017; Chimhowu et al., 2019). The epic failure of such development discourses is the result of states attempts to satirist developed countries and their development discourses. Even so, type C development planning discourses often fail to provide comprehensible evidence to justify its priorities towards development (Canning et al., 2012; Ezeh et al., 2012; Bradshaw & Brook, 2014; Robinson, 2016).

Furthermore, type-C population development discourses are likely to have a wide range of developmental issues ranging from economic dismay and growth, financial distresses and booms, business development, social ills and environmental problems, irrespective of these plans carefully considering these components of development it fails to structure how each component supports or undermines the other in development planning (Canning et al., 2012; Ezeh et al., 2012; Bradshaw & Brook, 2014; Robinson, 2016; Chimhowu et al., 2019). Granting, type C population development discourses consider competing concepts of population development and incorporate SDGs, it does not put the theory in practice and such are used as keywords for a national plan without providing clear engagement and deployment of these concepts in the national development plans. The failure of clear articulation of the latter development discourses typically leads to the indistinct monitoring mechanisms of development and misplacement of drivers of such development (Ohadike, 1992; Canning et al., 2012; Ezeh et al., 2012; Bradshaw & Brook, 2014; Seekings, 2014; Robinson, 2016; Munro, 2017; Yazlyyev, 2017; Chimhowu et al., 2019). In addition, the evidence of the practices and adoption of such discourses in the national development plan prove political governance deficits and economic failure. Such is the result of the lack of social embeddedness in the national plans, with no repute to social consultations.

Lastly, the Type-D population development discourses exhibit a frail indication base and narrow social embeddedness, Type-D planning discourses are bottom-up national development plans. National development discourses that tend towards Type-D population development discourses have characteristics of a participatory and shared-

vision process however fail to translate these processes from theory to practice (Seekings, 2014; Robinson, 2016; Munro, 2017; Yazlyyev, 2017; Chimhowu et al., 2019). To provide a practical sense of the latter, Peru and Venezuela are examples of the espousal of Type-D population development discourses, these countries followed a more bottom-up approach towards population development though the absence of clear and comprehensible reasoning validating development priorities existed modelling the general population development (Seekings, 2014; Robinson, 2016; Munro, 2017; Yazlyyev, 2017; Chimhowu et al., 2019).

Likewise, national development plans with distinctive features profoundly influenced by Type-D population development planning discourses share practice principles of Type-B discourses, these national development planning discourses are a product of intensive consultancy and public participation. The planning milieu of these development discourses are participatory and shared-vision processes addressing global development issues attendant to MDGs and newly founded SDGs (Lomazzi et al., 2014; Seekings, 2014; Robinson, 2016; Munro, 2017; Yazlyyev, 2017; Chimhowu et al., 2019). Generally, issues that link the competing concepts to the population development discourses are often not clearly articulated and evidence assisting the formulation of such national development plans is weak or inconsistent. In addition, the weakness and inconsistency of the evidence of the formulation of such nation development plans deliver challenges in identifying and measuring the effect of competing concepts of population development towards planning (Seekings, 2014; Robinson, 2016; Munro, 2017; Yazlyyev, 2017; Chimhowu et al., 2019).

Countries with continuous political and economic volatility often tend towards Type-D population development discourses. Type-D national development planning discourses are often a well thought political manifesto used by politicians to mobilize and convey influences and messages to the society, communicating population development hopes and plans to the entire populace (Ohadike, 1992; Canning et al., 2012; Ezeh et al., 2012; Bradshaw & Brook, 2014; Seekings, 2014; Robinson, 2016; Munro, 2017; Yazlyyev, 2017; Chimhowu et al., 2019). The political elites and government officials conveying these messages of hope must ensure citizens that are ascertained that development challenges will be addressed and that the government

is working on them through the national development plan. Type-D population development discourses are often understood as government calming measures and performance to gain the public's trust and confidence in stated objectives of national development planning (Ohadike, 1992; Canning et al., 2012; Ezeh et al., 2012; Bradshaw & Brook, 2014; Robinson, 2016).

#### **2.4.2 Global Agenda in Population Development Planning**

The agreement between states that are members of United Nations was to adopt SDGs in national population development plans, the agreement between these states was to incorporate MDGs and newly founded SDGs format for development (Lomazzi et al., 2014; Seekings, 2014; Robinson, 2016; Munro, 2017; Yazlyyev, 2017; Chimhowu et al., 2019). Adoption of the MDGs and SDGs format included goals, targets, indicators and results-based on overall population development, even though SDGs were a by-product of MDGs the negotiating processes for population development and their integration in planning was different. Moreover, the integration of SDGs in national population development planning was to be driven by the states as an alternative to being driven by Organisations for Economic Co-operation and Development (OECD) and aid interventions (Canning et al., 2012; Ezeh et al., 2012; Bradshaw & Brook, 2014; Robinson, 2016; Chimhowu et al., 2019). The refinery of MDGs to produce SDGs was a deliberated decision by all members of the UN, this action founded two significant impacts on population development discourses. The first significance is that SDGs are quite a several in numbers with a multiplicity of goals and targets, these numerous goals are 17 with 169 targets (Canning et al., 2012; Ezeh et al., 2012; Bradshaw & Brook, 2014; Robinson, 2016; Chimhowu et al., 2019).

The multiplicity of such goals and targets makes it difficult to set development priorities with much grander choices and potential for error in practice and development processes. Nevertheless, SDGs are advantageous in achieving population development planning because they address economic growth and related goals such as employment, infrastructure, urbanisation and energy where else MDGs failed to incorporate economic growth and development (Canning et al., 2012; Ezeh et al.,

2012; Bradshaw & Brook, 2014; Robinson, 2016; Chimhowu et al., 2019). The second significance is that SDGs unambiguously distinguish between the differences of global and common goals isolated from each countries goals and that each country must choose a goal and target that is appropriate to their development discourses through national deliberation processes (Canning et al., 2012; Ezeh et al., 2012; Bradshaw & Brook, 2014; Robinson, 2016; Chimhowu et al., 2019).

Also, the vagueness of MDGs lead to countries failing to adopt them in practice and in population development planning discourses, adoption of these set of goals would have led to the recapitulation of national development plans reset. Therefore, this created opportunity for the adoption of SDGs in population development discourses, promoting national development plans that are goal orientated (Canning et al., 2012; Ezeh et al., 2012; Bradshaw & Brook, 2014; Robinson, 2016; Chimhowu et al., 2019).

## **2.5 Determinants of Population Development in Planning for Developing Countries**

The Malthusian population trap is a well-known hypothesis that explains the relationship between population expansion and economic growth. According to this hypothesis, the human population rises geometrically, whilst the means of sustenance grow arithmetically, as a result of the law of diminishing returns being applied. Given the widespread acceptance of the Malthusian population trap, a large number of development economists and policymakers have come to believe that high population expansion is a threat to economic progress. In part, this may be ascribed to the concept that high population expansion leads to tightening labour markets, resulting in underemployment, and inhibiting labour force movement between industries. For this reason, according to the Malthusian population trap, high population expansion is a serious concern for every economy in the world. According to Malthus, moral constraint (delay in marriage) and vice (means of birth control) are major elements that influence population increase (Nyoni, 2018:8).

Because of the multi-disciplinary character of the difficulties associated with the complexity of population development, it is preferable that the topic be examined from a variety of perspectives (Lomazzi et al., 2014; Marten et al., 2014; Muhoza et al.,

2014). Demography, sociology, economics, geography, politics, psychology, communications, and social welfare are just a few of the domains in which social scientists investigate population from the perspective of its link with development. Professionals in other fields, such as law and government, music/drama, historical antecedents of societies, language and cultural depiction of life, and other humanities, may explore the challenges at hand. While this does not exclude other disciplines like as medicine and pharmacy, which have a different perspective on the impact of nature and nurture on the human person and the manner in which human actions affect all of these other professions, it does exclude them from consideration. This study therefore takes into consideration a variety of perspectives on population growth planning from which to draw conclusions. Ohadike (1992), Canning et al. (2012), Ezeh et al. (2012), Bradshaw & Brook (2014), Robinson (2016), and others.

It leans on six components with different variables and how these interact with forces that bring about or inhibit population development in societies. Demography is the statistical study of population, such as the number of people in a defined territory, their characteristics or composition, rate of growth or change in numbers, geographic distribution as well as the nature and effects of their activities which may have repercussion on their welfare now and in the future (Van Dalen & Henkens, 2012).

The interpretations of Malthus' 1798 doctrine have been varied and, sometimes, problematic as states used them to wage wars about land and natural resources thereupon such as oil, natural gas, minerals and timber (Peh & Eyal, 2010; Allen, 2017). Apparently, such misreading of Malthusian doctrine as an argument about "aggregate numbers of people" and absolute, rather than relative, scarcity (Allen, 2017: 31) have fuelled the hegemony of the erroneous notion of birth control-based family planning as population development planning.

Population development planning has continued to be a battle in both formulation and practice for developing countries. However, determinants of population development planning in developing countries should involve domains and a multiplicity of variables (Ohadike, 1992; Canning et al., 2012; Ezeh et al., 2012; Bradshaw & Brook, 2014; Robinson, 2016).

Organization of the domains and their focus on population development planning would prove easy to determine the determinants of population development planning in developing countries. As such, the economic domain should without limitation address the creation and retaining of jobs, with aim to improve the equal distribution of resources and accumulation of wealth. Where else, the social domain would be focused on the general and overall well-being of all human beings, increasing their standard of living, combating diseases and providing proper educational and housing facilities. Furthermore, the political domain focuses its attention on up-holding human rights and democracy with much regard to freedom (Lomazzi et al., 2014; Marten et al., 2014; Muhoza et al., 2014). Finally, governance and institutions as another domain consists of a myriad of variables that could play a significant role in shaping population development planning (Van Dalen & Henkens, 2012). Out of the six domains of human existence, the study identifies over 29 variables and in excess of 90 indicators from key determinants of population, development planning should be derived (see Appendix A).

The current popular birth control-based family planning is undergirded by regulatory blueprint development planning approaches, which priorities market forces. The ideal population development planning for developing countries should be underwritten by determinants that are informed through the interests of the non-Western societies, which would entail advocacy social learning development planning approaches. It is in this context that the study seeks to investigate determinants of population development that are embedded with the societal reality of developing countries that should inform their attendant planning. The study, therefore, is a significant departure from the population development planning research that is captivated by the fertility-driven “Unmet Need for Family Planning” approaches.

## **2.6 Conclusion**

Population development planning in receipt of control from the Malthusian doctrine must be balanced against the formulation of policies and constitutes the major determining competing concepts of population development. Raison d’etre pursuing the formulation and implementation of national plans are required to involve the entire populace explicitly ensuring unity, progress and self-reliance. National plans that don’t

comprehend the components of population development must take full account of the impact they have on the full capacity of population development planning and adjustments to their programmes and reforms. Such adjustments ought to be people-centred, basic need orientated, build capacities and create family planning strategies that are comprehensive to the components of population development.

## **CHAPTER THREE**

### **RESEARCH DESIGN AND METHODOLOGY**

#### **3.1 Introduction**

The chapter presents the research design and methodology for the study. It adopted document analysis approach because the major advantages associated with secondary analysis are the cost effectiveness and convenience. Since someone else has already collected the data, the researcher does not have to devote financial resources to the collection of data. When good secondary data is available, researchers can gain access to and utilize high quality larger datasets, such as those collected by funded studies or agencies that involve larger samples and contain substantial breadth. The larger samples are more representative of the target population and allow for greater validity and more generalizable findings. Access to this type of data presents opportunities for all researchers, even the novice or unfunded researcher, therefore equalizing opportunities and building capacity for empirical research. However, the researcher used both quantitative and qualitative methods to analyse, interpret and present findings. On the selected topic, the researcher used academic articles, books, and academic journals. This chapter consists of research design, description of the study area, kinds of data required, target population, sampling design, data collection techniques and data analysis methods as well as validity and reliability.

#### **3.2 Research design**

The study used a combination of designs that are qualitative and quantitative, with a bias towards the latter. To deal with the evolution of population development planning, the study will use the historical-comparative design. The study traced the discourses, approaches and time-space-bound determinants of population development, as well as compare them with consideration in planning. Also, the comparison was complemented through scholarship analysis to address the population development planning amongst Southern African states with specific reference to South Africa.

From a quantitative perspective, the study used Principal Component Analysis (PCA), which is a versatile multivariate analysis technique. It is a rigorous technique that provides for “the best linear estimator of a given rank for a random vector, out of which magnitude and direction of variable correlations will be drawn” (Torokhti & Friedland, 2009: 662). Whereas PCA would not define cause-effect relationships, it would however demonstrate the statistical confidence that such correlations would have not occurred by chance. The variables drawn from the six domains of population development planning were processed through regression analysis, classification, clustering, prediction and networking to isolate those that are determinants in the relationships. Whereas PCA does not deal with the process, instead, it provides for a snapshot; that is rigorous even with less than perfect data set. Finally, the study used the scholarship analysis design.

### **3.3 Description of the study area**

As described in the title, the study area for the study is Southern Africa, which is within Sub-Saharan Africa with specific reference to South Africa. The Human Development Index (HDI), maternal mortality ratio, Gross Domestic Product (GDP) per capita, employment to population ratio, the total number of refugees and displaced in the region, percentage of people satisfied standard of living, adolescent birth rate, Gini-coefficient of human inequality, amongst others, provide a crucial context for understanding the six domains (social, demographical, economic, political and administration, environmental and governance and institutional) that describe the Southern African region. Respectively, these measures were 0.523, 551 deaths per 100 000 live births, \$3 493, 65.2%, 34 453 000, 38%, 103.0 births per 1 000 women between the ages of 15-19 and 0.32 of inequality (UNDP, 2016). These indicators demonstrated the deep poverty and political uncertainty within which the nine Southern African states are challenged to conduct population development planning.

Southern Africa consists of nine countries, namely: Angola, Botswana, Lesotho, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe. The human population of this region was estimated at over 160 million (United Nations Habitat, 2014). Being an African region, Southern Africa’s population development has historically emulated Western family planning. In fact, the population development

planning in the region has been shaped through the demonstration effect. However, the disparities between Southern Africa and the West in terms of the six domains central to the study is stark. Southern Africa was colonised and the abolition of colonial administration has not obliterated the matrices thereof.

Southern Africa is vulnerable to climate change with continuous increasing temperatures and destabilised weather patterns (UN Habitat, 2014). As a result, continuous increase in temperature decreased sea levels and uncertain rainfall patterns, Southern Africa has had challenges with food availability, livelihood security, water availability and agricultural productivity, amongst others. Political will and leadership have continued to shape policies, inclusive of population development, that govern this region. The region is host to a variety of indigenous ethnicity, with a wide range of languages, religions and cultures which have close links with history; and, as such has continued to pose challenges for population development planning that is based on Western-driven norms and values.

### **3.4 Data Collection Instruments**

The research adopted conceptual approach and relied only on secondary data. According to Johnston (2014:6) the use of existing data sets can accelerate the pace of research because some of the most time-consuming steps of a typical research project, such as measurement development and data collection are eliminated. It is beneficial to have multiple sources to bolster confidence in findings, whether it is that two or more sources arrive at the same conclusion for comparison or that they do not, providing an option for contrast. In the case of this research, there was no other similar data located on this very specialized topic, so this analysis was impossible. In the case of this research an in-depth literature review of the areas of interest was conducted examining the previous and current work of experts in the field of school librarianship and technology. Through the literature review other researchers on this topic were identified, as were agencies and research centres that have conducted related studies. Secondary data enabled the researcher to expedite the completion of her studies. This document analysis study made the research to be cost effective by cutting costs that the researcher would have encountered when conducting the empirical study.

### **3.5 Kinds of data required**

The study required textual data about the conceptions and approaches to population development and planning. It also required textual data about the determinants of population development planning, population policy as well as discourses of the contextual information relating to the social, demographical, economic, political and administration, environmental and governance and institutional domains in Southern Africa. It will require statistical data in accordance with the domains, variables and indicators discussed in Appendix A. All the data are necessary to ensure that the PCA output may provide a reliable source of determinants.

### **3.6 Target population**

The target population of the study consisted of all nine states in Southern Africa with specific reference to South Africa. This target population is relevant to the study in that all the states are former colonies that are currently struggling with the legacies of colonisation. Most of them were previously affected by apartheid South Africa's regional policy. Equally, the nine states are home to the majority of poor people; and they have had similar social, economic, cultural, governance, institutional, political and demographic challenges. For example, adolescent fertility rates are uniformly high in the region wherein Human Development Index (HDI) is low. Southern African states have uniformly adopted and implemented population development planning that is a virtual outcome demonstration effect as it is exclusively shaped by Western perceptions. To this extent, the target population is most relevant for the study on the determinants of population development in planning.

### **3.7 Sampling design**

Southern Africa consists of only nine states which are all part of the target population of the target population of the study. Given that the PCA was used to analyse a 9 by 90 raw data matrix, wherein all the nine states are the observations, it means that there is no sampling required.

### **3.8 Data collection techniques**

The study used literature in relation to the six domains and their variables, with specific attention to their relationships and how they shape population development planning. For quantitative data, documents and reports were reviewed for the existing data and statistics on the 90 indicators that cover a wide range of spectrum from social to environmental domains.

The study used secondary data that involved both textual and empirical versions and this data was drawn from reports, books, journal articles, government documents, newspapers, magazines and the internet. Textual data included conceptions of population development, approaches to development planning, discourses about population development planning and determinants of population development in planning. These data were collected through literature review procedures. Statistical data, defined through the domains, variables and indicators described in Appendix A, was collected from a variety of reports including the 2016 United Nations Development programme, 2014 United Nations Human Settlements Programme, statistics South Africa reports, World Bank and Honest Accounts 2017, National Development Plans and population development policies from all the 9 Southern African countries.

### **3.9 Data analysis methods**

For qualitative data analysis, thick descriptions and classifications were utilised. Thick descriptions involved the expressions of meaning, contexts and, where relevant, intentions relating to conceptions, approaches and determinants of population development were planned. Contexts included the geographic, cultural, policy, historical, demographical, legislative, social, economic, political, and environmental and so on for Southern Africa and its states. Planning is value-laden; therefore, intentions relating to the adoption of family planning policies and their confusion with population development planning in Southern Africa will be discussed. For quantitative data, PCA was used to analyse the data into a variety of summary statistics. PCA will be used to analyse the raw data matrix to be drawn from Appendix A. Torokhti & Friedland (2009) and Tsheola (2010) concur that PCA is one of the best known versatile multivariate analysis techniques, which has been variously applied and

extended in many different directions. It converts raw data, into standard scores through vectors (Torokhti & Friedland, 2009; Tsheola, 2010, 2012b). PCA calculates to correlation coefficient matrix that will contain the magnitude and direction of relationships. The pattern of interrelationships will be captured in the principal components, which measure the amount of variance accounted by the principal axis (Tsheola, 2010, 2012b).

Principal components demonstrated different levels of co-variations, that may be indirect or inverse in ways that strengthen the ability to identify determinants of population development in planning. PCA provides for regression analysis, classification, clustering, prediction and networking as demonstrated through a variety of studies; It has been successfully used in the following ways: estimation of frequency data; Indices for infrastructure services, economic overhead capital, and social overhead capital are being developed; relationships between macroeconomic and environmental conditions are being developed; developments in water infrastructure are being developed; availability, demand, and quality of water resources are being developed; and indexes for infrastructure services, economic overhead capital, and social overhead capital are being developed.

Furthermore, latent factors such as social well-being, economic development, and infrastructure are being measured in order to discover the most important elements that influence the development of an organization; forecasting electoral performance; and determining the competitive power of a company, to name a few applications (Stambough & Thorson, 1999; Mainardi, 2003; Lautre & Fernandez, 2004; Ghosh & De, 2005; Andoh, Umezaki, Nakamura, Kizuki & Takano, 2006; White, Tan & Hammond, 2006; Imoto, Yabuuchi & Watada, 2008; Tsheola, 2010, 2012b).

A computer-aided analysis (PCA) method is described by White et al. (2006: 679) as having the capacity to simultaneously analyze enormous data sets in order to expose the underlying structure by "eigenvalue decomposition of the variance matrix" to yield a small number of principle components. The length of the projection of the original variables onto the primary component is represented by the component loadings (Lautre & Fernandez, 2004; Torokhti & Friedland, 2009; Tsheola, 2010, 2012b).

Component scores are associated with each observation and indicate the performance of each primary component (Torokhti & Friedland, 2009; Tsheola, 2010).

Summary of statistics were evaluated to make judgements, inferences and conclusions in terms of the magnitude and direction of the interrelationships of variables to identify those that would not have occurred by chance, using the statistical levels of confidence. Quantitative data was organized in a raw data matrix, consisting of 9 observations and 90 indicators. The summary statistics output from the PCA consisted of a correlation matrix, eigenvalues, confidence level, principal components, loadings and component scores. Out of these summary statistics, it was possible to establish patterns of association among relationships generated through the PCA from the correlation matrix. The results of analyses of factual data and PCA outputs were examined through scholarships analysis to identify determinants of population development in planning among Southern African states

## CHAPTER FOUR

### POPULATION DEVELOPMENT WITHIN THE SOUTHERN AFRICA CONTEXT

#### 4.1 Introduction

Africa's population is increasing at an accelerated rate with expectations of the growth quadrupling to 4.39 billion beyond the year of 2050, this will reason for over 30 per cent of the world's overall population. In comparison to other developing Asian, Latin American and Caribbean countries, African has a youthful population. In addition to the latter, the population's dynamic structure has posed a conundrum for population planers and experts, this is due to its youth structure and size with amplified fertility rates amongst the youth in the 21st century (Ohadike, 1992; Robinson, 2016; Muhoza et al., 2014; Allen, 2017; May, 2017; Plageron, Patel, Hochfeld & Ultiksen, 2019). Although; debates amongst planners have continued on the variances of Southern African countries fertility changes, careful deliberations on the multi-disciplinary nature of population development in planning and problems related to the competing concepts to population development have made it possible for studies to ponder on population development from different angles (Ohadike, 1992; Robinson, 2016; Muhoza et al., 2014; Allen, 2017; May, 2017; Plageron et al., 2019).

Studies on population development in Southern Africa have also taken into account aspects of both social and economic variables, with careful consideration of the relationship between competing concepts of population development in planning, including demography, social domains, economics, politics, psychology, and communications, among other factors. Another set of research looked at questions pertaining to law and government, as well as the historical origins of Southern African communities, as well as the portrayal of life in language and culture, among other humanities (Ohadike, 1992; Robinson, 2016; Muhoza et al., 2014; Allen, 2017; May, 2017; Plageron, 2019). Likewise, other population development studies have

included sciences and biological make-ups, including medicine and pharmacy which take other views of the effects of nature and nurture on the human being and indeed the ways in which the activities of human beings affect all these other fields (Ohadike, 1992; Robinson, 2016; Muhoza et al., 2014; Allen, 2017; May, 2017; Plagerson, 2019). This reason is greatly influenced by the high level of inequality in Southern Africa which is a challenge to overall development, hence this chapter takes cognisance of several concepts of population development and their relation to one another in population development.

## **4.2 Competing Conceptions of Population Development**

Since the inception of the Malthusian argument on population, researchers have debated the relationship between dominant competing concepts drawn from interpretations of the theory. This very aged theory on population has also given direction on debates immediate to population development. Understandably, population development is multi-disciplinary in nature and there exists a multiplicity of variables that shape national population development (Ohadike, 1992; Bradshaw & Brook, 2014; Nyoni & Bonga, 2017). However, the existence of imbalances in the relations between population development, policy and planning; including the complexity of the multiple competing variables and their interactions, has eluded policy makers, especially in Southern African developing countries, this is not limited to one country but inclusive of Angola, Botswana, Lesotho, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe (Canning & Schultz, 2012; Mukaba et al., 2015). In an attempt to understand and achieve population development, attention was given to the rapid population growth. This evolving idea of population prediction has preoccupied social scientists and economists who understood population growth as a threat to development. As such, the thinking that population growth threatens development arose from a fundamentally flawed interpretation of the Malthusian doctrine (Ohadike, 1992; Allen, 2017).

Henceforth, planning had to involve the reduction of population growth because increased consumption of resources would eventually lead to their depletion (MacQuirre, 2014; Allen, 2017; Curtis & Jones, 2017). In return, such a population will become weak as the supply of natural and artificial resources run low (Canning &

Schultz, 2012). On her part, Boserup argues that population development should be understood from a socialist perspective; and, that economic freedom allows for growth and development. For her, high population growth acts as a favourable measure in intensifying development by agitating for innovation (Ohadike, 1992; Josephson et al., 2014; Diachenko & Zubrow, 2015).

Moreover, the debate over the years relative to population development in Southern Africa was only limited to population size and the supply of food. The principle of population development was largely constrained in theory without other dominant competing concepts of population development (Ohadike, 1992; MacQuirre, 2014; Allen, 2017; Curtis & Jones, 2017; Bretschger, 2020). Southern Africa's countries development was subject to industrialization- notably some countries were dependent on the 'more' industrialized economies such as South Africa and to a certain Zimbabwe prior to 1980's; this necessitated the massive use of land and expansion to afford the rapidly growing population food supply and resources, the latter bore environmental issues such as pollution and climate change (Ohadike, 1992; MacQuirre, 2014; Allen, 2017; Curtis & Jones, 2017; Bretschger, 2020). This warranted the Malthusian argument on population and the principle of population development.

Nevertheless, rapid population growth has remained a development concern for both state planners, thereby understanding the role of drivers in other domains other than demographics (Ohadike, 1992; Bradshaw & Brook, 2014). In addressing population development, consideration should be given to the nexus of at least six domains (Ohadike, 1992; Canning et al., 2012; Ezeh et al., 2012; Bradshaw & Brook, 2014; Robinson, 2016; Allen, 2017).

In its attempt to address population development, Namibia's government gave careful consideration to the dominant concepts - attention to these competing concepts was to ensure that population development was not another thumb-sucked theory that sounds good on paper and a night-mare in practice (Ohadike, 1992; MacQuirre, 2014; Allen, 2017; Curtis & Jones, 2017; Bretschger, 2020). In its attempt it implicitly acknowledged that population development is an ethical concern, it proposed that population development must take account of economic variables addressing

economic growth and development in the form of job creation, equal distribution of wealth and improved standard; social variables that are measured through equal access and availability to healthcare, education, housing, employment opportunities overall wellbeing of citizens; political variables that include human rights, the value of freedom, empowerment and democracy in all its forms; cultural fabrics that identify and embrace the diversity of cultures and identity; and lastly, historical bonds that denote meanings of operational systems, symbols and beliefs with reference to history and future life (Ohadike, 1992; MacQuirre, 2014; Allen, 2017; Curtis & Jones, 2017; Bretschger, 2020).

In addition, professionals in Swaziland and Lesotho's population development focused on demography as a concept and isolated the other competing domains, fixating efforts on variables of fertility, mortality and migration. Moreover, planners supported demography and social domains and how they related to one another acknowledging that these forces could obstruct or aid population development. Efforts of the latter leaned more on the study of demography with statically studies of population growth rate in numbers, the number of people with boundaries of a region, the characteristics of the population, the composition of such population and geographic distribution with the nature of activities of their welfare and livelihoods (Ohadike, 2018; Robinson, 2016; Muhoza et al., 2014; Allen, 2017; May, 2017; Plagerson et al., 2019).

Similarly, Angola in its plenary structures for population development addressed issues of the dynamic relationship between population growth and economic domains. Subject to the dynamism of the concepts of population development, Angolan planners understood that the relationship of population growth and economic domains solicits Malthusians argument. In his "principle of population," he postulated that "food supply increases arithmetically, while population grows geometrically" (Cole et al., 1973; Diachenko & Zubrow, 2015; May, 2017; Plagerson et al., 2019). Notably; population growth is related to the availability of resources and will decline with the limitation of such resources, Angola in its population development plenary did not account for other competing concepts such as modification and technological progress that will arise from industrialization. This concealed error instigated a dilemma for the absolute adoption of the Malthusian doctrine attendant to population development in Angola

(Cole et al., 1973; Diachenko & Zubrow, 2015; May, 2017; Plageron, 2019). Industrialization and economic variables addressing economic growth and development in the form of job creation, equal distribution of wealth and improved standards correlated or separated from each other increased the probability of population growth (Cole et al., 1973; Diachenko & Zubrow, 2015; May, 2017; Plageron, 2019).

Furthermore, analyses into the correlation of competing concepts have shown that population development in the abovementioned countries isolated competing concepts. Respectively in no particular order, population development components of the aforementioned countries failed to address the relationship of the dominant competing six concepts. It erroneously overlooked the influence of industrialization as a driver of development on environmental issues; the effect of constant population growth; demographic changes; social aspects; political domains and cultural fabrics that are intertwined with one another (Boserup 1965; 1976; 1981; Shennan 2000; Richerson et al., 2009; Diachenko & Zubrow, 2015; Josephson et al., 2015; Robinson, 2016; May, 2017; Plageron et al., 2019). This limited the population development of Southern Africa countries subjected to demographic and economic; nevertheless, the latter permitted grounds for a large body of research and literature on the competing concepts of population development.

Moreover, Southern Africa has offered a perfect example of how these six domains were addressed in isolation in population development planning and policy (Josephson et al., 2015; Robinson, 2016). Population development in Southern Africa focused more on high fertility rates, notwithstanding the simultaneously high rate of mortality (Ezeh et al., 2012; Robinson, 2016). Whereas the Malthusian doctrine based population development policies dominated in Southern Africa, the absence of his rejection of aid, welfare and pro-poor policies was missed in planning (Robinson, 2015, 2016). Importantly, states and political elites manipulated population development planning and policies to advance political motives such includes apartheid in South Africa (Robinson, 2016). Other than demographic, social, economic, political and administrative, governance and institutional and environmental domains, other conceptions of population development prioritized the environment in planning

(Ohadike, 1992; Hayes, 2006; Josephson et al., 2014; Seekings, 2014; Robinson, 2016). This conception raised controversy because Southern Africa consists of mineral wealth simultaneously as it is home to millions of impoverished people (UNDP, 2016; Curtis & Jones, 2017).

The undeniable momentum in demographic changes and global human population, with continuous requirement of earth's resources to support the needs of the population, has made it impossible to find a plausible approach towards population development planning in Southern Africa (Bradshaw & Brook, 2014). Over the years, advocacy towards fertility, the reduction has gradually become a common approach towards population development planning because of the belief that lower human population would be manageable and easier to plan for in terms of resource availability and allocation (Ezeh et al., 2012; Horton & Petersen, 2012; Bradshaw & Brook, 2014). Therefore, family planning was adopted as a probable solution and a critical element to reproductive health and understanding of reproductive freedoms (Horton & Petersen, 2012).

Indeed, in democratic South Africa policies have been characterized as “strange and incoherent ... in that, they both exacerbate and mitigate poverty” (Seekings, 2014: 1). Unlike the authoritarian regimes in China, a democratic South Africa cannot impose such population development planning policy. Given that the available resources remain far below societal demand, a democratic South Africa has had to balance the reproductive freedoms with the desire to guarantee a better life for all (Hayes, 2006). This policy-positioning is in line with a variant of Malthusian doctrine that focuses on population size and absolute scarcity of food supplies. However, as Seekings (2014: 1) puts it, “The post-apartheid government inherited institutions and policies that made up a ‘distributional regime’ that were never intended to be pro-poor.” Such a balancing act in population development planning and policy would always remain impossible in the context where the majority of poor households have high fertility and fecundity rates, coupled with high illiteracy, devoid of skills and low levels of economic absorption rates. Therefore, the next subsection hopes to shed light on the conceptions and approaches to development planning in Southern Africa. With reference to South Africa's family planning as an approach.

### **4.3 Conceptions and Approaches to Development Planning**

Conceptions and approaches to development planning in Southern African countries have subsequently considered various competing concepts proffered in the subsection above in relation to population development planning. Southern African countries superficially seem to be implementing these concepts in their development planning (Ohadike, 1992 & 2018). The latter permitted arguments that integrating these concepts of population development is constrain and delay in development planning. The management of the relationships between demographical; economical; social; political; environmental; administration and governance and institutional variables promoted the loosening of developmental attitudes that did not endorse these competing concepts for national development planning and enhancement of population development (Mosley & Branic, 1989; Ohadike, 1992, 2018). Thus, Southern African national development plans have admitted to making erroneous reference to developed countries national development plans and that government did not recognize population development variables that are affected by population growth (Mosley & Branic, 1989; Ohadike, 1992, 2018). Nonetheless; Southern African development planning has shown inconsistency in accounting for policies and plans that did not clearly outline population growth trends and demographic profiles- where else, some Southern African countries have made attempts to incorporate competing concepts in their population development policies and national development plans with attention to the interrelationship of the variables as one approach towards development planning (Mosley & Branic, 1989; Ohadike, 1992 & 2018).

Also, Southern African national development planning processes are profoundly dependent on the availability of technology for the integration of population development competing concepts. The inaccessibility to and of updated data in respect to the variables of population development such as the creation and retention of jobs, access to services including health and education and fertility amongst others have posed challenges for the modelling of frameworks and techniques that potentially guide national development planning (Mosley & Branic, 1989; Ohadike, 1992, 2018; Munro, 2017; Yazlyyev, 2017; Chimhowu et al., 2019). Nevertheless; the potential of responsive planning towards these competing concepts draws an embedded line

between population development and population planning which distinguishes national population development planning for countries in Southern Africa (Mosley & Branick, 1989; Ohadike, 1992, 2018; Munro, 2017; Yazlyyev, 2017; Chimhowu et al., 2019). Therefore, the solicitation of national development planning in Southern Africa necessitates the adoption of population development programmes and projects that directly involve the adoption of competing concepts of population development as a guide. National development plans as an approach to development planning prerequisites orientation around competing concepts of population development essentially influencing possibilities of concept orientated development planning prominently creating a contrast between the formulation and implementation of such development planning (Mosley & Branick, 1989; Ohadike, 1992, 2018; Munro, 2017; Yazlyyev, 2017; Chimhowu et al., 2019).

Remarking on the overt delivery of national development plans in Southern Africa and how they have in due course shaped development planning. It appraises planners and experts to articulate national development plans that are comprehensive and operationalise the concepts of population development in programmes, projects and policies (Mosley & Branick, 1989; Ohadike, 1992, 2018; Munro, 2017; Yazlyyev, 2017; Chimhowu et al., 2019). Understandably, an ideal approach to development planning in Southern Africa would not only address micro demographical matters but inclusive of all economic, social, political, environmental and institutional subjects. Furthermore- the conceptions and approaches need to embrace rural population, urban population, children, adults and aged population, the linkage of the latter and recognition of non-development planning factors would allow for development planning in totality (Mosley & Branick, 1989; Ohadike, 1992, 2018; Munro, 2017; Yazlyyev, 2017; Chimhowu et al., 2019). Moreover, Southern African conceptions and approaches have concentrated on demographic domains, specifically devoted to family planning firmly applying population reduction strategies and enhancing the decline of fertility levels. Not limited to the latter variables related to the domain but also migration in rural and urban areas and amongst the countries.

The conception and approaches of Angolan national population development planning lean towards demographic domains with population programmes, projects and

policies steered by population distribution amongst rural and urban areas. Although development planning in the aforesaid country seeks to intergrade all domains for population development, its conceptions and approaches towards development planning are not affluent to the multi-disciplinary nature of population development planning (Mosley & Branica, 1989; Ohadike, 1992, 2018; Munro, 2017; Yazlyyev, 2017; Chimhowu et al., 2019). An overt and well-structured national development plan for Southern African countries would have to include the competing concepts of population development for a successful implementation, these national development plans should ordinarily recognize the complexity of population development planning concepts and their ever-changing relationship (Mosley & Branica, 1989; Ohadike, 1992, 2018; Munro, 2017; Yazlyyev, 2017; Chimhowu et al., 2019).

As a result, Southern African development planning has concentrated on family planning attendant to population development, with greater attention directed towards flawed family planning policies as opposed to inclusive national development planning that recognizes all concepts of population development (Mosley & Branica, 1989; Ohadike, 1992, 2018; Munro, 2017; Yazlyyev, 2017; Chimhowu et al., 2019). Noting the latter, national development plans of Southern African countries such as Botswana, South Africa and Zimbabwe centrally focus on high fertility rates as the important contributor and critical influencer towards population development planning (Mosley & Branica, 1989; Ohadike, 1992, 2018; Munro, 2017; Yazlyyev, 2017; Chimhowu et al., 2019). The aforementioned Southern African countries relied heavily on USAID and UN global policy database for information attendant to family planning for obvious reasons of reducing high fertility rates and population growth. Underlining high fertility rates as the stumbling block to regulating population growth and economic development of these countries. Consequently; with evidence of the national development planning system, the latter advocates for the fundamental status quo and pace of population development in Southern African countries (Mosley & Branica, 1989; Ohadike, 1992, 2018; Munro, 2017; Yazlyyev, 2017; Chimhowu et al., 2019).

#### **4.4 Population Development Planning Discourses for Developing Countries**

Population development discourse in developing countries has been focused on the demographic aspect as opposed to other domains of population development

planning. The discourse on population development planning is dominated by consideration of demographics with the result that it came to be captivated by birth control-based family planning (Banister et al., 2010; Canning & Schultz, 2012). To be precise, the discourse is driven by misreading of the Malthusian doctrine. In achieving population development, developing countries have been devoted towards improving family planning and reproductive health given that population growth is temporal to space and time (Hayes, 2006; Horton & Petersen, 2012). The hope was that access to the best family planning practices and programmes will effectively reduce fertility rates and child mortality amongst developing countries (Canning & Schultz, 2012; Horton & Petersen, 2012; Mukaba et al., 2015). This can be translated to an increase in working-age population, increase in earnings and increase in women actively participating in the economy which will result in employment (Canning & Schultz, 2012). Historically, Southern African countries devoted available resources to providing free family planning services to township residents and farm workers amongst white-owned farms (Norling, 2015).

#### **4.4.1 South Africa's context of Population Development Planning Discourses**

Population development planning has been exploited as a political tool for control of societies (Ohadike, 1992; Hayes, 2006; Norling, 2015; Robinson, 2016); and, China has offered a perfect example when it implemented its one-child-one-couple policy (Feng et al., 2012; Feng et al., 2016). However, apartheid South Africa presented the worst evil of such population control (Seekings, 2014; Norling, 2015). Whereas some of these mechanisms were justified through environmentalist notions founded on Malthusian doctrine, they remained inhumane and unethical (Ohadike, 1992; Seekings, 2014; Norling, 2015). As a demonstration of its weaknesses, China's one-child-one-couple planning was recently reviewed to one where couples are allowed to have two children (Feng et al., 2016). Unlike the authoritarian regimes in China, a democratic South Africa cannot impose such population development planning and policy. According to Seekings (2014: 1), while the democratization of South Africa reduced the influence of most formerly advantaged (white) residents, and maybe also

of business, it did not result in any significant empowerment of the poorest individuals." An extreme approach was implemented by the apartheid government of South Africa in order to suppress population growth, particularly in the non-white people and society.

Moreover, this far-reaching and extreme measure was used as a political tool to enforce and shape population growth and demographic constructs of the non-white societies (Ohadike, 1992; Seekings, 2014; Norling, 2015; Robinson, 2016; Besteman, 2019). On the other hand, the geographical demarcation and zoning of the apartheid government of South Africa did not limit the population growth and high fertility henceforth the assignment of population control measures directed to the non-white population (Ohadike, 1992; Seekings, 2014; Norling, 2015; Robinson, 2016; Besteman, 2019). The devious component of apartheid government and system enabled for the slow-paced and poor population development of the aforementioned race, this apparatus to control population growth and fertility rates violated human rights, health privileges and proved to be inhumane (Ohadike, 1992; Seekings, 2014; Norling, 2015; Robinson, 2016; Besteman, 2019). The devious and inhumane apparatus ascertained unsustainability for the government and planning mechanisms, the population development discourse became extraordinarily costly and unfavourable for the apartheid government (Ohadike, 1992; Seekings, 2014; Norling, 2015; Robinson, 2016; Besteman, 2019).

In addition, forced disbandment of the abovementioned population development discourse was subjective to a few components such as, cultural and social components that tie people together through the spirit of "Ubuntu" and diversity, secondly the political components that recognized the inhumane apparatus of population development and the bureaucratic system that endangered human health for dominance, thirdly psychological components that paid attention to the effects of the discourse on population development associated to social components and lastly economic components which led to the sanctioning of the South African government and serving no purpose to the economic growth and development (Ohadike, 1992; Seekings, 2014; Norling, 2015; Robinson, 2016; Besteman, 2019). The end of the apartheid era and the dawn of a more democratic South Africa welcomed more

humane and sensible population development discourses that acknowledge and give appreciation to Millennium Development Goals and Sustainable Development Goals. Upon this unified and democratic South Africa government practices were attendant to family planning, accompanied by information on practices and different contraception methods upon individuals' consent (Ohadike, 1992; Seekings, 2014; Norling, 2015; Robinson, 2016; Besteman, 2019).

#### **4.2.2 Sustainable Development Goals and Population Development Planning Discourses for Southern Africa**

Population development planning discourses in Southern Africa have adopted Sustainable Development Goals and target indicators to measure the progress of population development. The following Goals and their targets have been adopted to guide the planning policies: Goal 1. End poverty in all its forms everywhere by 2030, eradicate extreme poverty for all people everywhere, By 2030, reduce by at least half the proportion of men, women, and children of all ages living in poverty in all its dimensions, as defined by national criteria, which is presently assessed as those earning less than \$1.25 a day. Incorporate national-level social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and vulnerable. By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events as well as other socioeconomic and environmental shocks and disasters; and by 2030, ensure significant mobilization of resources from a variety of sources, including the private sector and international organizations. (UNDP, 2018: 109).

Goal 8 promotes sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all, sustained per capita economic growth consistent with national circumstances, with a particular emphasis on at least 7% gross domestic product growth per annum in the least developed countries, promotion of development-oriented policies that support productive activities, decent job creation, entrepreneurship and creativity and innovation and encourage the

formalization and growth of micro-small-and medium-sized enterprises (MSMEs), and the formalization and growth of SMEs in the least developed countries Full and productive employment, as well as decent work for all women and men, including youth and persons with disabilities, by 2030, as well as equal pay for equal value work, are to be achieved; by 2020, the proportion of youth not in employment, education, or training is to be significantly reduced. Remove all forms of forced labor from the workforce immediately and effectively; put an end to modern slavery and human trafficking; establish a legal framework for the prohibition and elimination of the worst forms of child labor, including the recruitment and use of child soldiers; and by 2025, eliminate all forms of child labor. By 2030, develop and put into effect plans to encourage sustainable tourism that generates jobs while also promoting local culture and goods. (UNDP, 2018: 110).

Goal 11 makes cities and human settlements inclusive, safe, resilient and sustainable Current progress is being measured by a significant reduction in the number of deaths and the number of people affected by natural disasters, as well as a substantial reduction in direct economic losses relative to the global gross domestic product caused by disasters, including water-related disasters, by 2030, with a particular emphasis on protecting the poor and people in vulnerable situations. (UNDP, 2018: 111).

Nevertheless, legislation highly influenced population development discourses for Southern African countries, a strong foundation was built from the diverse expression of democracy and transformation (Norling, 2015; Sullivan, n.d; Plagerson et al., 2019; Sullivan, 2020). The Constitution of South Africa with its distinctive features and expression for population development planning embodied the struggles to chart a way forward for population development, adoption of the Constitution of South Africa attendant to population development planning discourses negotiated for social issues and transformation (Norling, 2015; Sullivan, n.d; Plagerson et al., 2019; Sullivan, 2020). The Constitution as a guide to population development planning discourses articulated intentions to foster extensive stability in transformation and redistribution of social resources attendant to social deficiencies that existed in South Africa; additional to the latter, the Constitution fostered integrated population development planning

discourses that address the complex relationship of social and economic domains subsequent to legislation that rally for civil societies and overall human wellbeing (Norling, 2015; Sullivan, n.d; Plageron et al., 2019; Sullivan, 2020). The documentation of such ensured that social policies for South Africa have reference and directed continuous transformation.

#### **4.4.3 South Africa's Development Agenda as a discourse for Population Development Planning**

Furthermore, the South African government jointly adopted the Bill of Rights as an obligation to USAID and UN human rights in ensuring the provision of social components to the populace. Joining the Constitution and Bill of Rights as discourses to population development planning was a commitment to ensure that social components that enhance economic drive are gratified and addressed (Norling, 2015; Sullivan, n.d; Plageron et al., 2019; Sullivan, 2020). The progressive mindset towards population development planning discourses required the state to utilize available resources within its capabilities in ensuring that population development is achieved and the full realization of the same rights with those available resources (Norling, 2015; Sullivan, n.d; Plageron et al., 2019; Sullivan, 2020).

Moreover, incorporation of the Constitution and Bill of Rights in population development planning discourses influenced the upended apartheid government population development policies and discourses that were discriminatory, this reaffirmed the expression of democracy that recognizes the correlation between social rights and economic components (Norling, 2015; Sullivan, n.d; Plageron et al., 2019; Sullivan, 2020). The legislative pathway delivered foundation in the construction of population development policies and discourses that redressed the misdemeanour of the apartheid government of South Africa; the core principle of the above-mentioned population development planning discourse was to harmonize and focus available resources on the disadvantaged population inclusive of all concepts of population development in the prior planning, by the provision of a reconstructed welfare system that provides accommodation to principles of justice and equity (Woolard et al., 2011;

Norling, 2015; Patel, 2015; Sullivan, n.d; Plageron et al., 2019; Sullivan, 2020). The latter included benefits of coordinated population development planning and this vision verified the correlation of social rights and economic components that are the formula to reciprocal benefits for all citizens in the country (Woolard et al., 2011; Norling, 2015; Patel, 2015; Sullivan, n.d; Plageron et al., 2019; Sullivan, 2020).

Moreover, the Constitution as a legislative framework serves the purpose to embrace the population development discourses whilst adhering to the supreme rule of law that it upholds, the prime goal in population development discourses being the alleviation of poverty and inequality in South Africa. However, consequent population development discourses have pursued social development and economic growth even at a different route and prioritization (Woolard et al., 2011; Van Niekerk, 2013; Norling, 2015; Patel, 2015; Sullivan, n.d; Plageron et al., 2019; Sullivan, 2020).

Well ahead- the democratic government of South Africa introduced the Reconstruction and Development Programme (RDP) as a population development discourse, the adoption of the RDP was closely related to population development and the fundamental principles of the Constitution. The sole focus of the RDP as a population development discourse was to ensure that social rights are upheld and social needs are met (Woolard et al., 2011; Van Niekerk, 2013; Norling, 2015; Patel, 2015; Sullivan, n.d; Plageron et al., 2019; Sullivan, 2020). The democratic ruling party of South Africa which is African National Congress (ANC) ranged its population development discourses with the constitution; advocating for attention to human rights, social competing concepts-based approach and economic redistributive mechanisms. However, the application of this stance to qualify a successful population development did not habitually assure robust redistributive measures and population development discourses. These attempts towards population development discourses led the government of South Africa towards a more economic concentrated development discourses subjective to prior human rights and social competing for concepts-based approach. Consequently, the adoption of the Growth, Employment and Redistribution Programme (GEAR) was an attempt to ensure population development discourses attract foreign investment (Woolard et al., 2011; Van Niekerk, 2013; Norling, 2015;

Patel, 2015; Sullivan, n.d; Van der Westhuizen, 2015; Plagerson et al., 2019; Sullivan, 2020).

The adoption of the latter legislative frameworks coagulated the existence of the National Development Plan (NDP) as a population development discourse in South Africa, the NDP advocated for social and economic competing concepts as driving forces of population development. The NDP highlights the importance of incorporating competing concepts such as social-based approach, economic redistributive mechanisms and environmental policy as fundamental guides towards population development discourses (Woolard et al., 2011; Van Niekerk, 2013; Norling, 2015; Patel, 2015; Sullivan, n.d; Van der Westhuizen, 2015; Plagerson et al., 2019; Sullivan, 2020). Conversely; scholars have debated the former population development discourses in developing countries of Southern Africa, deliberation these discourses is that they displayed indistinct model progress and lacked context towards population development and the competing concepts of population development planning and this limited population development discourses in practice and application (Edigheji, 2012; Lincoln, 2016).

Ideally, developed demographics have the potential to assist in economic growth and strengthen economic development. The change over time of the latter provides policy makers and planners an opportunity to re-evaluate conceptions and approaches to population development planning (Norling, 2015; South African Government, 2015; Sullivan, n.d; Plagerson et al., 2019; Sullivan, 2020). Population development discourses in Southern Africa are largely influenced by recent and forecasts of demographics variables; nevertheless, policy makers have ignored the trends with result to the current under-development (Norling, 2015; South African Government, 2015; Sullivan, n.d; Plagerson et al., 2019; Sullivan, 2020).

In terms of demographic trends, developed and developing nations are at various stages of development. In comparison to the population of developed nations between the ages of 15 and 29, the population of developing countries between the ages of 15 and 29 has a 7 percent larger share in development (Norling, 2015; South African

Government, 2015; Sullivan, n.d; Plageron et al., 2019; Sullivan, 2020). Approximately 70 percent of Africa's population is under the age of 30, with estimates indicating that 40 percent is under the age of 15 and 40 percent is under 30. The demographic makeup of the economic workforce has an impact on the economy; fortunately, Africa's young population provides an advantage by constituting the majority of the labour force (Norling, 2015; South African Government, 2015; Sullivan, n.d; Plageron et al., 2019; Sullivan, 2020). As far as it is feasible, an active population with a small number of children to support offers opportunities for economic development and progress, which in turn improves people's quality of life and standard of living. Thus, the population has a competitive edge in the labour market as a result of this. Furthermore, an inactive labour market is characterized by a disproportionately elderly population, which inhibits the market's capacity for economic growth and development (Norling, 2015; South African Government, 2015; Sullivan, n.d; Plageron et al., 2019; Sullivan, 2020).

South Africa's population development discourses are primarily focused on slowing the increase of the population and raising the life expectancy of the population. The trend in South Africa's demographic compositions is more in line with an improvement in the quality of life and an increase in the chances of survival to guarantee that the economy thrives and the population is actively engaged in the workforce. (Norling, 2015; South African Government, 2015; Sullivan, n.d; Plageron et al., 2019; Sullivan, 2020).

The challenge today is to convert this into a demographic dividend for the country. In order to achieve this, an increase in the number of working-age people who can be employed in productive activities, as well as an increase in the amount of average income per capita, will be required. Unless South Africa takes steps to address this issue, the large number of young people in the country might pose a significant threat to the country's social, political, and economic stability (Norling, 2015; South African Government, 2015; Sullivan, n.d; Plageron et al., 2019; Sullivan, 2020). Fertility, mortality, and migration are the three key demographic drivers of South Africa's population, and there are significant differences in the profiles of the country's population groups between the three primary demographic drivers (Norling, 2015;

South African Government, 2015; Sullivan, n.d; Plagerson et al., 2019; Sullivan, 2020). Resulting from previous wrongdoing Black South Africans have shorter lives than white South Africans and have a greater fertility rate than white South Africans, despite the fact that the fertility rate among the black population is falling dramatically, particularly among those living in urban areas. Migration will be a key feature of the country's profile for the next 18 years, both inside and beyond borders, both within the country and across borders. Migration from rural to urban areas is likely to increase, although migration from other African countries, mostly to the United States, is expected to stay steady or perhaps increase (Norling, 2015; South African Government, 2015; Sullivan, n.d; Plagerson et al., 2019; Sullivan, 2020).

If present growth rates are maintained, the population will rise from 50.6 million in 2010 to reach an estimate between 65 and 67 million people by 2030, assuming that the economy continues to expand and fertility rates remain at their current levels. If the economy continues to contract, the current fertility rate is expected to remain steady, resulting in a population of 63 million people by 2050, according to projections (UN, 2019). United Nations estimates that the global population would expand to 3 61.5 million people under a scenario in which a nation north of South Africa were to fall, resulting in higher numbers of migrants. In the wake of its demographic change, South Africa has found a "sweet spot" in terms of economic development (UN, 2019). In comparison to other countries, the population of the United States is made up predominantly of people of working age and a relatively small number of children and the elderly. As a result, the dependency ratio – defined as the number of people over the age of 64 and under the age of 15 in relation to the working-age population – has reached a threshold where there are enough persons of working age to support the non-working population. In the case of South Africa, the caveat is that unemployment and HIV/AIDS have resulted in a far greater number of dependents than would otherwise be the case (Norling, 2015; South African Government, 2015; Sullivan, n.d; Plagerson et al., 2019; Sullivan, 2020). The hardships of joblessness and HIV/AIDS create a pressure on those who are working in spite of the fact that South Africa is statistically in a position to profit from the demographic dividend. It is possible for a perfectly timed window to become the perfect storm if the situation is not properly managed. According to the United Nations Development Programme, South Africans

between the ages of 15 and 29 will account for more than a quarter of the country's total population by 2030, up from less than a quarter now (Norling, 2015; South African Government, 2015; Sullivan, n.d; Plagerson et al., 2019; Sullivan, 2020).

A true opportunity exists to build a more prosperous economy, alleviate poverty, and reduce inequality around the world. The growth in the proportion of persons over the age of 64 in the population, which will rise from 5 percent presently to 6.5 percent by 2023 and over 7 percent by 2027, will mean that this window of opportunity will close before 2030. South Africa's population will grow by approximately 2.5 million people over the age of 64 by 2030, bringing the total number of people over the age of 64 to 4.4 million (UN, 2019). According to the UN, this is the point at which a country's population is considered "aged" in terms of demographics. As treatment for HIV/AIDS becomes increasingly successful, an increasing proportion of the old population will get infected with the virus, putting a strain on the economy. This is especially true since an increasing proportion of the elderly population will become infected with the virus. Apart from that, this age group is particularly vulnerable to noncommunicable diseases, with some predictions estimating that the number of cardiovascular deaths in South Africa will more than double by 2040 (Plagerson et al., 2019; UN, 2019; Sullivan, 2020). Higher demand for health-care and social-security benefits will have significant cost consequences, which will be paid mostly by taxpayers in the form of higher taxes (Norling, 2015; South African Government, 2015; Sullivan, n.d; Plagerson et al., 2019; Sullivan, 2020).South Africa's demographic makeup, as a result of its fertility trends, has had a significant impact on population development discourses, despite the fact that fertility levels are quite variable. High fertility rates are most often seen in situations of poverty and powerlessness, when infant mortality is high and women have limited opportunities and educational opportunities, according to the World Bank. Fatal mortality is reduced by health care, education, old-age security, women's empowerment, economic ambitions, and urbanisation (Norling, 2015; South African Government, 2015; Sullivan, n.d; Plagerson et al., 2019; Sullivan, 2020).. However, fertility rates can fluctuate dramatically and are unpredictable. As secondary school education became more widely available in Thailand, the fertility rate decreased from around 6 to 2 in a decade. In South Africa, the fertility rate has similarly declined, but over a longer period than in other countries. The rate peaked in the late

1960s at around 6.7 percent, before dropping to 2.9 percent in 2001 and 2.3 percent in 2011. According to current projections, it will decline to 2.1 by 2030, which is near to the replacement rate at which a population maintains a roughly constant size. It is projected that the population would grow by slightly more than 8 million people by 2030 as a result of this. Fertility rates in South Africa vary depending on the region and socioeconomic features of the population (Norling, 2015; South African Government, 2015; Sullivan, n.d; Plagerson et al., 2019; Sullivan, 2020).

The anticipated population changes in South Africa will have an impact on government spending. A number of factors will influence the costs associated with these shifts, including people living longer lives as life expectancy increases, older people constituting a growing proportion of the population, an increasing number of people living with HIV/AIDS as treatments become more effective, the number of people requiring ARV treatment will triple, and a number of other factors (Woolard et al., 2011; Van Niekerk, 2013; Norling, 2015; Patel, 2015; South African Government, 2015; Sullivan, n.d; Van der Westhuizen, 2015; Plagerson et al., 2019; Sullivan, 2020). These include the amount to which pensions are raised to keep pace with inflation, the efficiency of the healthcare system, the cost of medications, notably antiretroviral therapy (ARVs), and increases in grant payments, among other things. These expenses could be absorbed if the majority of the working-age population is employed, but they would be difficult to manage if persistently high levels of unemployment were to be encountered (Woolard et al., 2011; Van Niekerk, 2013; Norling, 2015; Patel, 2015; South African Government, 2015; Sullivan, n.d; Van der Westhuizen, 2015; Plagerson et al., 2019; Sullivan, 2020).

It is difficult to obtain precise information on migration into and within South Africa since data is insufficiently collected, improperly analyzed, and usually erroneous. Data collection is difficult since many migrants live under the radar and move back and forth between South Africa and their country of origin on a regular basis. Assuming the best-case scenario, there are evidence that international migration will grow in the near future (Woolard et al., 2011; Van Niekerk, 2013; Norling, 2015; Patel, 2015; South African Government, 2015; Sullivan, n.d; Van der Westhuizen, 2015; Plagerson et al., 2019; Sullivan, 2020). According to statistics from Statistics Canada, the total number

of border crossings has climbed by more than 2 million since 1996, going from 5 million to 7.5 million each year. However, while this indicates an increase in tourism, it might also be suggestive of an increase in transnational migration. As a result of extrapolating census statistics, the Forced Migration Studies Program has estimated that the overall foreign population is likely to be between 1.6 million and 2 million persons, or 3 percent to 4 percent of the total national population, based on its research. (Woolard et al., 2011; Van Niekerk, 2013; Norling, 2015; Patel, 2015; South African Government, 2015; Sullivan, n.d; Van der Westhuizen, 2015; Plageron et al., 2019; Sullivan, 2020).

In South Africa, according to the Forced Migration Studies Program, there are between 1 million and 1.5 million Zimbabweans residing there, with the vast majority of them being the most vulnerable of the migrant population. If global trends continue to be repeated in South Africa, the country's migratory patterns will grow increasingly difficult (Woolard et al., 2011; Van Niekerk, 2013; Norling, 2015; Patel, 2015; South African Government, 2015; Sullivan, n.d; Van der Westhuizen, 2015; Plageron et al., 2019; Sullivan, 2020). These patterns would include people from a variety of socioeconomic backgrounds, as well as a mix of permanent and temporary migrants. There will be an increase in the number of younger and female migrants, as well as an increase in the number of migrants migrating from areas that have been adversely affected by climate change, according to the United Nations Development Programme. In terms of pure numbers, migrations between and within provinces and municipalities are the most significant type of mobility in the country, although migrations outside are more politically problematic (UNDP, 2018). A nation's population trends are typically shaped by other variables, such as fertility rates and internal mobility inside the country, rather than the admission of immigrants into the country. Thus, between 2001 and 2007, natural growth contributed 74% to growth in population in Johannesburg, migration contributed 26% to growth in the Gauteng province, and cross-border migration contributed just 3 percent to overall population growth in the province during this period (Woolard et al., 2011; Van Niekerk, 2013; Norling, 2015; Patel, 2015; South African Government, 2015; Sullivan, n.d; Van der Westhuizen, 2015; Plageron et al., 2019; Sullivan, 2020).

Migration, if managed properly, has the ability to alleviate labor shortages in South Africa's labor market and contribute positively to the country's economic development. The contributions of migrant groups that are active and resourceful to the overall growth of the community can be considerable, and diverse, cosmopolitan communities are typically the re-centre of cultural, economic, and intellectual innovation. In contrast, if migrants' abilities and potentials are not adequately recognized and developed, they will be disregarded (Norling, 2015; South African Government, 2015; Sullivan, n.d; Plageron et al., 2019; Sullivan, 2020). A cause of conflict and tension in the world, migration will continue to be a source of vulnerability for migrants, who will grow increasingly vulnerable as a result of the abuse, exploitation, and prejudice that they have endured in the past.

A large amount of urbanization has taken place in South Africa, which is commensurate with the rest of the world. As of 2008, urban areas were home to half of the world's population, and the United Nations predicts that by 2030, nearly three out of every five people would live in one of 17 metropolitan areas. Compared to the rest of the globe, South Africa has a somewhat larger proportion of urban residents: roughly 60 percent of the population is urbanized (according to the official definition), and this proportion is predicted to climb to approximately 70 percent by 2030. (Norling, 2015; South African Government, 2015; Sullivan, n.d; Plageron et al., 2019; UN, 2019; Sullivan, 2020).

Because of the apartheid-era cyclical labour movement, the patterns of urbanization in South Africa are convoluted, and as a result of this relationship, there is a complex interplay between rural and urban districts. It is anticipated that urban residents would become more securely anchored in their locations of residence throughout time. Urbanization may slow, as it has in portions of Latin America and Asia, but urban areas will likely account for virtually all of South Africa's net population expansion through 2030 (an estimated 8 million people), notably in major cities (Norling, 2015; South African Government, 2015; Sullivan, n.d; Plageron et al., 2019; Sullivan, 2020). There has been a rise in migration to cities and urban renewal areas, which is symptomatic of a trend that can be observed in all growing markets. Rather than reflecting the failure of rural (population development) projects, this tendency is a reflection of the fact that

urban life offers individuals a greater variety of options than rural life (Norling, 2015; South African Government, 2015; Sullivan, n.d; Plagerson et al., 2019; Sullivan, 2020).

Despite the fact that these migrations are sometimes seen negatively, they can really have a positive influence on the environment and the economy. For example, increased state ability to provide better services because urban settings are more easily accessible, an increase in living standards as internal migrants are able to access jobs, and a decrease in fertility rates, which is unavoidably associated with people's adaptation to urban life are just a few of the benefits. Informal settlements, in particular, are a substantial source of contention (Norling, 2015; South African Government, 2015; Sullivan, n.d; Plagerson et al., 2019; Sullivan, 2020). Initially, the vast majority of job-seeking migrants who migrate to cities live in informal settlements, which offer a low-cost method of establishing a footing in a new environment. It is difficult for many newcomers to the city to break into the labor market and to make the shift from shacks to more formal living arrangements in the city (Norling, 2015; Sullivan, n.d; Plagerson et al., 2019; Sullivan, 2020). According to the United Nations Development Programme, the average length of time spent living in urban informal settlements has increased from roughly two to four years in the early 1990s to 10 years now. Although a significant fraction of rural-urban movement occurs, the majority of migration from rural regions and small towns is to neighboring rural regions and small towns, rather than to urban areas (78 percent) (UNDP, 2018). Because of this, while the expansion of large urban centers must be carefully controlled, planning must also take into consideration evolving patterns of population distribution in rural areas. Because individual economic behavior varies with age, changes in the makeup of the population can have a significant influence on the overall performance of a country. Countries having a high proportion of dependants to workers devote a disproportionately large part of their resources to these groups, hence restricting economic growth (Norling, 2015; South African Government, 2015; Sullivan, n.d; Plagerson et al., 2019; Sullivan, 2020). The working-age population tends to produce more than it consumes, which means that countries with a disproportionately large proportion of the population in prime working age may see an increase in income and

savings as a result of the fact that the working-age population produces more than it consumes (Norling, 2015; Sullivan, n.d; Plagerson et al., 2019; Sullivan, 2020). Nonetheless, demographic dividends may only promote considerable economic growth in environments where there are suitable economic and labour laws that allow the young to enter the workforce, as well as investments in health and education, as well as a stable and functional government. The goal is to develop economic strategies that will allow a bigger working-age population to reap the advantages of increased productivity. It has been found that East Asian countries have been more successful in utilizing their demographic dividend (Norling, 2015; Sullivan, n.d; Plagerson et al., 2019; Sullivan, 2020). East Asia's working-age population has increased from 47 percent in 1975 to 64 percent in 2010, a significant increase. Evidence suggests that the faster increase in the working-age population in East Asia compared with Latin America from 1965 to 1990 was due to a focus on export-oriented economic policies and investment in education and skills development, which was accompanied by a focus on education and skills development. South Africa will have nearly 14 million young people between the ages of 15 and 29 in the next 20 years, according to the World Bank. The number will reach a zenith in 2021 when it will exceed 15.1 million (Norling, 2015; Sullivan, n.d; Plagerson et al., 2019; Sullivan, 2020).

In addition to being a wonderful opportunity, joblessness also poses a significant risk, given that it corresponds to fault lines associated with age and race. Young black individuals account for two-thirds of the jobless under the age of 35, according to the Bureau of Labour Statistics. Young people between 15 and 24 years old had the greatest unemployment rates (46.6 percent in 2008), while those between 25 and 34 years old have the second-highest unemployment rates (26.2 percent). The unemployment rate among African-American youngsters is 65 percent (Woolard et al., 2011; Van Niekerk, 2013; Norling, 2015; Patel, 2015; South African Government, 2015; Sullivan, n.d; Van der Westhuizen, 2015; Plagerson et al., 2019; Sullivan, 2020). If young people do not secure formal work by the age of 24, they are unlikely to do so in the future. Without a solution, this tendency represents the single biggest threat to social stability, which is a key factor of population development. Young people are more inclined to rebel if they are forced to choose between unemployment and poverty as their only options. Homicides are often perpetrated by guys between the ages of

16 and 30 who are between the socioeconomic classes. Consequently, social instability, broad political upheaval, and an increase in crime are all possible consequences for South Africans (Woolard et al., 2011; Van Niekerk, 2013; Norling, 2015; Patel, 2015; South African Government, 2015; Sullivan, n.d; Van der Westhuizen, 2015; Plageron et al., 2019; Sullivan, 2020).

The extent to which the demographic dividend may be banked and dangers averted is dependent on the policy choices made and the effectiveness with which population development policies are put into practice. In order to increase possibilities, strengthen skills, and give second chances, the government must apply a "youth lens" to policies relating to population development and population growth. Among the most frequently cited factors for unlocking the potential of a demographic dividend are improved health, including food security, improved health care, and improved education to meet the demand for higher skill levels (Norling, 2015; South African Government, 2015; Sullivan, n.d; Plageron et al., 2019; Sullivan, 2020). Other factors include ease of entry into the labour market and increased labour mobility. Access to appropriate health care for children is essential because it can have long-term consequences for their physical and mental development, which can have a negative impact on their future productivity, wages, and economic well-being as adults (Norling, 2015; South African Government, 2015; Sullivan, n.d; Plageron et al., 2019; Sullivan, 2020).

Although health and education are required to take advantage of a youthful population, they are not sufficient to achieve long-term population development. The expansion of options for higher education without a corresponding increase in work prospects might be potentially dangerous. High levels of unemployment among educated young people have the potential to spark political instability and bloodshed. As a result, economic possibilities and employment are essential. The demographic dividend can only be realized if enough meaningful employment opportunities are established for the increasing number of working-age individuals (Woolard et al., 2011; Van Niekerk, 2013; Norling, 2015; Patel, 2015; South African Government, 2015; Sullivan, n.d; Van der Westhuizen, 2015; Plageron et al., 2019; Sullivan, 2020). In comparison to most other African countries, the Republic of South Africa has done little to improve the advantages of migration or to decrease the hazards that migrants confront. Lack of

support for migrants in important markets makes it difficult to reap the economic benefits of migration that may otherwise be realized. South Africa's immigration policy has attempted to respond to the need for skilled immigrants by amending the Immigration Act to make it easier for those with scarce talents to come to the country (Woolard et al., 2011; Van Niekerk, 2013; Norling, 2015; Patel, 2015; South African Government, 2015; Sullivan, n.d; Van der Westhuizen, 2015; Plagerson et al., 2019; Sullivan, 2020).

Beyond the Southern African Development Community Protocol on the 21<sup>st</sup> Facilitation of Movement of Persons, there is minimal regional law in place, which is particularly noteworthy. Improving data collection, coordination, and analysis as a matter of urgency are among the actions that must be taken to better enable movement in demographic dividends and therefore increase population development. Increasing the number of skilled migrants who can enter the country (Norling, 2015; Sullivan, n.d; Plagerson et al., 2019; Sullivan, 2020). Countering xenophobia through the implementation of long-term campaigns. Addressing the rights and vulnerabilities of migrants effectively (Woolard et al., 2011; Van Niekerk, 2013; Norling, 2015; Patel, 2015; South African Government, 2015; Sullivan, n.d; Van der Westhuizen, 2015; Plagerson et al., 2019; Sullivan, 2020). Introducing programs to assist migrants in obtaining legal status in their new home. Providing better and more consistent law enforcement is a priority (by protecting victims and prosecuting perpetrators). Increasing the effectiveness of multinational infrastructure (transport, electronic communications, banking services). Taking into consideration the unique needs of migrants in South Africa (Woolard et al., 2011; Van Niekerk, 2013; Norling, 2015; Patel, 2015; South African Government, 2015; Sullivan, n.d; Van der Westhuizen, 2015; Plagerson et al., 2019; Sullivan, 2020).

When discussing population development in South Africa, it is important to consider two policy responses to development planning: first, the country's internal migration trends must be taken into account. The implementation of a robust rural strategy to guarantee that people who remain on the land are not trapped in poverty and that their life prospects are enhanced is essential (Woolard et al., 2011; Van Niekerk, 2013; Norling, 2015; Patel, 2015; South African Government, 2015; Sullivan, n.d; Van der

Westhuizen, 2015; Plagerson et al., 2019; Sullivan, 2020). A robust urban development policy that accommodates expanding populations by ensuring that the required infrastructure is in place to support a growing population is essential. South Africa's demographic domains may be able to assist in the reduction of poverty and inequality, and the ultimate inception of population development (Woolard et al., 2011; Van Niekerk, 2013; Norling, 2015; Patel, 2015; South African Government, 2015; Sullivan, n.d; Van der Westhuizen, 2015; Plagerson et al., 2019; Sullivan, 2020). Receiving the advantages, on the other hand, can only be feasible if adequate education and training are supplied. Jobs must be created. If South Africa fails to do so, the country's huge youth population might represent a major danger to social, political, and economic stability, particularly if population development plans are not implemented (Woolard et al., 2011; Van Niekerk, 2013; Norling, 2015; Patel, 2015; South African Government, 2015; Sullivan, n.d; Van der Westhuizen, 2015; Plagerson et al., 2019; Sullivan, 2020).

In the National Development Plan, which serves as a discourse for population development, the key indicators of economic success are that South Africa achieves average Gross Domestic Product (GDP) growth of more than 5 percent, and that by 2030, GDP per capita is more than twice the current level, export growth has accelerated, income levels have risen above the poverty line for all, inequality has been substantially reduced, and unemployment has been reduced from 25 percent to 6 percent. The first part of the twenty-first century presents huge economic prospects for South Africa (South African Government, 2015). It also promises to bring with it enormous difficulties and hazards, which will be driven by both foreign events and internal dynamics in equal measure. While South Africa's economy is too tiny to have an impact on the direction of the changes that will occur in the world, knowing and forecasting the causes of change on a global scale might mean the difference between economic success and failure (Woolard et al., 2011; Van Niekerk, 2013; Norling, 2015; Patel, 2015; South African Government, 2015; Sullivan, n.d; Van der Westhuizen, 2015; Plagerson et al., 2019; Sullivan, 2020).

A similar effect will be had on the results of population development planning if domestic and regional developments and threats are anticipated in advance of time.

South Africa's economy and social equity will be significantly improved or harmed by the decisions made today in light of these findings. It will be possible to attain these objectives only if the country challenges its existing structural and policy deficiencies while minimizing risks and capitalizing on its economic strengths in ways that benefit the most marginalized members of society (South African Government, 2015). The apartheid-era policies that skewed the pattern of ownership and economic exclusion have resulted in the fragility of South Africa's economic structure. The consequences of decades of racial exclusion may still be seen in both employment levels and income disparities between white and black people. The fault lines that characterize these disparities are mostly racially determined, but they also include factors such as skill levels, gender, and geography (Woolard et al., 2011; Van Niekerk, 2013; Norling, 2015; Patel, 2015; South African Government, 2015; Sullivan, n.d; Van der Westhuizen, 2015; Plagerson et al., 2019; Sullivan, 2020).

As a result, South Africa has grown into one of the most unequal societies on the planet, with extremely high levels of poverty and the hazards that go along with it. Furthermore, the country has fallen short of realizing the benefits of a demographic dividend, which would have resulted from harnessing the potential of a proportionately large cohort of working-age young. Due to the problems, this presents to the South African economy, the country's weaknesses have been highlighted, including significant pressure on natural resources, energy restrictions, spatial misalignment, and restricted access to big markets due to the country's geographic remoteness (Woolard et al., 2011; Van Niekerk, 2013; Norling, 2015; Patel, 2015; South African Government, 2015; Sullivan, n.d; Van der Westhuizen, 2015; Plagerson et al., 2019; Sullivan, 2020). Situated in a position of economic comparative advantage that allows it to progress its population development planning strategies, South Africa has the good fortune of possessing such places. Natural resources (including minerals), a stable fiscal position, the country's geographic placement on the continent, a robust and deep financial services sector, high-quality colleges, and a tiny but sophisticated services industry are just a few of the advantages (Woolard et al., 2011; Van Niekerk, 2013; Norling, 2015; Patel, 2015; South African Government, 2015; Sullivan, n.d; Van der Westhuizen, 2015; Plagerson et al., 2019; Sullivan, 2020).

South Africa has a number of obstacles in its efforts to turn the economy into a vehicle for population development, some of which are external, some of which are a product of history or geography, and others which are a result of restricted ability. Even in cases when they are external to the country, South Africa may and should prepare for them (Woolard et al., 2011; Van Niekerk, 2013; Norling, 2015; Patel, 2015; South African Government, 2015; Sullivan, n.d; Van der Westhuizen, 2015; Plagerson et al., 2019; Sullivan, 2020). Among the factors that will have an impact on the context of population development in which South Africa will be situated are global economic development and the current economic downturn, economic performance on the African continent, the rise of emerging markets, intensified global competition, technological change, and climate change. Prices of commodities throughout the world will have varying effects on different sections of the economy. Although a worldwide push to ensure compliance with environmental standards will have financial ramifications, it will also spur innovation, waste reduction, energy efficiency improvement, and new investment (Woolard et al., 2011; Van Niekerk, 2013; Norling, 2015; Patel, 2015; South African Government, 2015; Sullivan, n.d; Van der Westhuizen, 2015; Plagerson et al., 2019; Sullivan, 2020).

Other structural variables that should have a significant impact on population development policy-making in the quest for complete development and that are driven by economic growth and development should also be taken into consideration. The first group consists of those that are common to economies that are similar to South Africa's in terms of size. In the second section, you'll find information about the difficulties and possibilities unique to this country. Some of the structural issues that South Africa is dealing with are not unique to the country. The ability to recognize and understand them is essential for overcoming them (Woolard et al., 2011; Van Niekerk, 2013; Norling, 2015; Patel, 2015; South African Government, 2015; Sullivan, n.d; Van der Westhuizen, 2015; Plagerson et al., 2019; Sullivan, 2020). Even though South Africa has the 27<sup>th</sup> greatest economy in the world, it also has the 12<sup>th</sup> highest carbon dioxide emissions, which lends credence to the Malthusian philosophy and his approach to population development. In particular, the latter is due to the fact that the energy-intensive economy is heavily reliant on carbon-based fuels. The National Development Plan has a 20-year horizon, which coincides with the world's efforts to

quantify the costs of carbon pollution. The immediate consequences of the increasing global economic crisis, on the other hand, cannot be ignored (South African Government, 2015). While the economy of the United States is rebounding, growth over the next decade is expected to be modest, owing in large part to high levels of public debt and the inability of European Union leaders to find a viable solution to the sovereign debt problem in Europe. It is possible that a recession in the European Union, South Africa's major trade partner, could further limit growth, even though projections for emerging countries are more optimistic (Woolard et al., 2011; Van Niekerk, 2013; Norling, 2015; Patel, 2015; South African Government, 2015; Sullivan, n.d; Van der Westhuizen, 2015; Plagerson et al., 2019; Sullivan, 2020).

The following are some of the structural issues that are unique to South Africa and that impede population development: While inequality and a limited market have skewed ownership and control in South Africa, the business environment has altered dramatically since 1994, and the country has grown to be extremely concentrated in its ownership and control. This creates a barrier to new business entrance and expansion in major sectors, which are critical for job creation and economic progress in developing countries (South African Government, 2015). Insufficient progress is being made in promoting population development, whether it is in education, health, or safety, as a result of current forms of Black Economic Empowerment (BEE), which do not achieve all of the necessary objectives. Environmental degradation, an energy constraint that will act as a brake on economic growth and development options, spatial misalignment, whether in relation to the urban/rural divide or within urban areas and binding constraints posed by poor physical planning and network infrastructure, distance from major global markets and limited market access, as well as implementation and coordination challenges are all factors to consider (Woolard et al., 2011; Van Niekerk, 2013; Norling, 2015; Patel, 2015; South African Government, 2015; Sullivan, n.d; Van der Westhuizen, 2015; Plagerson et al., 2019; Sullivan, 2020).

Aside from that, there are numerous favorable factors that contribute to population development, including an expanding middle class, scientific capability and institutions, fiscal resources, capabilities in dynamic sectors that are growing globally, a strong mineral base in the context of a commodity boom, high education enrolment,

being located in a high growth region, and the fact that many challenges that would influence our success are under our control (Woolard et al., 2011; Van Niekerk, 2013; Norling, 2015; Patel, 2015; South African Government, 2015; Sullivan, n.d; Van der Westhuizen, 2015; Plagerson et al., 2019; Sullivan, 2020).

Concerning population development planning, some of the ramifications for South Africa include a greater emphasis on reinvesting in the engine of growth (rising outputs from tradable sectors), the sources of jobs (which are frequently domestically oriented as well as services firms), and the interconnections between these two factors. Research and development of adaptive human settlements that can adjust to changing employment settings is now being carried out (such as available rental stock, and good and affordable public transport systems) (South African Government, 2015). For South Africa to boost its chances of acquiring long-term job opportunities, labor-matching services, transition aid, and easy access to retraining will be required. When the country's access to employment is expanded on a large scale in the first few years, a significant proportion of the working population will be compensated at a low salary (Woolard et al., 2011; Van Niekerk, 2013; Norling, 2015; Patel, 2015; South African Government, 2015; Sullivan, n.d; Van der Westhuizen, 2015; Plagerson et al., 2019; Sullivan, 2020). It is necessary to make basic services such as food, transportation, education, health, and other necessities more inexpensive in order to reduce the overall cost of living. It is critical that the environment be conducive to take advantage of chances when they present themselves to you. Investments should be made in the development of an enabling platform that allows individuals to take advantage of new opportunities. A rapid expansion of the economy, with a special emphasis on extending opportunities for black people as the economy develops, is the long-term solution to disproportionate ownership and control. Strategies for resolving structural inadequacies include raising educational standards and giving better help to entrepreneurs, as well as placing greater focus on employment mobility, workplace training, and financial inclusion. Using government procurement and licensing to help reduce racial patterns of wealth and income ownership, among other things, is a good thing for the economy (Woolard et al., 2011; Van Niekerk, 2013; Norling, 2015; Patel, 2015; South African Government, 2015; Sullivan, n.d; Van der Westhuizen, 2015; Plagerson et al., 2019; Sullivan, 2020).

Specifically, the National Development Plan identifies three strategic interventions to underpin the process of inclusive population development that is focused on economic growth. These interventions can be achieved by increasing levels of investment, improving skills and human capital formation, and increasing net exports, among other things. In the event that we achieve success on these three fronts, we will see increases in employment, higher productivity, improved living standards, and a reduction in inequality (South African Government, 2015). State expenditure on infrastructure, which is primarily intended to "crowd in" private-sector investment, will be the primary means through which investment rates will rise in the short term. The emphasis must be on infrastructure that increases the efficiency of the economy while simultaneously lowering expenses for businesses and consumers (Woolard et al., 2011; Van Niekerk, 2013; Norling, 2015; Patel, 2015; South African Government, 2015; Sullivan, n.d; Van der Westhuizen, 2015; Plagerson et al., 2019; Sullivan, 2020). It is possible to promote private-sector investment by establishing economic policy certainty and ensuring that all policies take into consideration the requirement for South African firms to remain competitive. On the strength of increasing consumer markets, particularly those in the rest of the continent, businesses are also expected to increase their investment levels (Woolard et al., 2011; Van Niekerk, 2013; Norling, 2015; Patel, 2015; South African Government, 2015; Sullivan, n.d; Van der Westhuizen, 2015; Plagerson et al., 2019; Sullivan, 2020).

It is necessary for South Africa to approach economic diversification from a variety of perspectives, and one of these perspectives will be population development. Efforts must be made to strengthen state capability to identify areas that would increase export prospects. Furthermore, development financing has the potential to play a critical role in the promotion of industrial strategy (Woolard et al., 2011; Van Niekerk, 2013; Norling, 2015; Patel, 2015; South African Government, 2015; Sullivan, n.d; Van der Westhuizen, 2015; Plagerson et al., 2019; Sullivan, 2020). The government, in collaboration with the private sector, must identify areas that need to be nurtured and supported; design appropriate tools to help those sectors, and put those instruments into action in a professional manner (South African Government, 2015). Support and protection should be targeted at sectors rather than individual companies. While at the same time, the government must foster strong competition and compel it via the use

of antitrust legislation. Importantly, industrial policy should allow for the accumulation of knowledge as well as the implementation of opportune departure options (Woolard et al., 2011; Van Niekerk, 2013; Norling, 2015; Patel, 2015; South African Government, 2015; Sullivan, n.d; Van der Westhuizen, 2015; Plagerson et al., 2019; Sullivan, 2020).

However, even though South Africa is considered to be of medium economic development, the suggestions contained in the National Development Plan take this into account. The company is unable to compete in low-skilled industries on the one hand, due to the fact that its cost structures are already too expensive. On the other hand, the country does not possess the requisite competencies to compete with sophisticated manufacturing countries such as Germany and the United Kingdom in terms of productivity and innovation (South African Government, 2015). This means that South Africa must compete in mid-skill manufacturing and service industries, as well as specialized markets that do not require massive economies of scale in order to succeed. Labor-market reforms aimed at promoting employment, particularly among young people; action to promote productivity gains and new entry by firms; and research and development (R&D) aimed at innovation and technological advancement are all required to maintain competitiveness and move up the value chain, among other things (Woolard et al., 2011; Van Niekerk, 2013; Norling, 2015; Patel, 2015; South African Government, 2015; Sullivan, n.d; Van der Westhuizen, 2015; Plagerson et al., 2019; Sullivan, 2020). Generally speaking, the majority of new jobs will be created in small, often service-oriented businesses that serve to a market of larger organizations and families with discretionary income in the near to mid-term. It is necessary to increase export earnings while also increasing investment to support the establishment of this service-oriented employment. Public policy may be useful to entrepreneurs by decreasing barriers to entry, cutting regulatory red tape, and encouraging an entrepreneurial atmosphere for firm formation (Woolard et al., 2011; Van Niekerk, 2013; Norling, 2015; Patel, 2015; South African Government, 2015; Sullivan, n.d; Van der Westhuizen, 2015; Plagerson et al., 2019; Sullivan, 2020).

Significantly, these businesses are frequently concentrated in the mid- and low-skilled labour markets. The expansion of exports is essential to the plan's success. Net

exports, on the other hand, will only increase if and when South African firms become more competitive. In order to achieve this, investment is required, as well as supporting macroeconomic policies. As a matter of fact, this is particularly true in a minerals-exporting economy because external prices might have a destabilizing effect on the non-minerals sector (Van der Westhuizen, 2015; Plagerson et al., 2019; Sullivan, 2020). The use of counter-cyclical fiscal policy, as well as low and stable inflation, are important components of this supportive macroeconomic strategy. South Africa is a tiny market that is geographically isolated from major trading partners. Furthermore, it has a history of economic growth that has been distorted by isolation and apartheid, both of which have had a significant influence on population development. Major sectors of the economy have developed in an uncompetitive way as a result of these causes, resulting in a high-cost structure in these sectors. In a variety of industries, governmental and private monopolies have taken advantage of their market dominance to impose exorbitant pricing (South African Government, 2015). Whenever these industries offer key inputs into the manufacturing process, such as power or steel, the consequences are particularly severe. When these variables are combined, bad services provided by governments and utilities to companies have a substantial impact on expenses (Woolard et al., 2011; Van Niekerk, 2013; Norling, 2015; Patel, 2015; South African Government, 2015; Sullivan, n.d; Van der Westhuizen, 2015; Plagerson et al., 2019; Sullivan, 2020).

With regard to population development discourse, the National Development Plan makes several recommendations in the areas of infrastructure investment, competition law, and the quality of public services to address these structural features, thereby lowering the costs of doing business in the country. It is critical to attaining a social floor and improving people's lives as well as their possibilities to engage successfully in society and the economy that the cost of living for the poor be brought down (South African Government, 2015). The primary economic drivers of poor population development are food and energy, as well as the expense of transportation, which is exacerbated by the apartheid-era spatial legacy. The poor and vulnerable households are hit harder by food price rises than more wealthy households, with the poor and vulnerable households suffering the most. Furthermore, due to the low number of sales, restricted competition, high transportation costs, and lack of appropriate storage

facilities in rural regions, rural households spend more on a basic food basket than their urban counterparts (Woolard et al., 2011; Van Niekerk, 2013; Norling, 2015; Patel, 2015; South African Government, 2015; Sullivan, n.d; Van der Westhuizen, 2015; Plagerson et al., 2019; Sullivan, 2020).

In order to lower the cost of living for the poor, a stable food inflation environment, enough, subsidised, and reliable public transportation, as well as a predictable energy price trend, are all necessary components (Woolard et al., 2011; Van Niekerk, 2013; Norling, 2015; Patel, 2015; South African Government, 2015; Sullivan, n.d; Van der Westhuizen, 2015; Plagerson et al., 2019; Sullivan, 2020).

Poor public service delivery, particularly in the areas of education and health care, imposes extra financial pressures on poor households by requiring many to pay for private provision of these services. Improving the delivery of public services is critical to decreasing the expenses of living for low-income families. The following are the high-level numerical targets for sustainable and inclusive population development: a reduction in the strict unemployment rate from 25 percent in 2010 to 14 percent in 2020 and 6 percent by 2030, an increase in the labour force participation rate from 54 percent in 2010 to 65 percent, and the creation of approximately 11 million additional jobs by 2030 (Woolard et al., 2011; Van Niekerk, 2013; Norling, 2015; Patel, 2015; South African Government, 2015; Sullivan, n.d; Van der Westhuizen, 2015; Plagerson et al., 2019; Sullivan, 2020).

#### **4.5 Determinants of Population Development in Planning for Developing Countries**

Determinants of population development planning in Southern Africa have been concentrated on demographic and social variables, concentrated on the impact of population growth and economic growth and development. The former is a result of guidance from the Malthusian doctrine and application of its principles in formulating national development plans (Acre & Long, 2000; Chi & Ventura, 2011; Murphy 2017; Alvarez-Dias, D'Hombres, Ghisetti, Pontarollo, Dijkstra, 2018; Gould & Tal, 2020). To understand population development attention and regard need to be given to its multi-variable discipline prior to planning. Planners must account for demography, social

domains, economics, politics, psychology, communications and other competing concepts for population development. The determinants of population development in planning for developing countries ideally would be shaped by the multidisciplinary nature of population development and the complex variables in planning. The conception, approaches and discourses of population development ought to revolve around the latter complex competing concepts; as such, these determinants must account for population development effects in planning. (Acre & Long, 2000; Chi & Ventura, 2011; Murphy 2017; Alvarez-Dias et al., 2018; Gould & Tal, 2020).

Population development planning is defined by the social domains as determinants, which are characterized by a multi-pronged strategy suggested guaranteeing that no home lives below the poverty line. Problems such as hunger driven by poverty, malnutrition, and micronutrient deficiencies will be addressed in this program designed to address population development. Construct an inclusive social development system that takes into account social administration, social welfare, and social administration as protection systems for population development discourses, and that is responsive to the needs, realities, conditions, and livelihoods of those who are most at risk. To promote self-reliant sustainable development, assist in developing and using the capacities of people, households, communities, and non-governmental organizations (NGOs). By establishing proper frameworks and incentives, it is possible to foster a culture of individual saving to mitigate risks associated with income loss resulting from unemployment, old age, and sickness. Increase the quality of services and programs for the jobless to get them back into the labour market, as well as provide possibilities in public employment (Acre & Long, 2000; Chi & Ventura, 2011; South African Government, 2015; Murphy 2017; Alvarez-Dias et al., 2018; Gould & Tal, 2020).

With a focus on social domains for population development themes, South Africa's National Development Plan addresses fifteen interconnected but distinct difficulties that the country is now grappling with. With the goal of addressing these concerns, the National Development Plan is organized around two major objectives: the eradication of poverty and the decrease of inequality (South African Government, 2015). Developing abilities that enable individuals to engage in the formal economy as well as other sectors of society is one way to achieve these societal objectives. As a result

of pursuing this aim, we will have a better knowledge of how policies in the areas of social security, social welfare, education, health, housing, energy, and transportation may be integrated to help individuals and communities while also improving the economy. In part, the high levels of poverty and inequitable distribution of income can be attributed to the low levels of formal employment, which hinder a significant proportion of the population from actively participating in the economic life of the country (Acre & Long, 2000; Chi & Ventura, 2011; South African Government, 2015; Murphy 2017; Alvarez-Dias et al., 2018; Gould & Tal, 2020). Because of apartheid, a significant portion of the population was prevented from developing education and skills, and as a result of this, they were unable to participate in the labour market, resulting in them remaining impoverished or being prevented from rising out of poverty, which is the root cause of income inequality. Africa's citizens, particularly those living in rural areas, were deprived of access to safe drinking water and sanitation, as well as electricity and reliable transportation as a result of this distorting of service provision. In metropolitan regions, services for Africans were provided at a level that was insufficient in order to meet their needs. Pension payments to elderly people in African nations were made every two months, but pension payments to elderly people in white countries were made every month, showing that the welfare system was unequally distributed. People are unable to reach an acceptable standard of living as a result of distortions in income distribution and access to fundamental services. This results in the bulk of the population being entrapped in a cycle of poverty (Acre & Long, 2000; Chi & Ventura, 2011; South African Government, 2015; Murphy 2017; Alvarez-Dias et al., 2018; Gould & Tal, 2020).

It is important not to underestimate the amount of time and resources required to solve these issues. It is critical that South Africa's population development policies, both in the recent past and in the future, pay close attention to the competing conceptions of population development to keep the country working, to ensure that individuals are engaged in meaningful activity, and to ensure that vulnerable groups and citizens are protected from the worst effects of poverty. The task for the next 20 years is to rebuild opportunity structures and assist individuals in developing the skills to lead the lives they desire. Apartheid destroyed possibilities for the majority of the population and imprisoned them in poverty. The various components of social protection are mutually

reinforcing and should not be considered in isolation when considering population development. The coordination of the social protection system is a crucial component of the system. In addition, other sectors of government, such as the court, have a complementary role to play in strengthening social protection. The emphasis here is on interventions that assist people in preventing, managing, and overcoming events that have a negative impact on their well-being (Acre & Long, 2000; Chi & Ventura, 2011; South African Government, 2015; Murphy 2017; Alvarez-Dias et al., 2018; Gould & Tal, 2020).

Children, people with disabilities, and the elderly are among those who are not gainfully employed because of their vulnerable status, as are those who experience labour market vulnerability because of the nature of their occupations, low-income levels, or unemployment. Social protection as a competing measure for population development discourse focuses on those who are not gainfully employed because of their disadvantaged status, as are children, people with disabilities, and the elderly. These social protection measures are intended to assist those who are most in need, such as children, people with disabilities, and the elderly, as well as to encourage active participation in the economy and society for those who are unemployed or underemployed. These measures include labour market activation measures, employment services, income support programs, and other services designed to maintain and improve the quality of life for those who are unemployed or underemployed (Acre & Long, 2000; Chi & Ventura, 2011; Murphy 2017; Alvarez-Dias et al., 2018; Gould & Tal, 2020).

The goal is also to identify the components of a social minimum or social floor, which when taken together create a quality of living below which no one should be forced to live. Moreover, this should encompass the whole life cycle of the individual, beginning with ensuring that pregnant women receive appropriate nourishment and continuing through retirement to relieve the effects of old age-related poverty (Acre & Long, 2000; Chi & Ventura, 2011; South African Government, 2015; Murphy 2017; Alvarez-Dias et al., 2018; Gould & Tal, 2020).

However, structural unemployment in South Africa as a result of historical causes and issues emerging from economic globalization implies that formal employment based

on an industrial model of growth is improbable in the near future. Employment in the informal sector is also low. It is necessary for South Africa to take a different approach to social protection than is characteristic of the Western economic paradigm. As part of its development strategy, it must adopt an integrated approach to safeguard vulnerable and at-risk populations while also promoting economic inclusion through a variety of proactive initiatives (Acre & Long, 2000; Chi & Ventura, 2011; South African Government, 2015; Murphy 2017; Alvarez-Dias et al., 2018; Gould & Tal, 2020).

Particularly noteworthy is that social protection is both a public and a private matter. While the government should play an active and important role in providing this support, it is also necessary for individuals to take an active role in making sure they are supported to take responsibility for raising their living standards. Furthermore, governments have a responsibility to ensure that social protection is cheap and sustainable to avoid the removal of assurances while also fostering solidarity and togetherness (Acre & Long, 2000; Chi & Ventura, 2011; Murphy 2017; Alvarez-Dias et al., 2018; Gould & Tal, 2020).

As a metric of population development, employment is the most effective kind of social protection available. In South Africa, there are far too few individuals who are employed, and the levels of poverty and inequality are quite high, with a strong connection to the labour market. As previously stated, it will take time to repair the economy and solve the difficulties facing the labour market. As a result, social protection should be utilized to bridge the population development gap, building on the previously existing social protection measures in place, but it should be labour market and employment friendly to be effective (Acre & Long, 2000; Chi & Ventura, 2011; South African Government, 2015; Murphy 2017; Alvarez-Dias et al., 2018; Gould & Tal, 2020).

The degree of population development in South Africa does not correspond to the country's natural resources or quantity of labour. Preventive measures are introduced to save lives and reduce levels of deprivation. Preventive measures act as an economic stabilizer, attempting to keep people from falling into deeper poverty by reducing their vulnerability to natural disasters, crop failure, accidents, and illness. Preventive measures are also introduced to reduce levels of deprivation and to save

lives by preventing them from falling into deeper poverty. Increasing the ability of people, communities, and organizations to engage in all realms of activity is the goal of promotional efforts. Transformative approaches inequalities and vulnerabilities through enacting policy and legislative reforms, allocating financial resources, and implementing redistributive policies. Aims of development and generative approaches are to enhance consumption habits of the poor while also encouraging regional and local economic growth and allowing impoverished people to access economic and social possibilities (Acre & Long, 2000; Chi & Ventura, 2011; South African Government, 2015; South African Government, 2015; Murphy 2017; Gould &Tal, 2020).

South Africa's National Development Plan includes reflective functions that represent a conceptual approach to social protection as a metric for population development discourses. These functions are reflected in the country's National Development Plan. Issues of chronic poverty, unemployment, danger and vulnerability are addressed as immediate concerns for development planning in this context. Upon taking office in 1994, the democratically elected government inherited a social system that was divided along racial lines and was marked by inequalities and a low level of services for the black majority. All social services, including education, health, and access to basic utilities like water and sanitation, were affected by these disparities. This included welfare assistance as well. The issues of unemployment, poverty, and inequality that South Africa is currently confronting have their origins in the apartheid regime (Acre & Long, 2000; Chi & Ventura, 2011; South African Government, 2015; Murphy 2017; Alvarez-Dias et al., 2018; Gould &Tal, 2020).

For the first time, the democratic government developed an integrated vision of social policy to promote population development, economic inclusion, and social stability to confront the issues of poverty and inequality. Constitutionlists mainly consisting of politicians and members of parliamentary committees in South Africa developed a comprehensive social security system that was connected to a social wage and set minimum criteria that were linked to that pay. The democratic administration made changes to the social protection system to remove racial disparities, as well as introduce additional guarantees and benefits for the citizens. There are a number of

fundamental services provided by the social security system, as well as non-income transfers. Basic services are designed to supplement people's incomes to ensure that everyone has access to a minimal standard of living. These have had a substantial influence on the reduction of poverty and inequality of asset ownership. The system's most important components are social assistance cash payments for children, the elderly, and people with disabilities; access to free basic services, such as shelter, water, sewage, and electricity for low-income families; and access to free health care for all (Acre & Long, 2000; Chi & Ventura, 2011; South African Government, 2015; Murphy 2017; Alvarez-Dias et al., 2018; Gould & Tal, 2020).

Six statutory social insurance systems, including the unemployment insurance fund (UIF), the compensation for injury and illness (COIDA), the road accident fund, and a school feeding and transportation program, provide free health care for pregnant women, children, and their families (RAF) Pensions and provident funds are examples of voluntary social security solutions for individuals who are formally employed. Employment policies that are active in the labour market to ease labour market entry while also addressing inequities that have arisen as a result of apartheid financial support for the working-age poor through public works programs the use of a developmental social welfare strategy that emphasizes individuals, families, and communities (Acre & Long, 2000; Chi & Ventura, 2011; South African Government, 2015; Murphy 2017; Gould & Tal, 2020)

#### **4.6 Conclusion**

Southern African population development planning in the context of the countries fails to show the successful application of Malthusian doctrine with balanced recognition of the multidisciplinary nature of population development. Adjustments to national plans must comprehend competing concepts of population and account for the adoption of the Malthusian doctrine and other scholarly models of population development planning.



## **CHAPTER FIVE**

### **RESEARCH FINDINGS, ANALYSIS AND INTERPRETATION**

#### **5.1 Introduction**

This chapter discusses the presentation and interpretation of the findings of the study. Population development comprises different domains, variables and indicators. The three basic domains are demographics, economic and social domains: these domains are measurable through a population's expectancy at birth, fertility rates, migration rate; the ability to raise individual well-being, measured by the level of poverty and inequality, access and supply of basic services; and the ability to achieve a decent standard of living, measured by gross national income per capita. Population development in Southern Africa has grown between the 1990s and 2000s (UNDP, 2018).

The general incision of the study argues that, notwithstanding the fascination with birth control-based family planning, population development is in reality shaped by a diversity of determinants that are generally ignored in attendant policy and planning. Consequently, to solicit and verify the argument data collection and analysis is necessary for regards to the research problem to assist in the formulation of policy and planning for population development. This chapter attempts to authenticate suggestions from notions from theorists and literature in regards to Population Development in Planning for Southern Africa through interpretation and analysis of data collected.

#### **5.2 Document Analysis Findings**

For quantitative data, the study used documents and reports for existing data and statistics on the 90 indicators that cover a wide range of spectrum from social to environmental domains. Secondary data involve both textual and empirical versions these data are drawn from reports, books, journal articles, government documents,

newspapers, magazines, the internet and media. Textual data include conceptions of population development, approaches to development planning, discourses about population development planning and determinants of population development in planning. Statistical data, defined through the domains, variables and indicators described in Appendix A, collected from a variety of reports including the 2016 United Nations Development programme, 2014 United Nations Human Settlements Programme, statistics South Africa reports, World Bank and Honest Accounts 2017, National Development Plans and population development policies from all the 9 Southern African countries.

Literature proposes a multiplicity of variables that shape national population development (Ohadike, 1992; Bradshaw & Brook, 2014). Acknowledging, that these multiple variables have eluded planners in population planning and policy development (Canning & Schultz, 2012; Mukaba et al., 2015). Therefore, national population development planning has always been based on narrow simplistic determinants, which are not reflective of the complex reality of human existence (Hayes, 2006; Ezeh et al., 2012; Norling, 2015). The latter implies that ideal population development planning would entail consideration of a multiplicity of variables and their interactions in at least six domains, which are: demography, economy, social fabric, politics and administration, environment and governance and institution (Ohadike, 1992; Canning & Schultz, 2012; Ezeh et al., 2012; Bradshaw & Brook, 2014; Robinson, 2016). (See Appendix A).

Literature advocates that colonization shaped population development of Southern Africa's population development and it has merely emulated Western traditions that conflated population development planning with family planning. The truth of this observation is tested in the table below.

A Pearson's correlation test was used to associate and measure the relationship between two continuous variables, every factor relating to itself will be the value 1 because it correlates perfectly with its self. A correlation between variables is considered weak if the value is less than 0.3, considered to be moderate if the value is between 0.4 and 0.6 and finally the correlation is considered to be strong if the value is above 0.7. Before running the regression analysis, a correlation test was conducted

to ascertain the relationships between the constructs. The table below shows that all the correlations are positive. Meaning the regression analysis can be conducted.

**Figure 1: The correlations between the main domains of population development planning**

Correlations				
	Population development	Demographic	Economic	Social
Population development	1,000			
Demographic	0,628	1,000		
Economic	0,236	0,197	1,000	
Social	0,821	0,076	0,206	1,000

Based on the results on the table above from the data collected, the results demonstrate that population development and demographics have a correlation value of 0.628 meaning that population development and demographic aspects are moderately correlated with one another. This would verify what the literature suggests in terms of population development having a relationship with demographic aspects. Henceforth, population development planning in Southern African countries specifically South Africa had to involve the reduction of population growth because increased consumption of resources would eventually lead to their depletion (MacQuirre, 2014; Allen, 2017; Curtis & Jones, 2017). In return, such a population will become weak as the supply of natural and artificial resources run low (Canning & Schultz, 2012). The predominant assumption is that demographic properties hold preserve as determinants of population development; therefore, agitating for the exclusive reliance on birth control-based family planning (Alpermann & Zhan, 2019). Ultimately, population development planning in Southern Africa has generally been exclusively shaped by family Planning research which focuses on population growth, fertility, fecundity and birth rate (Allen, 2017: 31).

The table above also presents the correlation between population development and economic aspects at a value of 0,236 meaning that population development and economic aspects are weakly related. Literature highlights that undeniably; the significance of economic domains ponders on population development (Bucci, 2018). Therefore, the consideration of economic aspects and variables does not necessitate population development. In crux population development and planning as a profession could be understood to have fixated on economic development but in practice, it is more concerned with demographic and population studies. History has proven to be against modern practice in population development and planning, industrial revolution and development rigorously advocated for economic growth and prosperity (Hu, 2018). The latter is solicited by the table above with the data displaying a weak relation between population development and economic aspects.

The table above also presents the correlation between population development and social aspects at a value of 0,821 meaning that population development and social aspects are highly correlated. This solicits the suggestion made by literature that although rapid population growth has been a developmental issue for both planners and available resources; over the year's population development planning has assisted in addressing social issues (Ohadike, 1992; Bradshaw & Brook, 2014).

Literature also suggested under the socialism perspective that population development must adopt the Marxism theory and perspective. Population development must not be fashionable but address social values hence solicited by the interpretation that under-development must be blamed on capitalism, insinuating that population development is reliant and closely related to social domains to harness the relationship between demographic aspects and economic domains without deteriorating agriculture production, sluggish industrial growth and increasing trends of unemployment (Powell, 2018; Block, 2021).

The table above solicited suggestions made by literature and scholarly arguments that population development could be understood from a socialist perspective and economic freedom allowing growth and development. Boserup postulated that accelerated population growth has been historically advantageous to agricultural production, and that population pressure requires for the utilisation of land for

production, this will act as a favourable measure in intensifying development (Josephson et al., 2014; Diachenko & Zubrow, 2015). That there is a correlation between population development and demographic domains, economic aspects and social aspects and shape population development planning.

A Multicollinearity test was conducted to assess if there are strong correlations between independent variables. Multicollinearity is assessed by examining the Tolerance and Variance Inflation Factor (VIF). The value of the Tolerance is expected to be above 0.1 and the value of VIF is expected to be below 10. There are conditions to run the test, the condition is to check variables that are not strongly correlated and check if they are problematic. The table below represents the multicollinearity of the 3 independent variables: Demographic, Economic, and Social. The results indicate that there is no multicollinearity issue between the variables because the value of Tolerance for each variable is above 0.1 and VIF is below 10 (Pallant, 2010). It therefore allows for the regression model and analysis.

**Figure 2: Collinearity Statistics based on the competing concepts of population development**

<b>Collinearity Statistics</b>		
	<b>Tolerance</b>	<b>VIF</b>
Demographic	0,960	1,042
Economic	0,924	1,082
Social	0,956	1,046

The model summary table below displays that a constant variable of demographic domains, economic aspects and social aspects in the Adjusted R square has a value of 0.995 meaning that these multiple variables in their nature are highly correlated with population development, and that population development must entail these multiple variables in planning. Literature suggested that there exists a multiplicity of variables that shape national population development (Ohadike, 1992; Bradshaw & Brook, 2014). The latter implies that ideal population development planning would entail

consideration of a multiplicity of variables and their interactions in at least six domains, which are: demography, economy, social fabric, politics and administration, environment and governance and institution (Ohadike, 1992; Canning & Schultz, 2012; Ezeh et al., 2012; Bradshaw & Brook, 2014; Robinson, 2016). (See Appendix A).

**Figure 3: A model summary of domains as approaches and conceptions to population development**

<b>Model Summary<sup>b</sup></b>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.998 <sup>a</sup>	.997	.995	142425.16638
a. Predictors: (Constant), Social, Demographic, Economic				
b. Dependent Variable: Population development				

The Anova table below displays that a constant variable of demographic domains, economic aspects and social aspects in the Significance (Sig) have a value of 0.000 meaning that these multiple variables in their nature have a high chance of being significant and this would suggest that incorporation of these multiple variables would ensure a successful implementation of population development and planning for Southern Africa. The variable of the Anova test suggests that the constant and dependent variables (population development) are statically sound. Notably referring to literature, there exists a multiplicity of variables that shape national population development (Ohadike, 1992; Bradshaw & Brook, 2014). Soliciting literature through the data collected, ideal population development planning would entail consideration of a multiplicity of variables and their interactions in at least six domains, which are: demography, economy, social fabric, politics and administration, environment and

governance and institution (Ohadike, 1992; Canning & Schultz, 2012; Ezeh et al., 2012; Bradshaw & Brook, 2014; Robinson, 2016).

**Figure 4: ANOVA statistics for domains of population development planning**

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3013055432 6807.152	3	1004351810 8935.717	495.122	.000 <sup>b</sup>
	Residual	1014246400 96.074	5	2028492801 9.215		
	Total	3023197896 6903.227	8			
a. Dependent Variable: Population development						
b. Predictors: (Constant), Social, Demographic, Economic						

The dependent variable and constant variables led to the formulation of three hypotheses based on literature and to a solicited suggestion made by the theorist. Hypothesis 1 is that population development is correlated to demographic aspects, hypothesis 2 is that population development is correlated to economic aspects and hypothesis 3 is that population development is correlated to social aspects. The results in the table below show regression results conducted to determine if the tested hypotheses are accepted or rejected. For the hypothesis to be accepted it should have a p-value of below 0.05 ( $p < 0.05$ ), if the p-value is above 0.05 ( $p > 0.05$ ) it means that the hypothesis is rejected (Pallant, 2010).

Literature suggests through the Malthusian doctrine that developed incredulity in respect to rapid population growth and consistent pressure of demand for production

of supplies for survival. Attention should also be assumed towards population development and environmental degradation and sustainability, noting that population growth leads to demography proceeding to adopt novel shape (Ehrlich & Holden, 1971; Ehrlich, 1978; Kiel & Matheson, 2010; Nasir, 2020). Ehrlich postulates that population will move from one area to the other on earth this is inclusive and not limited to other planets, “the extremely remote possibility of expanding into outer space offers no escape from the laws of population growth” (Ehrlich, 1978:15). Although, the environment has a way of remedying its self the persistent burden of rapid population growth could lead to the erosion of natural resources.

The results in the table show that demographics have a significant influence on population development because the p-value is significant ( $p= 0.000 > 0.05$ ) and the beta value is positive ( $\beta=0.576$ ). Meaning that Demographic is a significant determinant of population development. In other words, if the demographic increases from one standard deviation (xxx), population development will also increase from 57.6% of its own standard deviation (xxx). Hypotheses 1, therefore, suggest that that population development is correlated to demographic aspects is accepted.

Literature suggests that population development planning should consider economic factors and the significance of its activeness to population development. Understandably- development is ambiguous, the outcome of population development is correlated to economic activities that lead to ultimate growth and development. The recognition of this correlation motivated the reason for studies to argue for economic domains to be considered when planning for population development (Liu & Hu 2013; Golley & Wei 2015; Wesley & Peterson, 2017; Wongboonsin & Phiromswad 2017; Bucci et al., 2018). Although; development planning holds importance and the conception and approaches keep evolving, economic development associations have turned to influence development planning alongside the conceptualization of the competing concepts of population development (Hu, 2018). In addition, population development planning has renewed an interest in economic development and population growth in pursuit of faultless population development planning collaborative with intergraded competing concepts of population development (Anderson, 2006; Ezeh et al., 2012; Bradshaw & Brook, 2014; Robinson, 2016; Hu, 2018). Furthermore,

China's policy formulation and approach towards population development planning was under the notion of controlled fertility and facilitated economic growth (Gu et al., 2007; Feng et al., 2012; 2016). This temporary brake measure saw its epic fail in the current 21st century; and further resulted in loosening and relaxation of the two-child policy as a measure towards population development planning (Feng et al., 2016).

The results in the table below show that economics does not influence population development in planning ( $p=0.204>0.01$ ). Meaning that economic factor is not a determinant of population development in planning. This would be understood that variables within the aspect of economic aspect do not influence planning in population development, economic development and economic growth do not necessitate population development, and the significance of economic variables in population development cannot prove successful population development in planning. Therefore, hypothesis 2 that population development directly is correlated to economic aspects is rejected based on the data collected and analysed.

Literature suggests that planners in Southern Africa supported demography and social domains and how they related to one another acknowledging that these forces could obstruct or aid population development. The Constitution of South Africa with its distinctive features and expression for population development planning embodied the struggles to chart a way forward for population development, adoption of the Constitution of South Africa attendant to population development planning discourses negotiated for social issues and transformation (Norling, 2015; Sullivan, n.d; Plagerson et al., 2019; Sullivan, 2020). Moreover, incorporation of the Constitution and Bill of Rights in population development planning discourses influenced the upended apartheid government population development policies and discourses that were discriminatory, this reaffirmed the expression of democracy that recognizes the correlation between social rights and economic components (Norling, 2015; Sullivan, n.d; Plagerson et al., 2019; Sullivan, 2020).

Literature also suggested that the two broad categories of population development planning approaches are also denoted blueprint planning and social learning planning (Dale, 2004; Theron, 2008; Tsheola, 2011, 2012a). Blueprint and social learning planning approaches are, respectively, aligned to regulatory and advocacy planning

approaches (Tsheola, 2012a). Whereas the regulatory planning approach “seeks to deliver pure private market goods”, advocacy planning approach the latter hope to provide for pure public services” (Tsheola, 2012a: 172). That is, regulatory blueprint planning “relies on private markets” whereas advocacy social learning planning “depends on a public entrepreneur ... representing the interests of a particular social group”, specifically the poor (Goodall, 1987 cited in Tsheola, 2012a: 172). It is this multiplicity of planning approaches and development planning approaches that creates much confusion and controversy in the discourses about population development planning, especially in relation to developing countries

According to the results from the data analysed social aspects have a positive influence on population development in planning ( $p= 0.000 > 0.05$ ). Meaning that social factor is a determinant of population development in planning. Therefore, hypothesis 3 that population development is correlated to social aspects is acceptable.

**Figure 5. Depicts unstandardized Coefficients and Standardized Coefficients of the domains of population development**

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	64153,951	125030,774		0,513	0,630
Demographic	11,284	0,518	0,576	21,782	0,000
Economic	- 17124,620	11721,527	-0,039	-1,461	0,204
Social	2,879	0,097	0,785	29,632	0,000

### **5.3 Conclusion**

Although contradictions may exist and are obtained through literature and the data collected and analysed and the diversity of the study area. The data collected and analysed is in relation to the literature presented and provides validation to what literature uncovers. Nevertheless, the data collected and analysed may present further understanding of the study and the affected areas of focus. This provides clarity into population development in planning.

## CHAPTER SIX

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 6.1 Introduction

The study investigated the following main research questions: How should population development planning be determined? The research analysed and investigated the state of population development in Southern Africa.

#### 6.2 Summary

Chapter 1 served as an introduction and background to the study. In this chapter, the research problem is identified and listed. Pertinent issues regarding population development are identified as follows:

- Competing conceptions of population development
- Conceptions and approaches to development planning
- Population development planning discourses for developing countries
- Determinants of population development in planning for developing countries

The aims and objectives of the study were formulated based on the four issues identified for research purposes.

Chapter 2 dealt with the dominant conceptions of population development which are drawn from interpretations of the Malthusian doctrine. The general premise of the Malthusian doctrine focused supplementary on the correlation between population growth and food production, noting the impact of population growth on the attrition of food production and supplies.

Chapter 3 discussed population development within the Southern Africa context in detail. The main objective of the chapter was to establish to what extent is the population impacting on poverty, the economy and the environment.

Chapter 4 presented the theoretical and statistics findings collected from the secondary sources.

Chapter 5 provided a summary, conclusion and recommendations based on the research as a whole.

### **6.3 Recommendations**

Drawing from the analysis and the findings of the study related to population development in Southern Africa the following recommendations are proposed:

- Planning for population development in Southern Africa must take into consideration the multi-disciplinary nature of population development in the region. The recognition of nature would expand people's options in a far larger sense than what conventional economics have recommended. As a result, men and women - notably the poor and vulnerable - are placed at the center of population development planning efforts. As proposed by the Malthusian philosophy, it also entails the preservation of future generations' life chances as well as the preservation of the natural systems on which all life is dependent.
- In order to do this, Southern Africa's leadership must be able to establish an atmosphere in which people may reach their full potential, and its plenary sessions should not be simply focused on economic growth.
- Policy makers in Southern Africa's population development plans must include and share the same vision as human rights activists, with the ultimate objective of achieving human freedom. The goals of population development and human rights are to assist in the preservation of people's well-being and dignity.
- Southern Africa's population development discourses should include the inclusion of all human choices in variables across all development planning domains, including economic, social, demographic, environmental, political and/or administrative, governance, and institutional factors.

- Population development techniques in Southern Africa should be able to take into consideration the following considerations in their planning: Emancipation - The expansion of men and women's skills and choices enhances men and women's capacity to exercise those choices in an environment free of hunger and hardship. As a result, they have a greater opportunity to participate in or approve decision-making that has an impact on their life. The ability to collaborate and engage with others is essential for personal fulfilment, well-being, and a feeling of purpose and meaning. Human development is concerned with the manner in which individuals collaborate and interact with one another. Equity - The expansion of capacities and possibilities entails more than just an increase in money; it also entails equity in other areas, such as the establishment of an educational system to which everyone should have access. Maintaining sustainability means meeting the requirements of this generation without jeopardizing the rights of future generations to be free of poverty and hardship and to engage in activities that are within their fundamental capabilities. Security - Specifically, the security of one's means of subsistence. Threats such as sickness or repression, as well as unexpected and damaging interruptions in people's life, must be removed from their environment.
- This school of thought must be able to draw attention to three essential areas in population development planning: the opportunity to live a long and healthy life, the opportunity to learn new skills, and the opportunity to have adequate access to resources for a decent standard of living in Southern Africa.

#### **6.4 Conclusion**

The purpose of this chapter was to provide a conclusion and recommendations of the study. This chapter brings the study to the end and provides a conclusion and recommendations on the findings of the study. The chapter commences by giving a summary of the study.

## REFERENCES

- Acre, A. & Long, N. (eds). (2000). *Anthropology, development and modernities: exploring discourses, counter-tendencies and violence*. Routledge. London.
- Allen, B. (2017). *Malthus Redux: Why Malthus is being interpreted for the past 21<sup>st</sup> century?* Cambridge Alumni Magazine, 80: 28-31.
- Alpermann, B. & Shaohua Zhan, S. (2018). Population planning after the one-child policy: shifting modes of political steering in China. *Journal of Contemporary China*. DOI:10.1080/10670564.2018.1542218.
- Alvarez-Dias, M; D'Hombres, B; Ghisetti, C; Pontarollo, N; Dijkstra, L. (2018). *The determinants of population growth: Literature review and empirical analysis*. JRC Working Papers in Economics and Finance, No. 2018/10.
- Andoh, S.Y., Umezaki, M., Nakamura, K., Kizuki, M. & Takano, T. (2006). Correlation between national income, HIV/AIDS and political status and mortalities in African countries. *Public Health*, 120: 624-633.
- Arrow, K. (1963). Uncertainty and the welfare economics of medical care. *American Economic Review*. 1: 941–973.
- Banister, J., Bloom, D.E. & Rosenberg, L. (2010). *Population Aging and Economic Growth in China*. Program on the Global Demography of Aging Working Paper, 53. Retrieved from <http://www.hsph.harvard.edu/pgda/working.htm> (Accessed 17 June 2017).
- Besteman, C. (2019). Militarized global apartheid. *Current Anthropology*. 60:1-13.

Block, F. (2021). The ruling class does not rule: Notes on the Marxist theory of the state. *Socialist Revolution*. 33: 6-29.

Boserup, E. (1965). The Conditions of Agricultural Growth. *Population and Development Review*. 1:10-22

Boserup, E. (1976). Environment, population, and technology in primitive societies. *Population and Development Review*. 2(1): 21–36.

Boserup, E. (1981). Population and Technological Change: A Study of Long Term Trends. *Population and Development Review*. DOI:10.1080/14670764.2018.1542238.

Bradshaw, C. J. & Brook, B. W. (2014). Human population reduction is not a quick fix for environmental problems. *PNAS*, 111(46): 16610-16615.

Bretschger, L. (2020). Malthus in the light of climate change. *European Economic Review*. 127:103477-103495.

Bucci, A., Eraydin, L. & Muller, M. (2018). Dilution effects, population growth and economic growth under human capital accumulation and endogenous technological change. *Journal of Macroeconomics*. Advance online publication. DOI:<https://doi.org/10.1016/j.jmacro.2018.08.003>.

Burger, J.R. (2020). Malthus on population. *Research Gate*. DOI: 10.1007/978-3-319-16999-6\_1267-1.

Campbell, M & Bedford, K. (2009) The theoretical and political framing of the population factor in development. *Philos trans r soc lond b biol sci.* 2009 oct 27; 364(1532): 3101–3111. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2781838/>

[Accessed 12 February 2022]

Canning, D. & Schultz, P.T. (2012). The economic consequences of reproductive health and family planning. *Lancet*, 380: 165-171.

Chi, G. & Ventura, S. J. (2011). An integrated framework of population change: Influential factors, spatial dynamics, and temporal variation. *Growth and Change*, 42(4): 549–570.

Chimhowu, A.O., Hulme, D. & Munro, L.T. (2019). The ‘New’ national development planning and global development goals: Process and partnerships. *World Development*. 120: 76-89.

Coase, R. H. (1960). The problem of social cost. *Journal of Law and Economics*. 3: 1-44.

Cole, C., Freeman, M. & Jahoda, K.L.R. (eds.) (1973). *Models of Doom. A Critique of the Limits to Growth*. New York: Universe Books.

Conyers, D. & Hills, P. (1990). *An Introduction to Development Planning in the Third World*. New York: John Wiley.

Curtis, M. & Jones, T. (2017). Honest Accounts 2017: How the world profits from Africa’s wealth? Retrieved from <https://www.curtisresearch.org> (Accessed 09 June 2017).

Dale, R. (2004). *Development Planning: Concepts and Tools for Planner, Managers and Facilitators*. London: Zed Books.

Diachenko, A. & Zubrow, E. B. W. (2015). Stabilization points in carrying capacity: population growth and migrations. *Journal of Neolithic Archaeology*, 17: 1-15.

Dogan, E., & Seker, F. (2016). Determinants of CO2 emissions in the European Union: The role of renewable and non-renewable energy. *Renewable Energy*. 94: 429-439.

Edigheji, O. (2012). Constructing a democratic developmental state in South Africa: potential and challenges. In O. Edigheji (Ed.), *Constructing a democratic developmental state in South Africa: potentials and challenges*. Cape Town: HSRC Press.

Ehrlich, P.R & Holdren, J. (1971) Impact of population growth. *Science*. 171(3977):1212–1217.

Ehrlich, P. R. (1978). *The population bomb*. Rivercity: River City Press.

Ezeh, A., Bongaarts, J. & Mberu, B. (2012). Global population trends and policy options. *Lancet*, 389: 142-148.

Fainstein, S. S. (2000). New directions in planning theory. *Urban Affairs Review*. 35: 451–478.

Feng, W., Cai, Y. & Gu, B. (2012). Population, policy, and politics: how will history judge China's one-child policy? *Population and Development Review*, 38: 115-129.

Feng, W., Gu, B. & Cai, Y. (2016). The end of China's one-child policy. *Studies in Family Planning*, 47(1): 83-86.

Geels, W. F. (2014). Regime resistance against low-carbon transitions: introducing politics and power into the multi-level perspective. *Theory, Culture & Society*. 31(5): 21–40.

Ghosh, B. & De, P. (2005). Investigating the linkage between infrastructure and regional development in India: Era of planning to globalization. *Journal of Asian Economics*, 15: 1023–1050.

Golley, J. & Wei, Z. (2015). Population dynamics and economic growth in China. *China Economic Review*. 35: 15–32.

Gould, R. & Tal, A. (2020). Returning population policy to the sustainable development discourse: Israel as a case study. DOI: 10.14712/23363231.2020.8: 11- 43.

Gu, B., Feng, W., Guo, Z. & Zhang, E. (2007). China's local and national fertility policies at the end of the twentieth century. *Population and Development Review*, 33(1): 129-147.

Güney, T. (2017). Population growth and sustainable development in Developed-developing countries: an iv (2sls) approach. *The Journal of Faculty of Economics and Administrative Sciences*. 22(4): 1255-1277.

Haase, A., Rink, D., Grossmann, K., Bernt, M. & Mykhnenko, V. (2014). Conceptualizing urban shrinkage. *Environment and Planning A*, 46: 1519 – 1534.

Hayes, A. (2006). Towards a policy agenda for population and family planning in Indonesia. *Jurnal Kependudukan Indonesia*, 1(1): 1-11.

Hamin, E & Gurrán, N. (2009) Urban form and climate change: balancing adaptation and mitigation in the US and Australia. *Habitat International*, 33(3): 238–245.

Hodgson, R. (2016). Book review: The new worlds of Thomas Robert Malthus: Rereading the principle of population by Alison Bashford and Joyce E. Chaplin. *Population and Development Review*. 42(4): 717–721.

Horton, R. & Peterson, H.B. (2012). The rebirth of family planning. *The Lancet*, 380: 77.

Hu, R. (2018) .Planning for Economic Development in Carola Hein, ed. *The Routledge Handbook of Planning History*. London and New York: Routledge,

Imoto, S., Yabuuchi, Y. & Watada, J. (2008). Fuzzy regression model of R & D project evaluation. *Applied Soft Computing*, 8: 1266-1273.

Jolly, C.L. (1994). Four theories of population change and the environment. *Population and Environment*. 16 (1): 61-90.

Josephson, A., Ricker-Gilbert, J. & Florax, R.J.G.M. (2014). How does population density influence agricultural intensification and productivity? Evidence from Ethiopia. *Food Policy*, 48: 142-152.

Keynes, J. M. (1931). *Essays in Persuasion*. New York: W.W. Norton.

Keynes, J. M. (1936). *The general theory of employment, interest and money*. New York: Harcourt.

Kiel, K., Matheson, V. & Golembiewshi, K. (2010). Luck or skill? An examination of the Ehrlich–Simon bet. *Ecological Economics*. 69: 1365 – 1567.

Lautre, I.G. & Fernandez, E.A. (2004). A methodology for measuring latent variables based on multiple factor analysis. *Computational Statistics and Data Analysis*, 45: 505-517.

Levy, J. M. (2013). *Contemporary Urban Planning*. New Jersey, Pearson.

Liang, Z. (2014). *China Population Problem* (in Chinese). China Development Press, China.

Lincoln, D. (2016). The ends of the Developmental State. *South African Review of Sociology*.47 (2): 60-78.

Little, W. (2016). Population, Urbanisation and Environment. Retrieved from <https://opentextbc.ca/introductiontosociology2ndedition/chapter/chapter-20-population-urbanization-and-the-environment/> (Accessed 03 October 2021).

Liu, S. & Hu, A. (2013). Demographic change and economic growth: Theory and evidence from China. *Economic Modelling* 35: 71–77.

Lomazzi, M., Borisch, B. & Laaser, U. (2014). The millennium development goals: experiences, achievements and what's next. *Global Health Action*, 7(23695): 1-9.

MacQuirre, K.L.D. (2014). Unmet need for family planning among young women: levels and trends. Rockville: United States Agency for International Development (USAID).

Mainardi, S. (2003). Water availability and infrastructure development: cross-country econometric and neural network estimates. *Desalination*, 158: 241-254.

Makhetho, M.J. (2020). Understanding development planning: Is the blueprint model still relevant? Retrieved from <https://medium.com/@mikemaketho/understanding-development-planning-is-the-blueprint-model-still-relevant-to-development-planning-a953a2e4334b> (Accessed 03 October 2021)

Marten, R., McIntyre, D., Travassos, C., Shishkin, S., Longde, W., Reddy, S. & Vega, J. (2014). An assessment of progress towards universal health coverage in Brazil, Russia, India, China, and South Africa (BRICS). *The Lancet*, 384: 2164–2171.

May, J.F. (2017). The politics of family planning policies and programs in Sub-Saharan Africa. *Population and Development Review*. 43: 308-329.

Mosley, H., & Branic, G. (1989). Population policy in Sub-Saharan Africa: Agendas of international agencies. Pp. 463-506 in *Population policy in Sub-Saharan Africa: Drawing on international experience*. Liege, Belgium: International Union for the Scientific Study of Population.

Muhoza, D.N., Broekhuis, A. & Hooimeijer, P. (2014). Variations in desired family size and excess fertility in East Africa. *International Journal of Population Research*, 2014: 1-11.

Mukaba, T., Binanga, A., Fohl, S. & Bertrand, J. (2015). Family planning policy environment in the Democratic Republic of Congo: levers of positive change and prospects for sustainability. *Global Health: Science and Practice*, 3(2): 163-173.

Munro, L.T. (2017). *The resurgence of national development planning: how did we get back here?* Paper presented at the International Studies Association, San Francisco, April 7.

Murphy, M.J. (2017). Demographic determinants of population ageing in Europe since 1850. *Population and Development Review*. 00(0): 1–27.

Nasir, M. A. (2020) Environmental consequences of population, affluence and technological progress for European countries: A Malthusian view. *Journal of Environmental Management*. 260:110143- 110170.

Ninalowo, A. (2003). Crisis of governance, legitimacy crisis and policing in Nigerian society, in V. T. Jike (ed.) *The Nigerian police and crisis of law and order*. Ikeja: NISS Publications.

Norling, J. (2015). Family planning and fertility in South Africa under apartheid. University of Michigan Population Studies Center Working Paper, Michigan.

Nyoni, T. (2018). *Determinants of population growth: Empirical evidence from Pakistan (1960-2017)*. Retrieved from <https://mpra.ub.uni-muenchen.de/87522/> MPRA Paper No. 87522, posted 29 Jun 2018 18:46 UTC. (Accessed 17 October 2021).

Nyoni, T. & Bonga, G.W. (2017). Population growth in Zimbabwe: A threat to economic development. *Journal of Economics and Finance*. 2(6): 29-39.

Johnston, M.P. (2014). Secondary Data Analysis: A Method of which the Time Has Come. University of Alabama, Tuscaloosa, AL, USA. <http://qqml.net/papers/September 2014 Issue/336QQML Journal 2014 Johnston Sept 619-626.pdf> [Accessed 12 February 2022]

Odum, T. H. & Odum, C. E. (2001). *A Prosperous Way Down*. U.S.A.: The University Press of Colorado.

Odum, T. H. & Odum, C. E. (2006). The prosperous way down. *Energy*. 31: 21 – 32.

Ohadike, P.O. (1992). Population, policy development and implementation in Sub-Saharan Africa. *African Development Review*. 4(2): 273-297.

Ohadike, P.O. (2018). *The evolving phenomena of migration and urbanization in central Africa: A Zambian case*. *Town and Country in Central and East Africa*. Routledge. London.

Oyekanmi, F. D. (2005). Introduction in Oyekanmi, F. D. (ed.) *Development crisis and social change in Nigeria*. Lagos. Department of Sociology, University of Lagos. Chapter 1.

Oyekanmi, F. D. (2009). *Re-thinking Nigeria's development strategy*. Paper presented at the Third Annual Memorial Public Lecture in honour of Late Colonel G. O. Nebo, organized by the G. O. Nebo Memorial Foundation at Abalti Baracks, Surulere, Lagos, May 2009.

Pallant, J. (2010). *SPSS survival manual: A step by step guide to data analysis using spss* (4th ed.). Australia: Allen & Unwin.

Patel, L. (2015). *Social Welfare & Social Development in South Africa*. (2<sup>nd</sup> ed.). Cape Town: Oxford University Press.

Peh, K.S.H. & Eyal, J. (2010). Unveiling China's impact on African environment. *Energy Policy*, 38: 4729-4730.

Plagerson, S., Patel, L., Hochfeld, T. & Ulriksen, M. (2019). Social policy in South Africa: Navigating the route to social development. *World Development*. 113: 1-9.

Polanyi, K. (1957). *The great transformation*. Boston, MA: Beacon Press.

Powell, J. (2019). Towards a marxist theory of financialized capitalism. In: M. Vidal, T. Smith, T. Rotta, , eds. *The oxford handbook of Karl Marx*. Oxford: Oxford University Press.

Richerson, B.B. (2009). Cultural innovations and demographic change. *Human Biology*. 81(3): 211–235.

Robinson, J. (1933). *The economics of imperfect competition*. London: Macmillan.

Robinson, R.S. (2015). Population policy in Sub-Saharan Africa: A case of both normative and coercive ties to the world polity. *Population Research and Policy Review* 34(2): 201-21.

Robinson, R.S. (2016). Population policy adoption in Sub-Saharan Africa: an interplay of global and local forces. *Population Horizons*, 13(1): 1–9.

Rossouw, L., Burger, R. & Burger, R. (2012). *The fertility transition in South Africa: a retrospective panel data analysis*. Stellenbosch Economic Working Papers 03/12, Department of Economics and the Bureau for Economic Research, University of Stellenbosch.

Samuelson, P. A. (1954). The pure theory of public expenditure. *Review of Economics and Statistics*. 36: 387–389.

Seekings, J. (2013). *Democracy, poverty and inclusive growth in South Africa since 1994*. Centre for Social Science Research, Working Paper No. 231, University of Cape Town.

Shennan, S.J. (2000). Population, culture history, and the dynamics of culture change. *Current Anthropology*. 41(5): 811–835.

South African Government (2015). *National Development Plan 2030*. Pretoria: South African Government. Retrieved from <https://www.gov.za/issues/national-development-plan-2030#:~:text=The%20NDP%20aims%20to%20eliminate,leadership%20and%20partnerships%20throughout%20society> (Accessed 22 October 2021)

Stambough, S.J. & Thorson, G.R. (1999). Towards stability in presidential forecasting: the development of a multiple indicator model. *International Journal of Forecasting*, 15: 143-152.

Sullivan, R. (n.d). The global, the local, and population policy in Sub-Saharan Africa. *International Sociological Association*. 3:1-34.

Sullivan, J.O. (2020). The social and environmental influences of population growth rate and demographic pressure deserve greater attention in ecological economics. *Ecological Economics*. 172:2-10.

Theron, F. (2008). The change agent-project beneficiary partnership in development planning: theoretical perspectives. In Theron, F. (ed.), *The Development Change Agent: A Micro-Level Approach to Development*. Pretoria: Van Schaik, pp. 41-75.

Theron, F. (2009). Contextualising integrated development planning: An opportunity for public participation in developmental local government. In Davids, I., Theron, F. & Maphunye, K.J. (eds.), *Participatory Development in South Africa: A Development Management Perspective*. Pretoria: Van Schaik, pp. 135-151.

Torokhti, A. & Friedland, S. (2009). Towards theory of generic Principal Component Analysis. *Journal of Multivariate Analysis*, 100: 661-669.

Tsheola, J.P. (2010). Global “openness” and trade regionalism of the new partnership for Africa’s development. *South African Geographical Journal*, 92(1): 45-62.

Tsheola, J.P. (2011). A case for teaching development planning within development studies. *Journal of Development Studies*, 441(3): 80-94.

Tsheola, J.P. (2012a). Theorising a democratic developmental state; issues of public service delivery planning and violent protests in South Africa. *Journal of Public Administration*, 47(1): 161-179.

Tsheola, J.P. (2012b). Trade regionalism, decolonization-bordering and the new partnership for Africa’s development. *China-USA Business Review*, 11(8): 1051-1068.

Tsheola, J.P & Mmotlana, L. (2018). Politics of land investments, informalities, exclusionary planning and risk exposure in South African urbanism. *African Journal of Public Affairs*. 10(2): 163-182.

Uche, N.O. (2015). Coloniality and governance in Africa in the twenty-first Century; the challenges of public administration. *Journal of Public Administration*, 50(2): 191-200.

United Nations Human Settlements Programme (UN-Habitat), (2014). *The State of African Cities 2014: Re-imagining Sustainable Urban Transitions*. Kenya: United Nations Human Settlements Programme.

United Nations Development Programme (UNDP), (2016). *Human Development Report 2016: Human Development for Everyone*. New York: United Nations Development Programme.

United Nations Development Programme (UNDP), (2018). *Human Development Indices and Indicators: 2018 Statistical update*. New York: United Nations Development Programme.

United Nations (UN), (2019). Department of Economic and Social Affairs, *Population Division. World Population Prospects: The 2019 Revision*

Van Dalen, H.P. & Henkens, K. (2012). What is on a demographer's mind: A worldwide survey. *Demography Research*, 26: 363-408.

Van der Westhuizen, C. (2015). Setting the scene: public works employment from the RDP to the NDP. In P. Parenzee & D. Budlender (Eds.), *Who cares? South Africa's Expanded Public Works in the social sector and its impact on women*. Cape Town: Heinrich Boll Foundation Southern Africa.

Van Niekerk, R. (2013). Social policy, social citizenship and the historical idea of a social democratic welfare state in South Africa. *Transformation Critical Perspectives on Southern Africa*. 81(1): 115-143.

Wesley, E. Peterson, F. (2017). The Role of Population in Economic Growth. Retrieved from <https://us.sagepub.com/en-us/nam/open-access-at-sage> (Accessed 10 October 2021).

Wheeler, S. & Beatley, T. (eds). (2004). *The sustainable urban development reader*. Routledge, New York.

White, P.R., Tan, M.H. & Hammond, J.K. (2006). Analysis of the maximum likelihood, total least squares and principal component approaches for frequency response function estimation. *Journal of Sound and Vibration*, 290: 676-689.

Woolard, I., Harttgen, K., & Klasen, S. (2011). The history and impact of social security in South Africa: experiences and lessons. *Canadian Journal of Development Studies*. 32(4): 357-380.

Wongboonsin, K. & Phiromswad, P. (2017). Searching for empirical linkages between demographic structure and economic growth. *Economic Modelling*. 60:364 – 379.

Yazlyyev, B. (2017). National development planning in the Former Soviet Union. Paper presented at the Canadian Association for the Study of International Development, Toronto, June 2.

Zhao, P. (2010) Sustainable urban expansion and transportation in a growing megacity: consequences of urban sprawl for mobility on the urban fringe of Beijing. *Habitat International*. 34(2):236–243.



## APPENDICES

### Appendix A: Domains, Variables and Indicators of Population Development Policy and Planning

Domain	Variables	Indicators
<b>Economic</b>	<ul style="list-style-type: none"> <li>• Creation and retaining of jobs</li> </ul>	<ul style="list-style-type: none"> <li>• Labour force participation rate</li> <li>• Employment to population ratio</li> <li>• Child labour</li> <li>• Youth unemployment</li> <li>• Total unemployment rate (male to female ratio)</li> <li>• Youth not in school or employment</li> <li>• Vulnerable employment</li> </ul>
	<ul style="list-style-type: none"> <li>• Equal distribution of resources</li> </ul>	<ul style="list-style-type: none"> <li>• Income inequality</li> <li>• Mobilization of resources</li> </ul>
	<ul style="list-style-type: none"> <li>• Accumulation of wealth</li> </ul>	<ul style="list-style-type: none"> <li>• Material well being</li> <li>• Investments and Taxes</li> <li>• Trade and market capitalisation</li> </ul>
	<ul style="list-style-type: none"> <li>• Gross Domestic Product (GDP) Index</li> </ul>	<ul style="list-style-type: none"> <li>• National Poverty line</li> <li>• Living standards</li> <li>• Economic growth rate</li> <li>• Consumer price index</li> <li>• Domestic credit provided by the financial sector</li> <li>• Total debt</li> </ul>
<b>Social</b>	<ul style="list-style-type: none"> <li>• Poverty and Inequality</li> </ul>	<ul style="list-style-type: none"> <li>• Starvation and hunger</li> <li>• Expected years in schooling per gender</li> <li>• Life expectancy per gender</li> </ul>

		<ul style="list-style-type: none"> <li>• Gender inequality rate</li> </ul>
	<ul style="list-style-type: none"> <li>• Water supplies</li> </ul>	<ul style="list-style-type: none"> <li>• Piped Water</li> <li>• Improved drinking water coverage</li>   <li>• Household connection to improved drinking Water</li> </ul>
	<ul style="list-style-type: none"> <li>• Access to services</li> </ul>	<ul style="list-style-type: none"> <li>• Sewerage connection</li> <li>• Telephone service</li> <li>• Information and technology access</li> <li>• Electricity</li> <li>• Improved Sanitation Coverage</li> </ul>
	<ul style="list-style-type: none"> <li>• Housing and shelter</li> </ul>	<ul style="list-style-type: none"> <li>• Access to affordable housing</li> </ul>
	<ul style="list-style-type: none"> <li>• Educational access and facilities</li> </ul>	<ul style="list-style-type: none"> <li>• Literacy rate</li> <li>• Education quality (Primary school drop-outs, teachers trained to teach, pupil-teacher ratio etc.)</li> </ul>
	<ul style="list-style-type: none"> <li>• Food security</li> </ul>	<ul style="list-style-type: none"> <li>• Households that purchase food supplies from supermarkets</li> <li>• Households that purchase food supplies from informal markets</li> <li>• Households that grow their own food supply</li> </ul>
	<ul style="list-style-type: none"> <li>• Access to health care services and facilities</li> </ul>	<ul style="list-style-type: none"> <li>• Child malnutrition</li> <li>• Infants lacking immunization</li> <li>• Un-meet need to family planning</li> </ul>

		<ul style="list-style-type: none"> <li>• Health care quality</li> </ul>
	<ul style="list-style-type: none"> <li>• Urbanisation</li> </ul>	<ul style="list-style-type: none"> <li>• Slums formation and informal settlement</li> <li>• Urban poverty</li> <li>• Urban sprawl</li> <li>• Urban spatial inequalities</li> </ul>
Political and Administrative	<ul style="list-style-type: none"> <li>• Political freedom</li> </ul>	<ul style="list-style-type: none"> <li>• Freedom of choice</li> <li>• Public participation</li> <li>• E-governance</li> </ul>
	<ul style="list-style-type: none"> <li>• Up-holding of human rights</li> </ul>	<ul style="list-style-type: none"> <li>• Social protection</li> <li>• Social justice</li> </ul>
	<ul style="list-style-type: none"> <li>• Honest and responsive government</li> </ul>	<ul style="list-style-type: none"> <li>• Confidence in the judicial system</li> <li>• Actions to preserve the environment</li> <li>• Trust in national government</li> </ul>
	<ul style="list-style-type: none"> <li>• Human Security</li> </ul>	<ul style="list-style-type: none"> <li>• Birth registration</li> <li>• Refugees by country of origin</li> <li>• Internally displaced persons</li> <li>• Homeless people due to natural disaster</li> <li>• Orphaned children</li> <li>• Prison population</li> <li>• Justification of wife-beating</li> <li>• Violence against women</li> <li>• ever experience</li> <li>• Depth of food deficit</li> </ul>
	<ul style="list-style-type: none"> <li>• Fertility rates</li> </ul>	<ul style="list-style-type: none"> <li>• Adolescent birth rate</li> </ul>
	<ul style="list-style-type: none"> <li>• Birth rates</li> </ul>	<ul style="list-style-type: none"> <li>• Total births per woman</li> </ul>

Demographic	<ul style="list-style-type: none"> <li>Fecundity rates</li> </ul>	
	<ul style="list-style-type: none"> <li>Migration rates</li> </ul>	<ul style="list-style-type: none"> <li>Net migration rate</li> <li>Stock of immigrants</li> <li>International student mobility</li> <li>International inbound tourist</li> </ul>
	<ul style="list-style-type: none"> <li>Mortality rates</li> </ul>	<ul style="list-style-type: none"> <li>Maternal mortality rate</li> <li>Suicide mortality rate</li> <li>Deaths due diseases</li> <li>Homicide rate</li> </ul>
Governance and Institutional	<ul style="list-style-type: none"> <li>Norms</li> </ul>	<ul style="list-style-type: none"> <li>Social conventions</li> <li>Social values</li> </ul>
	<ul style="list-style-type: none"> <li>Beliefs systems</li> </ul>	<ul style="list-style-type: none"> <li>Cultural identity</li> <li>Ethnicity minority</li> </ul>
	<ul style="list-style-type: none"> <li>Practices and meaning systems</li> <li>Leaderships</li> </ul>	<ul style="list-style-type: none"> <li>Infants exclusively breastfed</li> </ul>
Environment	<ul style="list-style-type: none"> <li>Climate change</li> </ul>	<ul style="list-style-type: none"> <li>Rising/ Dropping sea levels</li> <li>Changing weather conditions</li> </ul>
	<ul style="list-style-type: none"> <li>Environmental change</li> </ul>	<ul style="list-style-type: none"> <li>Renewable energy consumption</li> <li>Forest area</li> <li>Fresh water withdrawals</li> <li>Natural resource depletion</li> <li>Air quality</li> </ul>
	<ul style="list-style-type: none"> <li>Natural disasters</li> </ul>	<ul style="list-style-type: none"> <li>Floods</li> <li>Drought hazards</li> <li>Volcanic Hazards</li> </ul>
	<ul style="list-style-type: none"> <li>Gas emissions</li> </ul>	<ul style="list-style-type: none"> <li>Carbon dioxide emissions</li> </ul>



## Appendix B: Confirmation of Editing Services

26 Alexander Street  
Goodwood Estate  
Cape Town  
7460

22 October 2021

### TO WHOM IT MAY CONCERN

I hereby confirm that I have proofread and edited the following dissertation using the Windows 'Tracking' system to reflect my comments and suggested corrections for the author to action:

*Determinants of Population Development in Planning for Southern Africa.*

---

Dr Agnetha Arendse (PhD, M.Ed, Honours, B.A., PGCE, TEFL)  
Academic Writer and Editor  
Email: [abba.plc7@gmail.com](mailto:abba.plc7@gmail.com)  
Cell: 076 730 7802