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CRITICAL CONSIDERATIONS FOR THE ROLE OF GOVERNMENTS IN THE INTERFACE BETWEEN GOOD GOVERNANCE AND SUSTAINABLE DEVELOPMENT IN DEVELOPING COUNTRIES

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ABSTRACT

The article explores the interface between good governance and sustainable development by focusing specifically on the role of governments in the global sustainable development agenda. With this context in mind, the purpose of this article is to highlight the role that governments should play in sustainable development in terms of the notions of 'good' governance as a prerequisite for a specific country's ability and capacity to successfully plan and execute development initiatives, to participate in the global economy and to adhere to the imperatives that emanate from international treaties and conventions regarding sustainable development. The article adopted a qualitative observational approach by comparing, contrasting, critically analysing and synthesising relevant documentary and literature sources in terms of recent data, statistics and knowledge pertaining to a historical and regulatory overview directing good governance and the Sustainable Development Goals (SDGs), as well as the variables influencing global and African governments in pursuit of these goals. To eliminate bias and promote conceptual and contextual analysis, the research method also included specific unobtrusive research techniques, such as concept analysis, historical analysis and documentary analysis. The study found that the reforms pushed by the World Bank are not prioritised and that recipient countries, which are forced to implement them, are not given an idea of how long it would take to carry them out. As a result, recipient countries undertake a multitude of governance reforms at the same time, which are differentially supported by a

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plethora of donors. Often little thought is given to their sequencing, interdependence, or relative contributions to the overall goal of creating more efficient, effective and responsive governments. This is exacerbated by the fact that many developing countries do not have the required resources to successfully implement the reforms required for good governance.

Keywords: good governance, globalisation, development initiatives, global economy sustainable development goals.
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I. INTRODUCTION

According to Auriacombe (2017:56), "To appreciate the role that good governance plays in the global sustainable agenda, it is necessary to understand the world as a complex and interrelated system…This system is characterised by often opposing forces such as pressure for economic growth versus the protection of the environment, globalisation versus the rise of nationalism, human rights versus radicalism, national development imperatives versus geopolitical realities and so forth". Challenges that face humankind today transcend national borders. No single country has the capacity to address the complexities associated with issues such as climate change, ecological degradation, chronic poverty, radicalism and limited natural resources. This reality forces countries to collaborate and co-ordinate their efforts. To frame such collaborative efforts, various international treaties, conventions and good governance protocols have been established to act as frameworks or guidelines for countries to respond in an appropriate and coordinated manner.

International development organisations and agencies, such as the United Nations (UN), the World Bank, and the African Development Bank (AfDB) continuously make a significant contribution in this regard. With this context in mind, the emphasis is placed on good governance and the global sustainable development agenda. The article firstly aims to provide a conceptual orientation for the notion 'good governance'. It is important to comprehend the nature, scope, dimensions and interface of the concepts 'government', 'governance' and 'good governance'. Secondly, the article aims to build on the above notions to explore the interface between good governance and sustainable development by focusing on the role governments play in the global and African sustainable development agenda. This perspective is significant, since the implementation of international conventions, treaties and protocols, such as the SDGs, depend on the commitment and capacity

of individual countries' governments to implement its programmes and meet its targets. In this regard, Auriacombe (2016:6) notes that, "the key is to strike a healthy balance between sustainability and development".

As noted before, the article is based on a qualitative observational analysis. Different documentary and literature sources are synthesised to present the authors' observations of the current knowledge, views, trends and recent initiatives. The sourced material includes recent data and statistics; approaches to sustainable development governance; a historical and regulatory overview directing good governance and SDGs; and the variables that influence global and African governments in pursuit of these goals. The research approach also included specific unobtrusive research techniques, such as conceptual analysis and historical/comparative analysis to eliminate bias and promote conceptual and contextual analysis. Conceptual analysis can be seen as a "system of concepts, assumptions, expectations, beliefs and theories informing the research and is generally regarded as an explanation proposed to reach a better understanding of the social reality/phenomena that is being investigated" (Maxwell 2005:66). Historical/comparative analysis "is a qualitative technique of which the main resources for observation and analysis are historical records… researchers seek to discover common patterns that recur in different times and places...Comparative is included in this method's name to distinguish it from historians who may attempt to describe a particular set of events" (Auriacombe 2007: 466). Notably, historical/comparative research extends "beyond a mere collection of incidents, facts, dates, or figures… It includes the study of the relationships among issues that have influenced the past, continue to influence that present, and will probably affect the future" (Glass 1989 in Auriacombe, 2016:24).

II. CONCEPTUAL CLARIFICATIONS

Development refers to progress within modern society and also relates to economic progress and prosperity. According to Cloete and Auriacombe (2013:14) development is seen as "an outcome of governmental interventions in society that succeed in empowering people to consider feasible options in their lives and to make informed choices for the future".

The most widely used definition of **governance** is that of the World Bank (2007), which views the concept as part of its "criteria to gauge the level of goodness of a particular government". According to the World Bank (2007), "governance refers to a political regime; authority processes; and the policy-making and

implementation capacity of a government". The Word Bank (2007) further considers the "goodness of governance i.e. the extent to which a particular government succeeds in fulfilling its constitutional obligations in society". The (UN) views **good governance** as a prerequisite to successfully operationalise MDGs and currently, the SDGs (Auriacombe 2017). In this regard, (Pierre (2000) states that, "Good governance is the key instrument to address challenges such as chronic poverty, social inequality, insufficient economic growth and environmental decline". Against the background of this article, good governance takes place when developmental policy objectives are operationalised successfully to ensure that a given society develops in a sustainable fashion. This takes place when resources in the voluntary, public and private sectors are mobilised, applied and coordinated in the most participatory, inclusive, effective and efficient fashion.

Sustainable development "in general is based on the argument that the general well-being and welfare of society should be promoted without causing harm to sensitive ecosystems…Governments around the globe should provide essential services without depleting natural resources and without putting future generations at risk" (Auriacombe 2017:67). The Brundtland Commission's Report (in Auriacombe and Jarbandhan, 2015) conceptualises "sustainable development as development that meets the needs of the present without compromising the ability of future generations to meet theirs". For Auriacombe (2017:69), **sustainability** "generally refers to the continued healthy functioning of the planet's climate, ecosystems and oceans".

III. CRITICAL CONSIDERATIONS OF GOVERNMENT AND GOVERNANCE

The notions of government, governance, and the level of goodness thereof are not without controversy. The success of governments largely depends on the trust that citizens have in them. Yet recent Gallup polls (2014; 2015) indicate that public trust in governmental institutions is very low and is continuing to deteriorate. Furthermore, various driving and restraining forces influence governments' ability to govern. For example, some may argue that the complexity and scope of societal challenges demand strong or 'big' governments that intervene in societal affairs. In contrast, libertarians will probably argue for 'small' governments with no or limited intervention (Van der Waldt, 2017). Despite these realities, there is broad consensus that the most important role of a government is to take care of society's general well-being and to facilitate prosperity (Van der Waldt, 2017).

The good governance agenda is not without its critics. It has largely been condemned for imposing 'superior' Western values and traditions on developing countries and pushing a neo-colonial, neo-liberal and capitalistic agenda. Ayittey (1997) argues that, before the colonialisation of Africa, communities lived in relative balance with their environment. The political institutions which they established assisted them to cope with challenges emanating from the environment. As a result, Africa experienced two forms of governance: an indigenous, informal and community-based structure and a formal government structure. The latter was an extension of the state and was based on the legacies of colonial rulers. The burden placed on countries to meet certain conditions of good governance has drawn sharp criticism (Abrahamsen, 2000:36). Furthermore, pushing the good governance agenda perpetuates dependencies and dominance and sustains global power dominance and in the process disregards the humanitarian dimensions of economic aid. An additional problem with the good governance agenda is determining what conditions are required for good governance and how they are to be achieved. Part of the issue is that it is assumed that the "characteristics of good governance are coherent and capable of being universalised" (Auriacombe 2017:72). This scenario is complicated by the lack of a general consensus on which aspects of governance are to be valued over others, as well as what constitutes the best political system.

The dilemma is that the reforms pushed by the World Bank are not prioritised. Furthermore, recipient countries that are forced to implement these reforms are not given an idea of the time-frame to carry them out. Auriacombe (2017:72) argues that, as a result, "for any given country, a multitude of governance reforms are being undertaken at the same time, differentially supported by a plethora of donors, often with little thought to their sequencing, their interdependence, or their relative contributions to the overall goal of creating governments that are more efficient, effective and responsive". The aforementioned scenario is exacerbated by the fact that many developing countries do not have access to resources needed to ensure that the reforms required for good governance are implemented successfully. To this end, Van der Waldt (2017:88) proposes that "good enough governance" conditions that consists of "a condition of minimally acceptable government performance and civil society engagement that does not significantly hinder economic and political development and that permits poverty reduction initiatives to continue" are more suitable.

Leftwich (1996) argues that the World Bank's perceptions of good governance are "naive" since "it entirely ignores that good governance is not simply available on order but requires a particular kind of politics both to institute and to sustain it". The World Bank's idea of good governance is "too idealistic, insufficiently historically specific and over-confident in respect of what we do know and can know about the politics of development" (Van der Waldt, 2017:90). Philip (1999) makes an especially valid point concerning the lack of specificity of the reforms, which seem to be applied regardless of historical, cultural, or political context. Philip (in Van der Waldt, 2017:90) argues that the World Bank appears to be pushing for 'perfect governance', rather than something that could be realistically attainable in a developing context. To this end, Auriacombe (2017:76) states that: "The manner in which governments govern, is frequently judged as either good or bad…The level of trust in government institutions, the legitimacy of political leadership, the responsiveness of government to address societal concerns and aspirations, the level of openness, health, security, education and justice, all influence the way governments are perceived".

In terms of governance, the 'third' sector (i.e. voluntary, non-profit, civil society) plays an increasingly important role in aspects of service delivery, such as education, healthcare, caring for the elderly, housing and public safety. On the one hand, this reality has eroded governments' traditional authority over service delivery. On the other hand, it has strengthened the state's role to take care of its citizens. One can refer to this as the 'co-management' of services between the third sector and government. Evers (2005) refers to this 'co-management' as a "hybrid state" that emerges from the new network mode of governance. Undeniably, it has blurred lines between the public, private and the third sector. Milward and Provan (2000:359) further elaborate on this phenomenon by referring to the "hollow state". This implies that networked governance has eroded the conventional roles and responsibilities and more traditional notions of the state. Guttman (2008) also explains that third-sector involvement has led to more public-private partnerships (PPPs) and outsourcing some services to private service providers. Guttman (2008) refers to this phenomenon as "government by contract". Within this paradigm, robust tender procedures, contract management, adhering to services standards and conventions, as well as issues relating to accountability and responsibility for these outsourced services are critical.

A further potential benefit of third-sector involvement in traditional governance activities is the fact that it could lead to the cross-pollination of ideas, technologies and competencies between these sectors. Third-sector agencies are

often highly competent and skilled in their specific area of function. Exposing public officials and political representatives to this expertise may improve the way services are rendered. Innovative service delivery strategies and mechanisms may improve overall governance, since they typically increase productivity and public sector performance. An impartial civil service is also a fundamental prerequisite for good governance in Africa and elsewhere. Public officials should serve the entire community and not only those who belong to a certain political party. Auriacombe (2017:81) argues that "officials should also not be politically directed or expected to act in ways that promote the partisan interests of the ruling party beyond what is required by their job descriptions". Aucoin (2012:179) further warns that, if officials are not impartial, they will be unable to provide objective, independent technical advice to their political heads.

IV. BACKGROUND AND ORIGIN OF THE GLOBAL SUSTAINABLE DEVELOPMENT AGENDA

With the emergence of the development movement – especially after World War 2 – the global agenda gradually shifted away from a market-driven paradigm towards a development-driven paradigm (Van der Waldt, 2017:100). The seminal works of Adam Smith, among which *The Wealth of Nations* (1776), Karl Marx's *Das Capital* (1867), and John Maynard Keynes' *The Economic Consequences of the Peace* (1919) and *A Treatise on Money* (1930) were highly influential in transforming the global economic system. Unlike the classical economists, Keynes (in Van der Waldt, 2017:100) "saw a key role for government in promoting economic growth". Rather than letting the market operate alone, Keynes (in Van der Waldt, 2017:100) suggested that "governments should intervene to promote investment either through monetary policies such as changing interest rates, or directly through government expenditure" (Van der Waldt, 2017:100).

In reviewing the history of development thinking, Potter and Desai (2008:67) suggest that it represents three key themes, namely *theories* (including ideologies and normative approaches), *strategies* (e.g. "the practical paths to development which may be pursued by international agencies in both developing and developed worlds, non-governmental organisations (NGOs) and community-based organisations (CBOs) in an effort to stimulate change within particular regions") and *processes* (Potter & Desai (2008:67) (e.g. the particular growth trajectory a country should follow based on its geo-political and environmental realities). To these three dimensions, one may add the *goal* perspective. Notably,

this perspective takes cognisance of political, social, economic, cultural, ethnical, moral and even religious influences and focuses on the specific reason why a country or agency pursues development.

After the free market was subject to several failures, economists began to develop new ideas about socio-economic growth and the state's role in regulating its effects. In the economics sphere, the 1944 Bretton Woods Conference in New Hampshire (US) gave rise to three important international institutions, namely the International Monetary Fund (IMF), the World Bank and the General Agreement on Tariffs and Trade (GATT). Known as the "Bretton Woods" institutions, these three institutions form part of the UN and are mandated to facilitate stable economic growth within capitalist systems (Van der Waldt, 2017:101). Development circles began to see that the value of sustainable development after the debt crisis in developing countries, especially in Africa and Latin America, placed considerable strain on economic stability. To this end, The World Commission on Environment and Development (WCED) (1987) was convened to assess this debt crisis. Discussions highlighted that development efforts should be redirected towards the poor. To add credence to talks, the influential Brundtland Report, titled *Our Common Future* was drafted in 1987. (Van der Waldt, 2017:100). According to Van der Waldt (2017:100), "The decision by the UN to replace the MDGs with the SDGs was one of the most important outcomes of the Rio+20 Conference on Sustainable Development held in July 2012 in Rio de Janeiro, Brazil". In its post-conference resolution, *The Future We Want,* the UN Goals Agenda (UNGA) committed to conduct "an intergovernmental process on SDGs that is open to all stakeholders with a view to developing global sustainable development goals" (in Martinez and Mueller 2015:239). A key outcome of Rio+20 was that UN member states resolved to create a set of SDGs that would build on the MDGs and link with the post-2015 development agenda (United Nations General Assembly, 2012).

There was general consensus that the SDGs should be action focused, brief, easy to understand, restricted in number, inspiring, globally focused and generally relevant to all countries (Slack, 2015:5). Furthermore, it was agreed that unique national realities, capacities and development levels should be considered, while national strategies and priorities should be respected (Slack, 2015:5). The establishment of the SDGs was a watershed moment. For the first time, the global sustainable development agenda endeavoured to strike a balance between socio-economic development and protecting the environment. Notably, SDGs pay

attention to critical environmental areas or cover targets on how development could influence the environment, both directly and indirectly.

V. GOVERNANCE OF SUSTAINABLE DEVELOPMENT IN AFRICA

An analysis of the status of sustainable development practices in Africa reveals vast differences in culture, beliefs, language, ethnicity, political regimes, geography and trajectories in terms of economic growth. To this end, it is useful to split Africa into five regions, namely North, West, Central, East and Southern Africa. Notably, each region has unique sustainable development-related traits and priorities. The Africa Growth Initiative at the Brookings Institution's report, *Foresight Africa: Top Priorities for the Continent 2016*, highlights the following six key challenges that Africa faces in terms of socio-economic development (https://providencemag.com/2016/01/ six-challenges-facing-africa-2016/):

- Challenge 1: The present economic growth rate is far too low. Given the 1.4% growth rate, it will take half a century to double the continent's gross domestic product (GDP) per capita.
- Challenge 2: Since the 1970s, industrial development has levelled off. Only one in five workers is employed in the wage economy.
- Challenge 3: Most Africans face poverty, malnutrition, poor education, poor health and violence. Poverty levels continue to rise due to rapid population growth. In 1990, 280 million lived in poverty; the number spiked to 330 million in 2012. In terms of countries with the worst food and nutrition security, 19 out of 20 are in Africa. More than two out of five African adults are illiterate. Africa faces the worst health outcomes in the world. On the upside, new-born life expectancy has risen and chronic child malnutrition has declined since the mid-1990s. Africa is twice as tolerant to domestic violence than the rest of the developing world, while violence against civilians are become increasingly prevalent. While sub-Saharan Africa is characterised by widespread suffering, life is specifically tough for people living in some 34% of Africa, where states have collapsed.
- Challenge 4: Every year, more Africans move to urban slums. In 2010, some 400 million Africans resided in cities; 60% lived in slums with no access to basic services. The number is expected to spike to 1.26 billion by 2050. It is estimated that about 50% of all Africans will reside in cities by 2035, with ongoing urbanisation expected thereafter.

- Challenge 5: The government and business sectors are rife with corruption and nepotism.
- Challenge 6: African countries will be disadvantaged by architectural changes to global trade mechanisms. As the Trans-Pacific Partnership (TPP) and Transatlantic Trade and Investment Partnership (TTIP) exclude sub-Saharan African countries, many trade benefits under America's Africa Growth and Opportunity Act (AGOA) will be lost.

Undeniably, Africans are primarily responsible for addressing these challenges. African citizens need to pressure their respective governments to implement these necessary changes. The mismanagement and misappropriation of Africa's mineral resources presents yet another challenge to sustainable development on the continent. A further commonality as far as sustainable development governance is concerned is that the New Partnerships for Africa's Development (NEPAD) acts as the overarching framework to address socio-economic and environmental challenges. NEPAD was adopted in 2001 as a inclusive and joint development plan for the continent. Notably, it highlights that sustainable development on the continent is based on key preconditions such as peace, security, democracy and good economic and corporate governance.

The African Peer Review Mechanism (APRM) is a critical component of the implementation plan. Approved by the Heads of State and Government Implementation Committee (HSGIC) in March 2003 (UNECA, 2003), each country must take the needed steps to create national focal points to coordinate, monitor and integrate NEPAD programmes into respective national development plans (NEPAD, 2010). A further positive governance-related move was the inception of the African Union (AU) in 2002. This gave rise to the Arab Maghreb Union (AMU), Economic Community of Central African States (ECCAS), Intergovernmental Authority for Development (IGAD), Economic Community of West African States (ECOWAS), Common Market of Eastern and Southern Africa (COMESA), Informal Regional Network of African Non-Governmental Organisations, Southern African Development Community (SADC), Economic and Monetary Union of West Africa (UEMOA) and the Customs and Economic Union of Central Africa (UDEAC). Undeniably, these organisations contribute significantly to implementing the sustainable development agenda on the continent. They also help to align continent-specific development priorities with respective UN development programmes. This, in turn, has improved overall governance.

Since the 1990s, African countries have recorded higher economic growth rates. Regular democratic elections are more commonplace and there are improved governance approaches, structures and systems. However, given the slow progress, most countries (specifically ones in sub-Saharan Africa) are unable to meet development goals, such as the former MDGs and the post-2015 SDGs. Therefore, these efforts should be strengthened and there should be a focus on facilitating better governance outcomes. According to Ayittey (1997), "Africa's deteriorating economic situation is a paradox…The continent has rich deposits of mineral wealth and has enormous tourist potential…Yet it is "inexorably mired in steaming squalor, misery, deprivation, and chaos". Africa is the least-developed continent in the world. Despite this, the region is home to 40% of the world's potential hydro-electric energy and 12% of its natural gas (Ayittey, 1997). Most of the world's diamonds and chromium; 90% of its cobalt; 50% of its phosphates; 50% of the world's gold; 40% of its platinum; 8% of its coal; and 8% of global petroleum reserves are found here (Ayittey, 1997), Furthermore it has enormous agricultural potential with millions of acres of latent farmland.

Why is Africa struggling, given the wealth of natural resources at its disposal? The 'externalist' and the 'internalist' schools of thought are concerned with this question. Externalists attribute Africa's challenges to factors beyond its control, such as colonialism and imperialism; exploitation by multinational corporations; conspiracy plots; an unjust and unequal global economy; and insufficient flows of foreign aid, trade and investment. Internalists ascribe Africa's low growth trajectory to poor political and administrative leadership; bad governance and decaying public institutions; systemic corruption; capital flight, economic mismanagement and deteriorating investment; incessant civil war and tribal factionalism; political dictatorship, human rights violations and military destruction. Internalists are of the opinion that internal factors have played a more important role in defining the current state of Africa. For Africa to be placed on a path of sustainable development, internalists argue that power needs to be transferred from the elite to citizens. In this regard, the politics of inclusion need to replace the politics of exclusion.

To facilitate this, governance systems need to be democratised and broad political reform needs to be facilitated. Furthermore, economic transformation is imperative to liberate the market, to attract foreign direct investment and to become more globally competitive. An independent and free media is needed to expose criminal wrong-doing and to disseminate ideas. This free flow of information helps to address the issue of corruption, nepotism and

maladministration. Furthermore, the media could also play a meaningful role to promote home-grown solutions to the continent's problems.

To varying degrees, African countries have made strides in establishing institutions, instruments and appropriate processes to support the sustainable development agenda. To rate the successes and failures of government interventions in sustainable development, it might be useful for social scientists to design a general scorecard for Africa and more specific rating systems for respective countries. Positive developments include better democratic practices where citizens participate in electoral processes; more rights to minority and marginalised groups (e.g. the disabled, the elderly, women and children); more inclusive governance institutions in terms of ethnicity, religion, race and gender a focus on macro-economic stability; reforming financial and monetary institutions and trade; better accountability; facilitating private sector development, such as macro-economic stability and transparency; political stability, peace and security; better mobilisation or resources; and implementing conflict resolution instruments.

VI. CONCLUSIONS

The article assessed the status of sustainable development and good governance on the continent. Critical success factors were identified pertaining to good governance practices in terms of sustainable developmental in the five regions of Africa. It is evident that the status of sustainable development in Africa is quite diverse in nature. The study found that Africa's good governance agenda has largely been condemned for imposing "superior" Western values and traditions on developing countries and pushing of a neo-colonial, neo-liberal and capitalistic agenda.

Colonialism introduced new governance systems and structures that created the illusion of accommodating indigenous systems. In reality, it enforced the privileges and wishes of the colonial conquerors. Traditional leadership was transformed and had to run parallel to new governance structures. The result was that Africa experienced two forms of governance: an indigenous, informal and community-based structure and a formal structure of government. The latter was an extension of the state that was based on the legacies of colonial rulers. Furthermore, pushing the good governance agenda perpetuates dependencies and dominance and sustains global power supremacy. Subsequently, the humanitarian dimensions of economic aid are disregarded.

An additional problem with the good governance agenda is determining what conditions are required for good governance and how they are to be achieved. Complicating this, is the lack of general consensus on which governance aspects are of more value than others, as well as what constitutes the best political system. The notions of government, governance and the level of goodness of developing countries are not without controversy. The good governance agenda has also been reproached because of its emphasis on economic rather than human development. Recent protest movements across the globe claim that governments are no longer able to cope with societal issues and concerns. Governments are increasingly losing their legitimacy to govern. Due to to limited resources, capital (both financial and human) and infrastructure, they struggle to render even basic services to citizens. Some governments in Africa are characterised by power struggles, bureaucracy, patronage and general inefficiency. As such, they are unable to render quality services. As governments' success largely depends on the trust that citizens have in them, this situation needs to be remedied.

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Research Article

INVESTIGATING THE KEY DRIVERS OF GOVERNMENT DEBT IN SOUTH AFRICA: A POST-APARTHEID ANALYSIS

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─Abstract ─

Over the years, the world has experienced increased and persistent levels of high government debts. This situation has been fuelled by the sluggish economic growth rates and weak revenue collections, particularly in the sub-Saharan region. Using the auto-distributive lag (ARDL) model, the study investigates the key drivers of government debt in South Africa from 1994 to 2017. Findings of this study revealed that there is long-run relationship between government debt and government expenditure, real GDP, inflation and real interest rates, with government expenditure, real GDP and interest rates being the key drivers of government debt in South Africa. Government debt has had a negative impact on economic growth and inflation. In the short run, there are no significant interactions between inflation, real interest rates and government debt. To reduce government debt, the South African government should lean towards improving its productive capacity, controlling interest rates and eliminating non-productive expenditure. Factors such as bailout spending on non-performing and problematic state entities may be avoided by opening for competition to ease the burden off the state as a sole or main funder.

Keywords: Government debt, government spending, economic performance, indebted countries, South Africa
JEL classification: E62; H60 H11; H30; H50

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1. INTRODUCTION

One of the most prominent global macroeconomic developments in recent years has been the upsurge and perseverance of large deficits and government debt. These developments have elevated fears regarding debt sustainability with the potential consequences of debt monetisation that initiates inflation and austerity measures that bring about extensive economic costs (Pirtea, Nicolescu & Mota, 2013), making countries susceptible to economic crises (Mendoza & Oviedo, 2004). Indeed, history reveals that over-borrowing was one of the underlying factors to both the 2008/09 global financial crisis and the Eurozone debt crisis (World Economic Forum, 2014).

In the case of sub-Saharan Africa, irresponsible borrowing has been recognised as one of the region's major challenges (Sambira, 2015). Since 2013, the stance on the region's debt sustainability has declined considerably (Battaile, Hernandez & Norambuena, 2015). More specifically, there has been a concern that many countries in the sub-Saharan region lack fiscal discipline, one of the main contributors to the region's growing government debt. In just four years, from 2014 to 2017, the government debt to GDP ratio had risen to 45 percent from 32.2 percent (Van Cauwenbergh & Laleman, 2018). A further observation is that a significant portion of the debt is often used to finance surging current expenditures such as public sector wage bills instead of capital expenditure, and this is evidenced by the lack of infrastructural development in the region. At the same time, various governments have assumed liabilities acquired by state-owned enterprises (SOEs).

South Africa is not unique to this situation, as the debt burden is seen as one of the country's key challenges (Vollgraaff & Cohen, 2017). From the beginning of 2008, government debt has been on a persistent increase (Mellet, 2012), surpassing 50 percent of GDP in 2017 (National Treasury, 2018). By the second quarter of 2018, the country's debt per capita remained at R48 942, which is considerably higher than the average of countries with similar economic standing (Brandmeir, Grimm, Heise & Holzhausen, 2017). Moreover, the majority of government's contingent liabilities have been mostly accounted for by inefficient state-owned entities (Budget Review, 2018), which have posed a major risk to the fiscus. Even though literature supports the fact that a growing economy determines an economy's ability to repay its debt (Perkins, Radelet & Lindauer, 2006), the country has been growing at very low rates, and has faced persistent challenges of inequality, poverty and unemployment. High levels of government

debt, especially on non-productive spending, are likely to be deleterious for growth and development (Shah, 2007), and can be very harmful as costs used to service the debts can drain resources that could have been used elsewhere. In the case of South Africa, an average of 13.8 per cent of revenue will be used for debt service over 2018 and 2020 (National Treasury, 2018), which again represents resources that could have been used in productive activities. In our understanding, to tackle the country's debt issues, there should be a thorough investigation of the determinants of this continually growing debt, and therefore the need for this study. As such, this study therefore has an objective of investigating factors that have contributed to the growth of government debt in South Africa since the beginning of democracy. The organisation of the paper is as follows. The next section discusses the literature on government debt and its known determinants. The section will further provide empirical studies carried out on the topic. The methodology, results and discussions are reported in section 3, and section 4 contains the conclusions and recommendations.

2. LITERATURE REVIEW

2.1. Theoretical framework on government debt

Government debt refers to the total amount of government fixed-term contractual responsibilities to others payable on a certain date (World Bank, 2013). According to Fall, Hoeller, Fournier and Bloch (2015), research on government debt sustainability levels in developing countries tends to confine debt thresholds to approximately 40 to 50 percent of GDP, subject to revenue raising abilities, growth prospects and the nature of fiscal threats confronting the country. This suggests that government debt-to-GDP ratios exceeding the threshold are a cause for concern.

Standard economic literature proposes the implementation of a countercyclical fiscal policy during economic downturns and increases in government debt, and reducing it during economic expansions (Barro, 1979). The Keynesian school of thought therefore justified increased government debt as a way of stabilising the economy, which implied that a government has to always have some form of debt (Keynes, 1937). This principle received some attention from political researcher, Lorenz von Stein, who argued that *"A government without government debt is either doing too little for its future, or asking too much from its present"* (von Stein, 1871:666). On the contrary, the Classicals were of the view that government debt would have some negative impact on the economy, as such

spending to them was unproductive and wasteful (Smith, 1776). Equally so, the Neoclassicals criticised government indebtedness due to the crowding-out effects it has on investments, interest-sensitive durable consumption expenditure and consequently indirectly reducing consumption spending through a wealth effect (Friedman, 1978). In periods where revenue is not enough to cover spending, governments are forced to finance this shortfall through several financing options, including borrowing. The choice to seek finance domestically or externally will be based on the costs and risks associated with each option (Ellis & Schansberg, 1999). In particular, the decision to finance spending through borrowing acquires follow-up costs that necessitate interest and principal payments due in future fiscal years (Holtfrerich, Feld & Heun, 2016), and over time the borrowings will add to the public debt cost. Even though from a national perspective borrowing is justified and as such can play an important role in facilitating economic progress (Perkins et al., 2006), too much borrowing can create economic problems, particularly if growth and revenues fail to produce the resources needed to repay the debt (Van Cauwenbergh & Laleman, 2018).

2.2. Drivers of government debt

Existing literature shows that government debt is primarily influenced by a combination of macroeconomic, socio-economic, institutional and structural factors. However, it is often unclear whether government debt is boosted by exogenous or endogenous factors (Holtfrerich et al., 2016).

Economic growth has a major influence on government debt. Since GDP measures an economy's ability to repay debt, a larger productive capacity and resultant income imply a greater ability to repay debt (Perkins et al., 2006). Therefore, low economic growth accompanied by weak revenue collections (which can stem from low tax base) will imply less fiscal revenues, consequently forcing government to use debt to finance spending (Van Cauwenbergh & Laleman, 2018; Holtfrerich et al., 2016).

Similarly, a growing fiscal deficit forms a major part of the increase in the ratio of public debt (Belguith & Omrane, 2017). The deficit of each year is added to the previous year's debt stock (Gruber, 2011), and therefore the stock of government debt becomes greater when the deficit increases, signifying higher interest payments.

The credibility of monetary and fiscal policy is likewise one of the important factors that determine the level of government debt. If the credibility of a

country's policies is deemed to be uncertain, debt securities will be sold, which often puts an upward pressure on interest rates. This will eventually raise the cost of government borrowing. This increased cost of financing raises government debt because of increased interest payments (OECD, 2017). Consequently, a higher government debt level results than it would have been when interest rates were lower (Fourie & Burger, 2010). Inflation is yet another factor that affects government debt through higher nominal interest payment (Afonso, 2003). In fact, Reinhart and Rogoff (2010) found that higher debt levels were linked to significantly higher levels of inflation in emerging market economies. However, Abbas et al. (2013) maintain that higher inflation essentially supports government debt reduction by lowering the real value of government debt.

Political factors are among other factors that may deviate fiscal outcomes from the optimal level, especially in emerging and developing economies (Natalia, 2006). In particular, political instability may fuel a country's deficit, and Henisz (2000) argues that this is possible through market uncertainties regarding the country's prospect to pay its debt and the quality of political institutions. As the magnitude of government debt surges, there are insecurities about policies that the government will use in order to meet its debt servicing obligations, with adverse effects on investment (Clements et al., 2003). Currency fluctuations also have an adverse effect on government debt, particularly on debt denominated in foreign currencies. According to Fourie and Burger (2010), if the domestic currency depreciates against the currency in which loans were borrowed, it means that the foreign debt has increased, which, in turn, raises the real debt burden (Holtfrerich et al., 2016). This debt-exchange rate channel can also be linked to terms of trade, with adverse effects for countries that are heavily dependent on primary exports, since these exports are vulnerable to shocks (Van Cauwenbergh & Laleman, 2018).

Demographic factors such as population also put pressure on government debt by influencing spending, especially if the spending structure is skewed by a large share of current spending (OECD, 2017). According to Ellis and Schansberg (1999), contrary to an increased elderly population, an increase in younger age population is linked to increased spending and essentially more debt financing. This is especially true if the government has limited fiscal revenues, with high unemployment and numbers of individuals enrolled in social assistance (Kalaji & Vokshi, 2015).

2.3. Empirical overview

The link between government debt and various economic factors has been investigated by various studies. In a study that investigated the influence of political fragmentation on government debt using data on 92 advanced and developing countries between 1975 and 2015, Crivelli et al. (2016) found strong evidence showing that political fragmentation plays a prominent role in explaining government debt dynamics. The effects were stronger in economies where corruption is perceived to be high. On the contrary, Ellis and Schansberg (1999) found that political variables were largely irrelevant to the accumulation of government debt.

Natalia (2006) studied the influence of economic and political factors on the level of government debt in 14 emerging countries. The study found that GDP per capita, growth rate of output, change in output gap, inflation, unemployment and real interest rate to be significant in explaining the level of government debt. In their study, Kumar and Woo (2010) discovered that, on average, a 10 percent increase in the debt-to-GDP ratio is connected to a 0.2 percent decline in real per capita GDP. Pirtea et al. (2013) found that real interest rates on government bonds, exchange rate and GDP growth rate remained a significant determinant of government debt in Romania between 2000 and 2011. Belguith and Omrane (2017) found similar results in a study that investigated the macroeconomic determinants of public debt growth in Tunisia between 1986 and 2015. They found that real interest rate, budget deficit and trade openness increased Tunisia's government debt during the specified period.

In an econometric investigation of the macroeconomic determinant of government debt in 46 countries for the period 1980 to 2009, Swamy (2015) found that real GDP growth, foreign direct investment (FDIs), government expenditure, inflation and population growth have negative effects on government debt. However, gross fixed capital formation, final consumption expenditure, and trade openness had positive effects on debt. In Albania, Kalaja and Vokshi (2015) found demographic factors, including unemployment, aging rate and pension schemes associated with ever-growing sovereign debt levels in the country. While Akitoby et al. (2014) found that inflation supports government debt reduction by lowering the real value of government debt, Forslund et al. (2011) found no statistical significance on the variable on the composition of government debt.

3. METHODOLOGY

3.1 Study design

The study makes use of annual data obtained from the South African Reserve Bank (SARB) and world development indicators (WDIs) from the period 1994 to 2017. All variables utilised in this study are transformed to their natural logarithm form. The variables specified include total loan debt of national government as a percentage of GDP, which is the dependent variable (GD), followed by the independent variables, i.e. gross domestic product per capita (GDP), national government expenditure as a percentage of GDP (GEXP), real interest rate (RINT), and inflation rate (CPI). For this reason, the quantitative research design was deemed fit and suitable for the study.

3.2 Model specification

The study makes use of the auto distributive lag (ARDL) model developed by Pesaran et al. (2001). The ARDL model has a number of advantages compared to other cointegration methodologies, such as the Johansen and Juselius (1990) cointegration technique. Firstly, the ARDL technique allows for variables to be integrated at either order I(0), I(1) or jointly at I(0) and I(1) (Habanabakize et al., 2017). Secondly, potential issues of endogeneity reflected in the explanatory variables are effectively rectified through the ARDL technique (Brini et al., 2015). Thirdly, the ARDL technique allows for the simultaneous use of different numbers of optimal lags for the variables (Kharusi & Ada, 2018). Lastly, the ARDL techniques allow researchers to use a small sample size, such as the study of Kharusi and Ada (2018), which utilised a sample of 25 observations from1990 to 2015. It is for these reasons that the ARDL techniques are used for its favourable properties. In order to determine the key drivers of government debt in South Africa, the following ARDL model is specified:

$$\Delta LGD_t = \alpha_0 + \sum_{i=1}^{n} \beta_{1i} \Delta LGD_{t-i} + \sum_{i=1}^{n} \beta_{2i} \Delta LGEXP_{t-i} + \sum_{i=1}^{n} \beta_{3i} \Delta GDP_{t-i} + \sum_{i=1}^{n} \beta_{4i} \Delta LRINT_{t-i} + \sum_{i=1}^{k} \beta_{5i} \Delta LCPI_{t-1} + \phi_1 LGD_{t-1} + \phi_2 LGEXP_{t-1} + \phi_3 LGDP_{t-1} + \phi_4 LRINT_{t-1} + \phi_5 LCPI_{t-1} + \varepsilon_t \quad (1)$$

Where ΔLGD denotes the natural logarithm of government debt at time (t), followed by ΔLGDP, which denotes the natural logarithm of gross domestic product at a time (t), ΔGEXP symbolises the natural logarithm of government expenditure at a time (t), while ΔLRINT denotes the natural logarithm of real interest rates at a time (t) and ΔLCPI symbolises the natural logarithm of inflation at a time (t). Furthermore, the intercept and the number of lags used are denoted by α0 and *n,* respectively. The short-run dynamics are represented by β1 to β6,

followed by the long-run relationship, which is denoted by $\phi 1$ to $\phi 6$, while the error term is represented by ϵt.

In order to investigate a cointegration relationship between the variables, the null hypothesis (no cointegration) and the alternative hypothesis (cointegration) are formulated below:

$$H_0 : \beta_1 = \beta_2 = \beta_3 = \beta_4 = 0$$

$$H_1 : \beta_1 \neq \beta_2 \neq \beta_3 \neq \beta_4 \neq 0$$

Making use of the Wald f-test, the bounds test is utilised to test the two hypotheses indicated above, where the estimates of the f-values and critical values from the Persaran et al. (2001) table were compared. When the f-value is greater than the critical value, this will imply that the null hypothesis is rejected, concluding that a long-run relationship between the variables exists. Furthermore, when the f-value is lower than the critical value, this will imply that the null hypothesis is not rejected, and therefore we can conclude that a long-run relationship between the variables does not exist, and therefore there is no cointegration. However, at a point where the f-value lies between the upper and lower critical value, Persaran et al. (2001) assert that this will indicate that the results obtained are inconclusive. After testing for the presence of cointegration, the next step is to estimate the error correction model. When the variables are co-integrated, the error correction equation will be adapted in the following manner:

$$\Delta LGD_t = \alpha_0 + \sum_{i=1}^{n} \beta_{1i} \Delta LGD_{t-i} + \sum_{i=1}^{n} \beta_{2i} \Delta LGEXP_{t-i} + \sum_{i=1}^{n} \beta_{3i} \Delta GDP_{t-i} + \sum_{i=1}^{n} \beta_{4i} \Delta LRINT_{t-i} + \sum_{i=1}^{n} \beta_{5i} \Delta LCPI + \delta ECT_{t-1} + \varepsilon_t \quad (2)$$

In order to measure the speed of adjustment towards long-run equilibrium, the error correction term and its coefficient are represented by ECT and δ, respectively. Furthermore, in order to determine the optimal number of lags, this study made use of the Schwarz Bayesian information criterion, as this criterion, according to Brooks (2014), provides precise results irrespective of the sample size utilised in the analysis. Furthermore, in order to check the reliability and accuracy of the model utilised, diagnostic and stability tests will be conducted. Making use of Eviews 9 software, the study conducts the empirical analysis by following the following steps; firstly, the augmented dickey fuller (ADF) and Phillips Perron (PP) unit root test were utilised to determine the order of

integration of the variables. Secondly, the long-run relationship between the variables was evaluated. Thirdly, the error correction model was estimated. Lastly, the study further conducted the normality, stability, serial correlation, Ramsey RESET test and heteroscedasticity.

4. RESULTS AND DISCUSSIONS

4.1 Correlation analysis

The Pearson correlation analysis is conducted in order to determine the strength and association between the variables utilised. The correlation coefficient (r) should lie between the range -1 and +1. As indicated by the study of Ahlgren et al. (2003), if the correlation coefficient is closer to zero, a strong association between the variables is observed, and if the correlation coefficient is closer to one, a strong association is observed between the variables. This study follows the correlation coefficient guideline from Evan (1996), which is summarised in the following manner: 00-0.19- 'very weak', 0.20-0.39- 'weak', 0.40-0.59- 'moderate', 0.60-0.79 'strong', 0.80-1.0 'very strong'. The results of the correlation test are presented in Table 1 below:

Table 1: Pearson's correlation coefficients

	LGD	LGEXP	GDP	LRINT	LCPI
LGD	1.000000				
LGEXP	0.480122**	1.000000			
GDP	-0.345750	-0.446437**	1.000000		
LRINT	0.156565	-0.365594	-0.79580	1.000000	
LCPI	0.156885	0.115089	-0.311734	-0.101655	1.000000

Note: ** denotes 5% level of significance

The correlation between LGD and LGEXP is statistically significant at the 5% level of significance. However, the correlation between LGD and the other variables (GDP, LRINT and LCPI) is not significant. Furthermore, the correlation between LGEXP and GDP is statistically significant at the 5% level of significance. However, the correlation between LGEXP and the variables (LRINT and LCPI) is not significant. This is followed by a non-significant correlation between LRINT and LCPI. Furthermore, a moderate association is observed between the variables LGD and LGEXP followed by LGEXP and GDP. Moreover, a weak association between LGD and the variables (GDP, LRINT and

LCPI) is observed, followed by a weak association between LEXP and the variables (LRINT and LCPI), followed by a weak association between GDP and LCPI, and lastly a weak association is observed between LRINT and LCPI. The results further indicate that the correlation between LRINT and LCPI is the weakest, while the correlation between GDP and LRINT is the strongest compared to the other variables.

4.2 Unit root test

This study made use of the ADF and the PP unit root test in order to test the order of integration of the variables. As can be seen in Table 2, the results indicate that all variables are stationary either at I(0) or at I(1).

Table 2: Unit root test

Variable	ADF		PP		Order of integration
	t-stats	p-value	t-stats	p-value	
LGD	-2.186307	0.0306**	-2.186307	0.0306**	I(1)
LGEXP	-3.993554	0.0004*	-4.041716	0.0003*	I(1)
GDP	-2.326298	0.0223**	-2.245289	0.0268**	I(0)
LCPI	-4.376926	0.0032*	-7.008209	0.0000*	I(1)
LRINT	-7.014281	0.0000*	-7.034481	0.0000*	I(1)

Note: * denotes significance at 1%, ** denotes significance at 5%.

4.3 Model selection

Making use of the Schwarz information criteria, the optimal number of lags utilised by this study is 1. Therefore, the model chosen is the ARDL (1, 1, 1, 0, 0) model.

4.4 Bounds testing and long-run analysis

The results of the bounds test are summarised in Table 3 below:

Table 3: ARDL bounds test

Dependent variable: LGD	
F-statistics	7.699539

Critical value bounds	I(0) Bound	I(1) Bound
10%	2.2	3.09
5%	2.56	3.49
1%	3.29	4.37
Conclusion	Cointegration	

The null hypothesis of no long-run relationship is rejected, as the F-value, 7.699539, lies above the upper bound critical values at all levels of significance. A long-run relationship between government debt and its key drivers is therefore evident. The long-run relationship between government debt and its key drivers arises from the fact that the government needs capital in order to conduct activities and fulfil its obligations. In most cases, the government is running at a deficit. This, therefore, fuels the need to borrow, not forgetting that the government is liable for debt service costs, and ultimately the economy suffers as money that should have been invested into domestic capital and profit forming activates is used to service the debt. The long-run relationship is also observed by Brini et al. (2015) and Wrega (2015). Because there is a long-run relationship between the variables, the long-run results are summarised by equation 3 below.

Long-run equation:

$$LGD = 6.020889LGEXP - 0.043570GDP - 0.086676LCPI + 0.099521LRINT - 15.9949 \quad (3)$$

A positive, significant relationship between government debt and government expenditure exists. A one percent increase in government expenditure will on average result in a 6.02 percent increase in government debt. An analysis of government spending in South Africa reveals that the increase in spending has been driven by consumption spending as the public sector wage bill continues to rise instead of investment activities. Furthermore, the expenditure on social welfare has continuously increased in an effort to relieve the poor from the triple challenges of poverty, inequality and unemployment, which continue to affect the country. This puts a major strain on government debt, especially if unemployment and growth levels continue to be low. These findings are supported by Mah et al. (2013) and Milu (1998).

A negative significant relationship between government debt and economic growth is observed, implying that a one percent increase in economic growth will on average result in a 0.04 percent decrease in government debt. The findings of

this study are in line with the Classical school thought on the view that government debt may be unproductive and wasteful (Smith, 1776), especially if it is on non-productive services, which will have negative effects on economic growth. The study of Kumar and Woo (2010) mirrors the findings of this study.

A negative, insignificant relationship was observed between government debt and inflation. This suggests that a one percent increase in inflation will on average result in a 0.08 percent decrease in government debt. These results are consistent with the findings of Warega (2012) and Forslund et al. (2011), who also found a negative association between inflation and government debt. This is because inflation reduces the true value of money, as inflation benefits the borrower (debtor) at the expense of the creditor (lender), as it reduces the value of the debt that South Africa would have to pay back. In this manner, the government tends to benefit at the expense of the private sector since it is one of the biggest debtors. These findings are advocated by the study of Akitoby et al. (2014), who indicate that even though inflation alone can hardly solve the problem of debt, an increase in inflation could help with debt reduction. .

A positive, insignificant relationship between government debt and interest rate was also observed. A one percent increase in interest rates will on average result in a 0.09 percent decrease in the government debt. The findings of this study are in agreement with the study of Karanja (2013), Engen and Hubbard (2004), and Juma (2010), who found a positive relationship between these two variables. The positive relationship between interest rates and government debt lies behind the fact that as interest rates increase, private investment is affected through the 'crowding-out' effect, which ultimately hinders economic growth, and leads to a reduced amount of tax revenue collected by government. This will further lead to increased government deficits and ultimately the government will have to borrow, and therefore an increase in government debt.

4.5 Short-run relationship and error correction model

The error correction model findings are summarised in Table 4 below.

Table 4: Short-run and error correction results

Variable	Coefficient	Std. error	t-statistic	P-value
D(LGEXP)	1.013891	0.261589	3.875889	0.0013**
D(GDP)	0.011253	0.003988	2.821448	0.0123**
D(LCPI)	-0.005708	0.016975	-0.336246	0.7411
D(LRINT)	0.007633	0.020046	0.380779	0.7084

CointEq(-1)	-0.130657	0.017446	-7.489299	0.0000

Note: **denotes 5% level of significance.

The results indicate that government debt is stimulated in the short run by expenditure and economic growth. The results also show that inflation and interest rates are statistically insignificant, therefore suggesting that inflation and interest rates have no short-run impact on government debt. The error correction term is negative and statistically significant, indicating that the speed of adjustment is satisfactory with a coefficient of -0.130657 and a probability value 0.0000. Moreover, the coefficient of 0.201243 indicates that approximately 13 percent of any disequilibrium is corrected each year; furthermore, this implies that it will take approximately one year for changes in government debt to affect its key drivers.

4.6 Diagnostics and stability results

The study further conducted diagnostics and stability tests in order to determine the legitimacy of the model used. The results reveal that the series utilised is normally distributed, there is no serial correlation, there is no heteroscedasticity, there are no misspecification errors and the model is stable. This, therefore, indicates that all econometric assumptions were met by the ARDL (1, 1, 1, 0, 0) model.

5. CONCLUSIONS AND RECOMMENDATIONS

Over-borrowing and high government debts undermine growth and development. This has been the case in South Africa, as, despite the surge in government debt, the country still faces challenges of low growth, unemployment and inequality. The findings of the ARDL model found that there was a positive relationship between government debt and government expenditure. This, combined with less than three percent growth rates, shows that South Africa's debt has been used on non-productive spending, further fuelling low economic growth and the budget deficit. A positive relationship was also found between government debt and interest rates, implying that increasing interest rates meant higher debt servicing costs, and *vice versa*. A negative relationship was observed between government debt and real GDP, indicating that a growing economy makes it possible to reduce debt levels, and *vice versa*. This shows that although South Africa has a favourable debt structure, the fact that debt levels have been increasing over the years questions the country's debt management capacity and the sustainability of the situation thereof. Therefore, there is a need to reduce the gap between debt

levels and budget deficit. A growing economy measures a country's ability to repay debt; therefore, there should be an improvement in the country's productive capacity, which is going to require a shift from consumption (non-productive) expenditure to capital expenditure. Spending on non-performing SOE bailouts can be avoided through the opening for competition in the problematic SOE sectors, such as the electricity industry. Given that research shows that government's current spending has a tendency to increase more compared to capital spending in years that elections take place, the real challenge for the South African government is to ensure that populist policies do not lead to increased government current spending as the country approaches the 2019 national elections and also does not add to the already growing government debt.

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Research Article

LAND REFORM AND SUSTAINABLE DEVELOPMENT - A SOUTH AFRICAN PERSPECTIVE

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-Abstract-

Land reform entails initiatives embodied in legislative, policy and other measures, constituting actions and mechanisms aimed at broadening access to land, improving security of tenure and restoring land or rights in land, all of which have become necessary because of the historical racial and inequitable approach to land in South Africa. Land reform therefore, consists of three main pillars, namely restitution of land rights, redistribution of land rights and improving security of a wide range of tenure forms. The focus of this paper is primarily on land tenure reform as an important element of land reform. The emphasis is on the legal arrangements used in South Africa to effect land tenure reform. The aim is to investigate the adequacy, flaws, challenges and effectiveness of the legal arrangements used in South Africa to effect land tenure reform. The qualitative method of research will be employed in this study. The reason is that it is best suited to this type of study which entails a critical analysis of legal issues. The study *inter alia* makes the finding that if land reform is pursued merely on the basis of political ideology and expediency, the economic and social costs will soon outstrip the perceived benefits of radical land acquisition. At the same time, it must however, be recognised that the majority have reasonable expectations for land holding patterns to change in order to address historical imbalances. The researcher concludes by submitting that property can no longer be seen, as it was defined in the common-law tradition, an island of sovereignty where the individual can do whatever she likes. Caution should be taken, therefore, in seeing property rights as the means by which to best secure tenure rights. Rather, security of tenure grounded in the human rights framework should be clearly articulated and properly seen as a fundamental human right.

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1. INTRODUCTION

Land reform entails initiatives embodied in legislative, policy and other measures, constituting actions and mechanisms aimed at broadening access to land, improving security of tenure and restoring land or rights in land, all of which have become necessary because of the historical racial and inequitable approach to land in South Africa (McCusker, Moseley & Ramutsindela, 2015). Land reform therefore, consists of three main pillars, namely restitution of land rights, redistribution of land rights and improving security of a wide range of tenure forms (van der Walt & Pienaar, 2012). Restitution of land rights is a process that is aimed at restitution of specific lands that were taken away from specific people during the apartheid era (Badenhost, Pienaar & Mostert, 2015). Redistribution of land rights involves various programmes and processes aimed at obtaining land and making it available quickly and cheaply, both in the urban and rural areas (van der Walt & Pienaar, 2012). The upgrading of security of tenure involves legislation and other steps to improve the quality and the security of existing land rights, especially in cases where security of tenure was undermined or prevented by apartheid policy (van der Walt & Pienaar, 2012). The focus of this paper is primarily on land tenure reform as an important element of land reform, although some comments will be made to land reform in general. It therefore falls beyond the scope of this study to compare and analyse different land reform policies in the broadest sense. The emphasis is rather on the legal arrangements used in South Africa to effect land tenure reform. It is not intended to provide a detailed overview of historical land practices and discriminatory policies in South Africa. Suffice to say that the effects of the apartheid land law on the black population were cruel and while land reform seeks to redress the injustices of the past and while it has indeed brought justice to some, it can never fully compensate the suffering caused through dispossession. It can only be a step towards healing and reconciliation (van der Walt & Pienaar, 2012).

The aim of the paper is to investigate the adequacy, flaws, challenges and effectiveness of the legal arrangements used in South Africa to effect land tenure reform. As will be highlighted in this paper, this is important, primarily because land tenure security guarantees the existence of land rights, ensures protection of

rights through legal remedies when those rights are challenged or abused and provides landowners and users with confidence that they will not be arbitrarily deprived of their rights over particular lands and resources. Furthermore, secure land tenure can improve livelihoods and sustainable management of natural resources, including forests and promote sustainable development and responsible investment that eradicates poverty and food insecurity. Against this backdrop, it will be argued that secure land tenure plays a critical role towards the realisation of Sustainable Development Goals and the Aspirations related to *inter alia*, poverty alleviation, food security, environmental sustainability and advancing women's empowerment worldwide. In this regard, reliance will be made on the Sustainable Development Goals as provided for in the United Nations document, *Transforming Our World: The 2030 Agenda for Sustainable Development* and the Aspirations as provided in the African Union document, *Agenda 2063.*

2. BRIEF HISTORICAL BACKGROUND

The land reform programme in South Africa exists against the background of inequality and injustice caused by decades of apartheid land law. Therefore, in order to get a more comprehensive overview of what land reform entails it is necessary to sketch the outlines of apartheid land law as it existed before 1991. Four main statutes are important in this regard. First, is the Black Land Act 27 of 1913; with this Act, grand apartheid in the rural areas was established. Eight percent of the land was identified as 'traditionally black' and reserved for exclusive use and occupation by black groups, while all other land in the country was reserved for exclusive use and occupation by the whites. Secondly, is the Development and Trust Land Act 18 of 1936. This Act extended the reserved land by five percent with the addition of the so called 'released' land. All rural land which was 'reserved' for blacks in these two statutes (thirteen percent of the land in the country reserved for more than eighty percent of the population) was held either according to customary law or in terms of special land rights created by these laws. These rights rarely amounted to full ownership and large tracts of land were in fact owned by the state, which held them in trust for the tribal communities actually living in the land (van der Walt & Pienaar, 2012). The physical effects of grand apartheid were cruel. The amount of land reserved was

inadequate for the people living off it. The situation was exacerbated by the lack of opportunities for expansion and development as it became impossible for the growing number of people to survive on the land they had. The result was large-scale poverty, overcrowding, overgrazing and lack of social services which eventually forced male family members to relocate to the urban areas, where job opportunities, especially in the mining industry, were available for unskilled labour.

The third statute is the Group Areas Act 36 of 1966 which set aside in the urban areas, special residential areas for the black, coloured and Indian groups as identified by the Population Registration Act 30 of 1950. The designation of land as a group area implied that only people belonging to that race group were allowed to own, occupy and use land in that area for any purpose. The temporary land rights which could be obtained in these urban townships were prescribed and controlled by regulations issued in terms of the Black Local Authorities Act 102 of 1982, the Black Communities Development Act 4 of 1984 and the Blacks (Urban Areas) Consolidation Act 25 of 1945 and held by permission from the white controlled townships administrations. These insecure land rights consisted of site permits, residential permits, lodgers' permits, certificates of occupation and hostel permits. All these forms of landholding were temporary and insecure. One of the most important results of the strict control over urbanisation and housing in group areas was the growth of squatter settlements or informal settlements. Despite strict controls, squatter communities increased enormously since the 1980s. These communities usually consisted of people who moved to the urban or peri-urban areas because of poverty, lack of opportunities and overcrowding in the rural areas. The fourth important stature is the Prevention of Illegal Squatting Act 52 of 1951. This was by far the most draconian of all apartheid land laws. The Act forced private landowners and public authorities to demolish and remove all buildings and structures erected without consent of the landowner or in contravention of planning provisions and building regulations.

Given the above background, it is without doubt that in the South African context, improving security of land tenure is critical. There is a pressing need to rectify the

land situation created by apartheid and to establish a measure of normality and fairness as far as the land issue is concerned. An important aspect of the process through which greater normality and fairness regarding the land issue is promoted is land reform. However, if this process (of land reform) is pursued merely on the basis of political ideology and expediency, the social and economic costs will soon outstrip the perceived benefits of radical land acquisition. Notwithstanding this, the majority have reasonable expectations for land holding patterns to change in order to address historical imbalances. It is thus, crucial that the legal arrangements used in South Africa to effect land tenure reform are efficient and effectively implemented. In the following discussion, the legal framework relating to land reform in South Africa is discussed. The Constitutional framework presents the starting point as South Africa has a system of constitutional supremacy. Inherent in this term is the idea that the Constitution is the supreme law. Section 2 of the Constitution of the Republic of South Africa provides that that the constitution is the supreme law of the land and that any law or conduct inconsistent with it is invalid (Constitution, 1996).

3. THE CONSTITUTIONAL FRAMEWORK

Section 25 of the Constitution of the Republic of South Africa 1996 has entrenched the right to property as a fundamental right. The property clause is however, recognized as a ‘two pronged’ mechanism with which to protect private property against impermissible imposition on the one hand, and with which to bring about transformation of existing patterns of private property on the other. This shows that notwithstanding the constitutional imperative to protect private property, it was also vitally important for the Constitution to attempt to redress the imbalances of the past as a result of apartheid. In this regard, the courts are therefore required to play a dual role in balancing out the tensions and conflicting interests that arise between the protective and reformative characteristics of the constitutional right to property (Currie & de Waal, 2013).

The three pillars of land reform are constitutionally entrenched *viz* redistribution in terms of section 25(5) which places a duty on the State, within its available resources, to take steps to promote equitable access to land; tenure security reform in terms of section 25(6) which provides that those people whose land rights are insecure because of past discriminatory laws or practices are entitled to security of tenure as provided by law, or to comparable redress; and redistribution in terms of section 25(7) which provides the basis for restitution of land rights. Section 25(4) is important as it deals with the interpretation of two important aspects. Firstly, section 25(4)(a) states that the term 'public interest,' which is a justification for expropriation in terms of section 25(2), must be interpreted to include the nation's commitment to land reform. Secondly, in terms of section 25(4)(b), reference to property that may be expropriated is not limited to land. Section 39(1) of the Constitution which requires that the interpretation of the Bill of Rights must consider international law is also relevant in the interpretation of the property clause. Section 25(8) ensures that any state action aimed at land, water and similar reforms aimed at redressing past inequalities, will be justified in terms of section 25 as long as these measures conform with section 36. Section 25(9) places a duty on parliament to enact security of tenure legislation foreseen in section 25(6).

This paper mainly focuses on land tenure reform, hence section 25(6) of the Constitution forms the foundation on which the main discussion unfolds. It is noteworthy that an infringement of section 25(6) of the Constitution through ineffective implementation and enforcement of legislation pertaining to land tenure reform automatically violates various other human rights entrenched in the Constitution such as the right to have access to adequate housing, rights to culture and to sufficient food. These rights are also guaranteed in the *International Covenant on Economic, Social and Cultural Rights,* (United Nations, 1966a) and the *International Covenant for Civil and Political Rights*, (United Nations, 1966b) both of which South Africa has ratified. South Africa, thus, also has an international obligation to prevent situations within its jurisdiction that may violate these rights hence the steps undertaken to promote land tenure reform.

4. TENURE REFORM – THE LEGISLATIVE FRAMEWORK

Tenure reforms involves legislation and other steps aimed at improving the quality and security of existing land rights, especially in cases where security of tenure was undermined or prevented by the apartheid policy. As has been highlighted, this aspect of land reform is authorised by section 25(6) of the Constitution, which provides that a person or community whose tenure of land is insecure because of past racially discriminatory laws or practice is entitled to secure tenure or other redress as provided for in a law of parliament. The main purpose is to make existing land rights more secure by protecting the holders of those rights against unfair evictions. Section 26(3) of the Constitution also plays an important role in this regard as it provides protection against eviction. The section provides that no one may be evicted from their home or have their home demolished without a court order, which may not be granted without taking into account all relevant circumstances. In light of the constitutional obligation placed on Parliament in terms of section 25(9), Parliament has enacted numerous legislation aimed at ensuring tenure reform. In the following discussion, selected legislation enacted to give effect to section 25(6) of the Constitution are discussed.

4.1 The Land Reform (Labour Tenants) Act 3 of 1996

Issues surrounding labour tenancy in South Africa are controversial and complex in that they reflect a struggle over access to land and tenure security that spans more than a century. In many instances, the labour tenants have enjoyed much longer relationships with the land they occupy than the farmer who legally owns the land. In many cases the land was expropriated from the African families who occupied it since time immemorial with the effect that they were reduced from the status of customary land owners to mere occupiers. They were thus forced to comprehend how a piece of paper in the form of a title deed lodged in some distant place could deprive them of the land that they were born on and where their ancestors were buried. The only place that they could call home now belonged to someone else and they lacked security of tenure in respect of that land. The Land Reform (Labour Tenants) Act was therefore enacted to address

this issue. The Act regulates the special position of labour tenants, who have special right to the agricultural land that they occupy. Section 1 of the Act provides that a labour tenant means a person (i) who is residing or has the right to reside on a farm; (ii) who has or has had the right to use cropping, or grazing land on the farm of the owner and (iii) whose parent or grandparent resided or resides on a farm and had the use of cropping or grazing land on the farm of the owner, including a person who has been appointed a successor to a labour tenant but excluding a farm worker. In *Zulu and Others v Van Rensburg and Others,* the land claims court decided that a person has to satisfy all three requirements in section 1 of the Act to qualify as a labour tenant. This was confirmed in *Ngcobo and Others v Van Rensburg*. For purposes of tenure reform, the most important function of the Act is to protect labour tenants against unfair or unlawful evictions. Section 5 of the Act which is headed "Prohibition on Evictions" expressly stipulates that a labour tenant may only be evicted in terms of an order of court issued under the Act. In terms of section 6, no person other than the owner may institute proceedings for the eviction of labour tenant. An order for eviction will only be granted where the court deems it just and equitable. Section 14 prohibits the eviction of a labour tenant if an application of land in terms of chapter 3 of the Act is pending. This means that once a labour tenant has made such an application in terms of section 16 of the Act, he or she cannot be evicted pending the finalisation of such claim. It is submitted that effective implementation of the Act will offer labour tenants protection from arbitrary eviction and this, is the cornerstone of secure tenure.

4.2 The Extension of Security of Tenure Act 62 of 1997

The Extension of Security of Tenure Act (ESTA) is another Act of Parliament envisaged in section 25(6) of the Constitution to improve security of tenure for those 'whose tenure of land is legally insecure as a result of past racially discriminatory laws or practices.' The ESTA recognises that many South Africans do not have secure tenure of their homes and the land which they use and are therefore vulnerable to unfair eviction. It therefore, addresses the tenure rights of occupiers (excluding labour tenants) residing on land outside the urban areas with the permission of the landowner. In section 1(1)(x) of the ESTA, an occupier as

defined as a person residing on land which belongs to another person and who has on or before 4 February 1997 or thereafter, had consent or another right in law to do so but excluding (a) labour tenants in terms of the Land Reform (Labour Tenants) Act; (b) a person suing or intending to use the land in question mainly for industrial, mining, commercial or commercial farming purposes; and (iii) a person who has an income in excess of the prescribed amount. In *Venter NO v Claasen* it was held that ESTA does not apply to spouses of occupiers separately. A spouse acquired his or her right of occupation from a marriage relationship with another occupier, and not as an independent right of occupation, unless such right was based on an independent agreement with the owner. Protection of occupiers' rights follow in terms of the Act in two stages. Firstly, the permission to occupy the land may be revoked only according to the procedures laid down in the ESTA. Secondly, once the occupation has been revoked, the occupier can be evicted only according to procedures provided in the ESTA.

4.3 The Prevention of Illegal Eviction from Unlawful Occupation of Land Act 19 of 1998

The Prevention of Illegal Eviction from Unlawful Occupation of Land Act (PIE Act) unlike the Land Reform (Labour Tenant Act) and the ESTA applies to people who occupy land unlawfully. The PIE Act provides strict requirements and procedures for the eviction of these occupiers as some of them would have occupied the land for a very long time and in some instances, the reason for the occupation is sometimes a technicality. The PIE Act also contains provisions to prevent further unlawful occupation of land. In the case of *City of Cape Town v Rudolf and Others,* it was decided that the common la remedies like the spoliation remedy could not find application together with the PIE Act. In other words, if the PIE Act applies, the common-law remedies are disqualified, and the landowner cannot choose rather to make use of the common-law remedies. In *Modder East Squatters and Another v Modderklip Boerdery (Pty) Ltd* the Supreme Court of Appeal reconciled the conflict of law between section 25 property rights and section 26 right to have access to adequate housing by ordering the State authorities to compensate the owner of the land for the costs associated with its occupation by the informal settlement until the State authorities could provide

alternative land for the residents of that settlement. In the case of *Port Elizabeth Municipality v Various Occupiers*, the court confirmed that the Constitution obliges the courts to find a reasonable and just balance between the rights of landowners and the interests of even unlawful occupiers. The court reasoned that while unlawful occupiers do not have any occupation rights according to the common law, their vulnerable position and human dignity must still be taken into account. Therefore, an order to evict them should not be given too easily and definitely not without taking all the circumstances into account. At the same time the court emphasised that eviction is not impossible and that even if eviction would render the occupiers homeless, the landowner's rights must also be protected and if it appears just and equitable in all the circumstances, an eviction order should be granted.

5. SUSTAINABLE DEVELOPMENT GOALS

In the effort to address global sustainability challenges affecting people, prosperity and planet, in September 2015, the United Nations member states adopted *Transforming our World: The 2030 Agenda for Sustainable Development*, (United Nations, 2015), which includes a set of Sustainable Development Goals for 2015-2030. The Agenda provides a successor framework for the *Millennium Declaration and the Millennium Development Goals* that covered the period from 2000-2015, (United Nations, 2000). The Sustainable Development Goals represent the world's comprehensive plan of action for social inclusion, environmental sustainability and economic development. In the same year, the African Union (AU) adopted *Agenda 2063* as the continent's new long-term vision for the next 50 years. Both of these international guides require States to commit to inter alia land tenure security. In the following discussion, security of land tenure in relation to the Sustainable Development Goals as well as the Aspirations is discussed.

5.1 Land Tenure and Sustainable Development Goals

Land tenure reform as provided for in section 25(6) of the Constitution, coupled with good land governance is critical in accelerating the achievement of many Sustainable Development Goals. In the same light, infringement of section 25(6) of the Constitution poses significant challenges for advancing the Sustainable Development Goals. For instance, failure to afford a person or community whose tenure of land is legally insecure because of past racially discriminatory laws or practices, either tenure which is legally secure or comparable redress, hinders the achievement of the Sustainable Development Goal 1 and Sustainable Development Goal 2. Sustainable Development Goal 1 focuses on ending poverty in all its forms. This goal is aimed at ensuring that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate modern technology and financial services, including micro-finance. Sustainable Development Goal 2 focuses on ending hunger, achieving food security and improved nutrition, and promoting sustainable agriculture. This goal is aimed at doubling the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment by 2030. The goal emphasises the importance of small-scale agricultural producers to feeding the world's poor and vulnerable.

It is argued that the continued existence of insecure tenure for, for example, labour tenants in terms of the Land Reform (Labour Tenants) Act and occupiers in terms of the ESTA, affects the security of their access to food and promotes poverty and hunger. There is therefore, need for considerable effort by the government to improve security of tenure of existing land rights by the poor and vulnerable for Sustainable Development Goal 1 and 2 to be achieved. In South Africa, effort in this regard is evidenced by the wide array of legislation on land tenure reform that exists. However, infringement of section 25(6) of the Constitution is still prevalent as tenure reform remains neglected and consequently, challenges towards meeting these goals still exists. Farm labour tenants and occupies continue to be vulnerable to eviction. Thousands of claims have been ignored, and

only recent court action has forced the Department of Rural Development and Land Reform to recommit itself to resolving them. In the case of *Mwelase and Others v Director General for Department of Rural Development and Land Reform Others,* the court, referring to the Department of Rural Development and Land Reform noted, "From the history of the litigation, it is apparent … that the Department has not been able to comply with its own time frames or to provide accurate information on how far the collation of labour tenant's claims had progressed … the Department has also not filed updated implementation plans …" There is thus a wide gap between the legislative framework concerning land tenure reform and its implementation and/or enforcement. The gap needs to be closed if real progress is to be made on land tenure reform. Laws must therefore, be effectively implemented.

Sustainable Development Goal 5 focuses on achieving gender equality and empowering all women and girls. States are *inter alia* required to, "undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property …" The distinction between the land rights of men and those of women is necessary as a safeguard to ensure that development agendas do not leave women behind, unintentionally exacerbating the gender asset gap and undermining governments' ability to meet Sustainable Development Goals' targets. It is submitted that the application of section 9(2) of the Land Reform (Labour Tenants Act) and section 8(5) of the ESTA frustrates the achievement of Sustainable Development Goal 5. The former section provides that on the death of a labour tenant who has retained the right to occupy the farm in terms of the provisions of subsection (1), all his or her associates may be given twelve calendar months' notice to leave the farm. Similarly, the latter section requires, upon the death of a male occupier, the spouses and dependents of the male occupier to vacate the farm upon the expiration of the twelve months period. It is argued that these provisions have the potential of leaving many women and children in extremely vulnerable positions, as they face the reality of homelessness after the expiration of the twelve-month period in the aftermath of the death of the male occupier as legislated or earlier if a breach occurs. It is recommended that the said provisions be repealed. Furthermore, provisions giving women secure land tenure in the event of the

death of the male labour tenant or occupier should be inserted in the mentioned statutes.

In addition to the explicit land-related goals discussed above, a number of goals have implicit land-related outcomes. For instance, Sustainable Development Goal 10 which focuses on reducing inequality within and among countries has particular implications for reducing inequality of land access and protection of property rights from discriminatory policies and practices. Effective implementation of land tenure reform in South Africa will aid the achievement of this goal. Sustainable Development Goal 11 focuses on making cities and human settlements inclusive, safe, resilient and sustainable. It aims to address the chronic lack of property rights for informal urban settlements or slums across the developing world and the related rural conditions that drive mass, unplanned urban migration. In line with this goal, it is submitted that land reform in South Africa should also put focus on informal urban settlements. Land reform currently focuses mainly on rural areas but urbanisation and growth of informal settlements, some on communal land in peri-urban areas means that key needs and opportunities are missed. Sustainable Development Goal 15 focuses on life on land. It aims to protect, restore and promote the sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation and halt biodiversity loss. This reflects the growing recognition of the importance of the role of improved security of tenure in fostering conservation and community stewardship of natural resources. Sustainable Development Goal 16 focuses on promoting peaceful and inclusive societies for sustainable development, providing access to justice for all and building effective, accountable, and inclusive institutions at all levels. This requires developing and strengthening institutions such as land administration agencies, courts, and legal aid services to effectively enforce land and property rights and ensure the poor and vulnerable have equal access to mechanisms for addressing violations of their land rights. Be that as it may, it is submitted that all of these are possible only when there is a land governance system that is accessible, equitable, resource efficient and sustainable.

6. LAND TENURE AND *AGENDA 2063*

In 2015, the African Union (AU) adopted Agenda 2063 as the continent's new long-term vision for the next 50 years, (African Union, 2015). A detailed discussion of Agenda 2063 is not undertaken in this paper suffice to briefly highlight the connection between land tenure reform and the achievement of some of its aspirations. Agenda 2063 contains seven aspirations for "the Africa we want." Of relevance to the issue of land tenure is Aspiration 1 focuses on a prosperous Africa based on inclusive growth and sustainable development. This aspiration will be achieved through the determination to *inter alia* eradicate poverty. In this regard, Aspiration 1 of Agenda 2063 therefore resonates with the Sustainable Development Goal 1. Effective implementation of land tenure reform will therefore, also promote the achievement of Aspiration 1. Aspiration 3 which focuses on an Africa of good governance, democracy, respect for human rights, justice and the rule of law; Aspiration 4 focusing on a peaceful and secure Africa; and Aspiration 6 which focuses on an Africa whose development is people-driven, relying on the potential of African people, especially its women and youth, and caring for children are also relevant to the issue of land tenure. It is submitted that in the same way that land tenure reform as provided for in section 25(6) of the Constitution, coupled with good land governance is critical to accelerating the achievement of many Sustainable Development Goals, it is also equally important in enhancing the achievement of the Agenda 2063 Aspirations and its related goals.

7. FINDINGS

The study *inter alia* makes the following findings. Firstly, that despite the legal framework relating to land tenure reform, the implementation of tenure reform laws has, to a large extent, been weak and ineffective has also been made. This is particularly the case with the Land Reform (Labour Tenants Act) and the ESTA.

The case of *Mwelase and Others v Director General for Department of Rural Development and Land Reform Others,* confirm that the developmental provisions to provide for secure long-term rights under these laws have largely not been implemented. It is recommended that land tenure reform legislation should be effectively implemented, especially in light of the crucial need to address land relations which were disturbed and skewed fundamentally during the apartheid era. Secondly, also made is the finding that land tenure reform is necessarily complex and time consuming. Therefore, State capacity, comprising strong leadership and management, adequate budgets, appropriate policies, sound institutional structures, efficient procedures as well as an effective system for monitoring and evaluation of land reform is crucial. Furthermore, it is also recommended that a Land Charter be developed to facilitate the implementation of a sustainable land reform. There is also a need to develop a Code of Practice or Principles to guide the relations between the Department of Rural Development and Land Reform and stakeholders. Thirdly, the study also makes the finding that effective implementation of land tenure reform in South Africa will yield the unintended positive result of accelerating the achievement of many Sustainable Development Goals as well as the Aspirations, goals and related targets of *Agenda 2063*. The recommendation in this regard is that land tenure reform must be effectively pursued as government endeavours to meet its obligations in terms of the Sustainable Development Goals and *Agenda 2063*. Fourthly, also made is the finding that an infringement of section 25(6) of the Constitution through ineffective implementation and enforcement of legislation pertaining to land tenure reform automatically violates various other human rights entrenched in the Constitution such as the right to adequate housing and the right to sufficient food. It also derails the achievement of Sustainable Development Goals such as Goal 11 focusing on making cities and human settlements inclusive, safe, resilient and sustainable and Goal 1 focusing on ending poverty. It is recommended that since South Africa furthermore has an international obligation to prevent situations within its jurisdiction that may violate these rights, effective steps to promote land tenure reform should be undertaken. Fifthly, a finding has also been made that the process of eviction as stipulated in the legislation pertaining to land tenure reform is far removed from the virtually automatic right of eviction that exists in terms of common law. In this regard, it is recommended that property can no longer be seen, as it was defined in the common-law tradition, an island of sovereignty where the individual can do whatever he/she likes. Caution should be taken

therefore, in seeing property rights as the means by which to best secure tenure rights. Rather, security of tenure grounded in the human rights framework should be clearly articulated and properly seen as a fundamental human right.

8. CONCLUSION

Insecurity of land tenure is *inter alia*, a precipitating cause of poverty and inequality. It creates insecurity for landowners and land users that dampens investment, destroys livelihoods, foments conflict, creates unequal economic systems, locks assets in an unusable and untradeable form, discourages conservation, hampers sustainable domestic resource mobilization for increasing the availability of public services, and undermines principles of effective and democratic governance, (Mennen, 2016). However, secure land tenure can improve livelihoods and sustainable management of natural resources, including forests, and promote sustainable development and responsible investment that eradicates poverty and food insecurity. Improving the security of tenure of existing land rights goes hand in hand with the realisation of Sustainable Development Goals related to *inter alia*, poverty alleviation, food security, environmental sustainability and promoting gender equality through advancing women's empowerment. Land tenure security guarantees the existence of land rights, ensures protection of rights through legal remedies when those rights are challenged or abused, provides landowners and users with confidence that they will not be arbitrarily deprived of their rights over particular lands and resources, and creates land markets that unlocks its potential as an asset and encourages efficient allocation and transactions. In light of these innumerable benefits are to be reaped from land tenure reform, the researcher concludes by submitting that government should accelerate land tenure reform.

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Research Article

EDUCATION FOR SUSTAINABLE DEVELOPMENT – ECONOMICS STUDENTS' PERSPECTIVES AT AN INSTITUTION OF HIGHER LEARNING IN SOUTH AFRICA

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Abstract

Sustainable development has become a major concern in recent years. Faced with a possible unsustainable future, including depletion of natural resources, greenhouse gases, environmental degradation, and the need to provide housing, food, water, and health care for an ever-increasing population, these novel complex problems will challenge citizens globally, and everything that has life in the world. This has led to the need for awareness of sustainable development, from university students, so that they are equipped with the knowledge to advocate for changes in behaviour, for a sustainable future. This study aimed at identifying how knowledgeable Economics students are on sustainability issues, establishing their level of concern on sustainability issues affecting South Africa and the globe, and finding out their personal lifestyles and reflections on sustainability concerns. A quantitative study was adopted, where questionnaires were distributed to second- and third-year Economics students at an institution of higher learning. The results were analysed from 114 responses using t-tests as well as ANOVA tests. The findings indicate that students are highly knowledgeable and concerned about water and energy savings concepts, and least knowledgeable about waste disposal concepts. The students felt that they have a responsibility towards taking care of the environment and society. The results also indicated that their lifestyles do not reflect their concerns about sustainability.
Although the study found that the students lack knowledge on some key sustainability concepts such as sustainable development, they are concerned about sustainability of water and energy. In addition, though their lifestyles do not reflect their concerns about sustainability, the students are interested in learning more about sustainability. It is recommended that institutions of higher learning integrate programs to educate the students more on the importance of sustainable development.

Keywords: Sustainability Education, Higher Learning

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1. INTRODUCTION

There has been growing concern globally and nationally for sustainable development to be at the forefront of all operations conducted by human beings, in order to safeguard the future. As the urgency to address social, economic and environmental challenges increases worldwide, education is a major component in striving to achieve solutions for sustainability (Sterling, 2001). Universities hold immense responsibility to pass on the necessary knowledge, skills and understanding to students, to ensure that they are both capable and competent to live lives on the earth in a responsible and caring manner (Clarke, 2012). Education plays a key transformational role in cultivating a cultural change towards a sustainable way of living. Education institutions are therefore being urged to move from mainstream thinking to a new era of education for sustainability for sustainable development (ESD). According to Barth, Rieckmann and Thomas (2015), ESD is expected to create awareness of sustainable development (SD) related problems with the intention of bringing forth innovative contributions to economic, social and environmental issues. Universities play an important role in fostering ESD by providing a link between knowledge generation and knowledge transfer to society. This is achieved by educating future decision-makers as well as practicing social outreach and service (Adomßent, Fischer, Godemann, Rieckmann, Timm and Herzig, 2014). In addition, authors Loubser (2015) Baniasadi, Bazargan, Sadeghi and Zahir (2013) emphasize that teacher education on environmental, social and economic issues plays an important role in determining the future of the world and its development.

According to Barth et. Al, (2015), many universities from all over the world have already initiated activities to address sustainability in their teaching and learning at course level and in their curricula. Uitto and Saloranta (2017) argue however that understanding the different dimensions of sustainability has proven to be a challenge for teachers as they may not feel very competent to include sustainability issues in their teaching. ESD seeks to support students to develop the knowledge, skills, values and world views necessary to act in ways that contribute to more sustainable patterns of living (CAPS, 2011). The starting point for this process is the equipping of student teachers to teach the sustainability component, within the new National Curriculum Statement. This leads to the main aim of the study, which was to find out perceptions of Economics student teachers, at a particular university, regarding sustainability aspects and their

preparedness for classroom delivery at schools. Several questions guided this research:

1. How knowledgeable are Economics student teachers on sustainability issues?
2. What is their level of concern on sustainability issues affecting South Africa and the globe?
3. How do the Economics student teachers' personal lifestyles reflect their sustainability concerns?

2. THEORETICAL FRAMEWORK

2.1 Education for sustainable development

Sustainable development has numerous definitions and there has not been any consensus on any acceptable universal definition. The most widely used definition is found in the Brutland Report which says that sustainable development is "development that meets the needs of the present without compromising the ability of future generations to meet their own demands" (WCED, 1987). The report emanated from a Commission established by the United Nations (UN) that aimed to come up with global strategies towards the Sustainable Development (SD) agenda. The objectives of SD cannot be achieved without knowledge being disseminated to the grassroots levels and educating the young ones on the importance of sustainability. ESD is a dynamic concept encompassing a new vision of education that seeks to empower people of all ages to assume responsibility for creating and enjoying a sustainable future (UNESCO, 2002). UNESCO (2005) further elaborated on the importance of ESD by emphasizing that education can help in the promotion of values and ethics. This should be done at all levels in order to make an impact on people's lifestyles and behaviors, and consequently to build a sustainable future. The concept of SD has evolved, and efforts to integrate education in SD were endorsed by the 1992 UNCED conference in Rio de Janeiro. This resulted in the adoption of Agenda 21, which provided a comprehensive set of principles to assist governments and other institutions in implementing SD policies and programs, spearheaded by education (UNCED, 1992). Reza (2016) argues that in order for this to be achieved, education from nursery school through university requires re-orientation to include more principles, skills, perspectives and values related to sustainability for current and future societies.

Mochizuki and Yarime (2015) categorize ESD into three progressive levels of learning: first order, second order and third order learning. Their argument is that first order learning level aims at deepening awareness, knowledge and understanding of the concerns of sustainability. It is therefore content-based education *about* sustainability that identifies and assembles relevant knowledge and expertise in traditional academic disciplines to address sustainability problems. According to Tuncer, Tekkaya, Sungur, Cakiroglu, Ertepinar, and Kaplowitz, (2009), educators will only produce students who are ESD literate if they themselves are knowledgeable and have positive attitudes towards the environment, society and the economy. This implies therefore that knowledge is needed for SD concepts in the related content being taught by teachers (Burmeister, Rauch, and Eilks, 2012). Burmeister and Eiks (2013) further add that it is necessary for teachers to have general ESD knowledge as well as specific subject matter content in order to be effective SD advocates. The second form of learning involves responses to sustainability challenges. This is termed education *for* sustainability. It connects and integrates disciplinary knowledge and expertise to advance basic understanding of the complex, dynamic interactions of human-environment systems. According to McKeown (2006), ESD requires a multidisciplinary and comprehensive approach in tackling social issues. In order for this to happen, it requires understanding of the background of an issue. Educators therefore need to adopt a new approach of teaching sustainability that incorporates societal contexts (Cress, 2004). It is imperative then for students to be allowed to think more broadly and look for ways in which sustainability can be interpreted and developed in real life situations (Alvez and Rogers, 2006). The third form, education *as* sustainability, is vital for epistemic change. It leads to cultivating a culture of sustainability, promotes active collaboration with various stakeholders throughout society, and promotes the organization of processes of mutual learning. According to Burns (2011), educators need a shift from transmissive teaching models to transformative learning models, requiring behavioral change.

Berth and Michelson (2013) argue that ESD is based on scholarship that examines the contribution of education to fostering competencies of individuals such as promotion of ethical values and positive attitudes towards sustainability. ESD is therefore aimed at advancing discussions on sustainability literacy and improving teaching and learning to foster those competencies (Cebrian and Junyent, 2015) involves teaching and learning skills to address critical environmental, economic and social issues (Santone, Saunders and Seguin, 2014). In addition, Bursjoo

(2011) argues that teachers need to change their teaching, not only about new knowledge but also changing frames of reference on how to understand the world.

The importance of ESD has been advocated by a number of authors. Santone et al (2014) argue that trainee teachers, as well as sustainability literate teachers, can explain how their fields of study relate to key environmental, economic and social issues within local, national and global contexts. In addition, they say that ESD knowledge helps pre-service teachers in analyzing how their disciplines relate to key environmental, economic and social issues within the local and global communities (Santone et al, 2014). Wiltshire (2008) emphasizes the importance of ESD for teachers. He argues that teachers play a key role in the appropriate socialization of young people for sustainable development. Therefore, it is important that, irrespective of the academic subject matter for which a teacher is responsible, the teacher's major overall responsibility be seen as the moulding of socially and emotionally well-adjusted individuals who respect themselves and others, and take full responsibility for their actions (Wiltshire, 2008).

2.2 Transformative learning in ESD

Transformative learning theory advocates for changes in understanding of the self, leading to behavioural changes, and as a result, effecting changes in lifestyles (Mezirow, 1996). According to UNESCO (2014), ESD can be defined as a "transformative learning process that equips students, teachers, schools, and informal educators with the knowledge and ways of thinking that society needs to achieve economic prosperity and responsible citizenship while restoring the health of the living systems upon which our lives depend". According to Dannenberg and Grapentin (2016), ESD's main areas of concentration are competencies that transform the society, the economy and the environment. These competencies refer to the skills and abilities necessary to solve SD problems. Bursjoo (2011) adds that the most significant way to effect change in one's established frame of reference or world view is to critically reflect on assumptions underlying a problem defined by a learner. Wals (2017) also emphasizes the importance of transformation learning, saying that it focuses on real life issues essential for engaging learners, and considers learning to be more than acquisition of knowledge. The problem lies in the fact that current education models are marked by a retrospective strategy which limits the concepts of change to the examination of past experiences (Dannenberg and Grapentin, 2016). Development of actions and strategies for ESD and integration of both formal and non-formal learning, are

both key in transformational learning and the possibility of consequent behavior change.

According to Martens (2005), ESD is more than a knowledge base related to environment, economy, and society. It also addresses learning skills, perspectives, and values that guide and motivate people to seek sustainable livelihoods, participate in a democratic society, and live in a sustainable manner. It also involves studying local. and, when appropriate, global issues. ESD empowers learners to take informed decisions and responsible actions for environmental integrity, economic viability and a just society, for present and future generations, while respecting cultural diversity (Martens, 2005). In addition, ESD is holistic and transformational education which addresses learning content and outcomes, pedagogy and the learning environment. It achieves its purpose by transforming society (UNESCO, 2014). Wals (2017), however, argues that critical thinking and transformation is hardly practiced; rather, the main emphasis is on ESD theory, and implementing ESD will remain impossible without commitment by educators to the new paradigm. Additionally, ESD educators must practice what they preach, encouraging values development by example; a position more compelling to the learner (Armstrong, 2011).

As an agent of change, ESD aims at a change in the knowledge, values, attitudes, lifestyle, skills and actions needed for achieving SD (Teise, 2013). A number of authors (Hicks, 2002; O'Sullivan, 2002; and Sterling, 2011) have however argued that the education system is not suitable for ESD. Wals (2010) argues that the education system is teacher-centred and therefore not suitable to impact behavioural change. After all has been said, it should be recognized that sustainability is not a set of behaviours that people can be trained to adapt to, but rather a capacity for critical thinking, reflexivity and transformation (Dannenberg and Grapentin, 2016).

3. METHODOLOGY

The methodology used in this research is the quantitative method. The object being researched is assumed to be independent from the investigator. The quantitative approach makes attempts to control and predict phenomena. It is guided by theories and prior research findings. The data are deemed to be objective, precise and reliable (Struwig, 2001:16).

3.1 Research design

Research design refers to the strategy to integrate the different components of the research project in a cohesive and coherent way. The research design used in the study is descriptive research. According to Goddard (2005), descriptive research is research in which a specific situation is studied either to see if it gives rise to any general theories or to see if existing, general theories are borne out by specific situations. Zikmund (2003:55) further elaborates that descriptive research is research designed to describe characteristics of a population or phenomenon.

3.2 Population and sample

A population "refers to all potential subjects who possess the attributes in which the researcher is interested" (Arkava and Lane, 1983:27). The population in this study was Bachelor of Education (B.Ed.) students specializing in Economics and Management Sciences (EMS) courses, with Economics as their major subject at a university in Free State province of South Africa. The target population excluded the first year B.Ed. EMS students as they were still new in the university. Simple random sampling was done where questionnaires were distributed to students in their classes. Out of a total population of 160 and sample size of 139 students at 95 % confidence level, the responses received were from 114 students. This is a response rate of 82 %.

4. RESULTS AND INTERPRETATION

4.1 Demographics

The results indicated that majority of the respondents were in the third year of study (52.6 %), and females formed the majority (61.4%). This is generally because there are more females than male students in this course.

4.2 Coverage of sustainability in EMS course

In the first section which deals with the respondents' level of familiarity with sustainability knowledge, 75.4 % agreed that they had heard the term sustainability being mentioned in EMS courses. This implies that they are familiar with the term sustainability. Regarding coverage of sustainability, 52.6 % agreed that they have covered a sustainability topic in their EMS course, 17.5 % said they have not, while 29.8 % said that they are not sure whether they have covered the topic or not. Independent sample t-tests showed that there is no statistical difference between group means for both second and third years ($F=0.903$, $p=0.344$).

4.3 Knowledge of sustainability aspects

This section aimed to find out the level of knowledge that the student teachers demonstrated on some aspects of sustainability. The question was based on a 5-point Likert scale from strongly disagree to strongly agree. The results were based on means of the responses. The results indicated that students had good knowledge of the various sustainability aspects that required responses, as all of them had scored a mean of 3 and above out of 5. Other observable aspects of sustainability that required more attention included waste disposal knowledge, which had a mean score of 3.31, indicating the familiarity level to be weak positive (Table 1). In addition, the independent t-test showed a significant difference between second and third years in that third year students were more knowledgeable (3.58 $\pm$ 1.139) compared to second years (3.00 $\pm$ 0.991) $t(112) = -2.924$, $p = 0.004$).

Sustainable development knowledge and awareness results indicated a mean of 3.25. This is the lowest among all means and indicates lack of knowledge of SD concepts. The independent t-test showed that there is a significant difference between second and third years in that third year students were more knowledgeable (3.50 $\pm$ 1.255) compared to second years ((2.98 $\pm$ 1.173) $t(112) = -2.271$, $p = 0.025$). BBBEE awareness results indicated a mean of 3.50. However, the independent t-test showed that there is a significant difference between second and third years in that third year students were more knowledgeable (3.68$\pm$ 1.049) compared to second years ((3.30 $\pm$ 1.268) $t(112) = -1.781$, $p = 0.078$).

Table 1: Knowledge on sustainability issues

Item	N	Mean	Standard deviation
Waste disposal	114	3.31	1.106
Recycling	114	3.76	1.016
Energy and water saving	114	3.88	1.014
Health and wellness awareness	114	3.73	1.050
BBBEE awareness	114	3.50	1.169
CSR	114	3.42	1. 233
Sustainable development	114	3.25	1.240
Sustainability education	114	3.50	1.154

4.4 Sustainability concerns

This section aimed to find out the level of concern that the student teachers showed on some aspects of sustainability. The section had two main subsections: the first required the respondents to indicate their concerns and the second required them to indicate their level of responsibility towards the broad sustainability aspects (economic, social and environmental).

The first question was based on a 5-point Likert scale, from strongly disagree to strongly agree, and the results were based on means of the responses. The results indicated that students were concerned about the various generic sustainability aspects that required responses as all of them had scored a mean of 3 and above out of 5, with energy and water saving being the issue with the highest concern at 4.04, while waste disposal was of least concern with a mean of 3.28 out of 5 (Table 2).

Table 2: Sustainability concerns

Item	N	Mean	Standard deviation
Waste disposal	114	3.28	1.266
Recycling	114	3.32	1.271
Energy and water saving	114	4.04	1.147
Health and wellness	114	3.99	1.252
BBBEE	114	3.40	1.302
CSR	114	3.43	1.248
Sustainable development	114	3.49	1.271
Sustainability education	114	3.76	1.299

This second question aimed to find out the level of personal responsibility and interest towards the three main facets of sustainability. The question was also based on a 5-point Likert scale from strongly disagree to strongly agree, and the results were based on means of the responses. The results indicated that students agreed that they have personal responsibilities towards economic, social and environmental aspects of sustainability. All of them scored a mean of 4 and above out of 5, with both environmental and societal aspects scoring the highest (4.04 out of 5). Economic responsibility was the least with a mean of 4 out of 5. However, the independent t-test showed that there is a significant difference

between second and third years with regard to their responsibility to the environment in that second year students indicated more responsibility toward it (4.28 ± 0.712) compared to third year students ((3.87 ± 1.016) $t(112) = 2.476$, $p = 0.015$).

4.5 Sustainability related lifestyles

This section aimed at finding out about the students' sustainability-related lifestyles. The respondents were asked to choose the activity/activities that describe their lifestyles. The responses were as follows: 77.2 % indicated that they turn off lights when not in use; 72.8 % indicated that they exercise; 67.5 % indicated that they practice double-sided copying when printing; 47.4 % indicated that they recycle; 44.7 % indicated that they participate in cleaning campaigns; and 43.9 % indicated that they take short showers (approximately 5 minutes).

4.6 Interest in sustainability education

The last section asked the respondents about their interest in sustainability education. Most respondents, 87.7 %, indicated they have an interest in learning more about sustainability while 12.3 % indicated they do not have an interest in sustainability. The last question was asked in order to find out more about the student teachers' level of sustainability interest.

5. DISCUSSION

5.1 Knowledge of sustainability concepts

Student teachers indicated that they were more knowledgeable when it comes to environmental aspects of sustainability. Aspects such as recycling, energy and water saving scored high means compared to the other aspects (economic and social). This concurs with a study in Tehran which elicited the same responses, showing that students were more knowledgeable of environmental aspects compared to social and economic (Baniasadi et al, 2013). In the present study, attributive factors may include the intense campaigns from all stakeholders in South Africa about saving water and energy, as well as recent power outages and lack of water in most parts of South Africa. The importance of having knowledge on all three facets is important and has been emphasized by many authors. In addition, the interconnection among these three facets requires that students be taught that they are all linked. Sustainable production and consumption will help save the environment, as will social aspects such as healthy foods and lifestyles.

Sustainable development was the least knowledgeable concept as it scored the lowest mean. This concurs with a study carried out by Loubser (2015) in two other universities in South Africa who found that student teachers did not understand the meaning of SD. According to Burmeister and Eiks (2013), it is necessary for teachers to have general SD knowledge as well as specific subject matter content in order to be effective SD advocates. In light of their lack of knowledge, the starting point for ensuring student teachers play an active role in advocating for SD is for them to become knowledgeable about SD. This is supported by Tuncer et al (2009) who emphasize that educators will only produce students who are ESD literate if they themselves are knowledgeable and have positive attitudes towards the environment, society and the economy.

Another key finding was that the students indicated they have covered sustainability topics somewhere in their EMS course at the university. This is encouraging news since it shows a positive development in addressing the sustainability agenda in South Africa, as educators are the key agents of change in the sustainability journey. Again, this finding concurs with Barth et al (2015) who found that many universities all over the world have already initiated activities to address sustainability in their teaching and learning at course level and in their curricula, an indication that South Africa is playing a leading role in ESD.

5.2 Sustainability concerns

The results broadly indicate that there is a general concern about sustainability issues. This is a positive result as those concerns for the environment, economy and society show that we are on the right path towards ensuring that we achieve the sustainable development goals set for 2030. According to Martens (2005), ESD is more than a knowledge base related to environment, economy, and society as it also addresses learning skills, perspectives, and values that guide and motivate people to seek sustainable livelihoods, participate in a democratic society, and live in a sustainable manner. Concern from the students indicates that the education they have received has fostered their values and their moral obligation towards the environment, society and economy. However, poor concern for waste disposal requires attention considering the high levels of paper litter and other waste material pollution in South Africa. Reza (2016) argues that for behavioral changes towards sustainability to be achieved, education from nursery school through university requires re-orientation to include more principles, skills, perspectives and values related to sustainability for current and future societies.

Other results showed that the students had personal responsibility towards all three spheres of sustainability – economic, environmental and social. The social aspect was the highest. I strongly believe that this is because there is a great deal of concern for the society in terms of education, health and general living standards of people in South Africa. The economic aspect was deemed the least favored by the respondents, concurring with a study by Anna and Saloranta (2017) which found that the teachers were unsure of their understanding of the economic dimensions of sustainability.

5.3 Sustainability-related lifestyles

The results indicated that the respondents switch off lights, practice double-sided printing and do exercise. However, the results in all the other aspects contrasted with their concerns in that majority indicated they do not recycle, they do not take short showers, and they do not participate in clean up campaigns. This contrasts with the students' indication earlier regarding their concern for the environment and other aspects of sustainability. This calls for transformative learning which advocates for behavior change, as emphasized by Wals (2017). Transformative learning focuses on real life issues that are essential for learners to understand and be engaged with and considers learning as being more than merely knowledge-based. As Armstrong (2011) advocates, educators should practice what they preach, encouraging values development by example. This is important as the students will soon be imparting the same knowledge, values and practices to other students when they get into schools. In addition, Teise (2013) illustrates that ESD is an agent of change, and therefore it aims at a change in the knowledge, values, attitudes, lifestyle, skills and actions needed for achieving SD. Without behaviour change, SD will take a long time to be achieved. ESD seeks to support students in developing the knowledge, skills, values and world views necessary to act in ways that contribute to more sustainable patterns of living (CAPS, 2011). This contrasts with most of the behavior indicated by the student teachers. The behavior indicated could be a result of the education model, whereas Wals (2010) argued, the education system is teacher-centred and therefore not suited to impact behavioural change.

6. CONCLUSIONS AND RECOMMENDATIONS

Based on the results from the study, it was concluded that student teachers lack knowledge on some key sustainability issues; student teachers are concerned about sustainability; student teachers' lifestyles do not reflect their concerns about

sustainability; and student teachers are interested in learning more about sustainability.

Following the conclusions above, the following recommendations are advocated:

Programs at universities should be developed to support student teachers to graduate with readiness and capacity to teach sustainability education in schools. Training courses on ESD and transformation education need to be developed by the departments of both basic and higher education in South Africa so that they encourage the teaching of sustainability at schools and enable student teachers to be proactive regarding the sustainable development agenda.

Changes in lifestyles should be advocated in everyday lives, at university level as well as when students graduate, so that they have an impact on the future generations that they will teach. It should be emphasized that since SD concepts involve everybody, projects in and out of school should be initiated in the drive towards conserving the planet that we live on.

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Research Article

AN INVESTIGATION ON THE CRYPTO CURRENCIES AND ITS FUTURE

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ABSTRACT

Crypto Currencies (CC) have recently become one of the most debated topics in the public opinion. One of the most fundamental reasons for this is that the fluctuations in transaction volumes and prices of CCs that emerged in 2009 have increased visibly in recent years. CCs have many direct and indirect effects on the global monetary system and the world economy. At this point, as well as the factors that lead to the emergence of CCs, the change and transformation process that CCs create in the world economy is also very important. One of the factors that will determine the degree of future expansion of CCs will be the functions of money. The degree of which CCs can fulfill the functions of the classical currencies will have a direct impact on the process of CC dissemination. CCs cannot fulfill the appraisal function at this time. The most basic reason for this is the excessive fluctuations in prices of CCs. This volatility prevents economic units from valuing any goods and services using CC and leads to preclude the spread of CCs. However, since this fluctuation will persist over time, CCs will begin to fulfill the function of appraisal and the spread will accelerate. The power of governments to direct economic and monetary policy will change and transform with the spread of CCs. The effect of this change and the extent to which the states will allow this change remain unclear. Besides, how CCs will affect the global reserve money system is also very important. It remains unclear whether the CCs will be used as reserve currency in the future and how the major central banks will react to it. CCs are also closely related to the seigniorage income. As the CCs become widespread, the seigniorage income which the major central banks obtained from the banknotes will also be jeopardized. The question of how states and central banks will react to this should also be discussed. Measures that are taken against crypto-currencies by the central banks, whose

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seigniorage incomes decrease, will be determinant of the global reserve money system. The purpose of this study is to foresee the future of the global reserve money system with the emergence of CCs and how the seigniorage incomes of central banks will be affected from this process.

Key Words: *Crypto Currency, Global Financial System, Monetary Policy,*
JEL Classification: E42, E51, E58

INTRODUCTION

Crypto currencies have been one of the most debated issues both in the economy and the public in recent years. Even though the crypto currencies that emerged in 2009 have a recent history, they have begun to draw attention rapidly with their increasing transaction volume and usage areas. Crypto currencies, which are not managed from a single center and can be produced with specific mathematical solutions, are completely differentiated from today's classic money supply methods. This situation brings with it important problems related to the externality of money supply. In addition, the effectiveness of monetary policies which are implemented by central banks may also be jeopardized with the widespread use of crypto currencies. Besides, the issue of how the national and global monetary authorities will react to the presence of future crypto currencies maintains its importance. On the other hand, crypto currencies have various effects on the world economy. These effects can be listed as commercial, financial, economic and political, and tax effects. For this purpose, the historical process revealing crypto currencies was analyzed in the first part of the study. While in the second part of the study, the interaction between crypto currencies and the functions of money were analyzed. The possible regulatory policies also were analyzed in this part. The reactions of central banks and states against to the existence of crypto currencies and the effects of crypto currencies on the world economy were analyzed in the third part of the study.

1. HISTORICAL BACKGROUND OF THE CRYPTO CURRENCIES

While analyzing the historical background of crypto currencies, we have to analyze the development process of classical currencies as well. Coins have dominated for a long time in the history of the world, and paper money gradually has begun to gain importance from the 17th century onwards. The banking system has developed in this process as well. The central banking system was established in parallel with the development of the banking system in this period. The main reason for this is the willingness of the states for controlling the paper money which has increasingly taken part at the center of the economic system.

Along the period, the indexing of the paper money to the gold which is found in the reserves of the central banks continued until the First World War. But after the war, the gold standard was abandoned by many countries. Paper money has become deposit money along with the development of banking system in particular and disengaged from its representative status. The US dollar was indexed to gold in 1944 together with the Bretton Woods system and the currencies of the participating countries were indexed to the US dollar. Thus the US dollar became the global reserve money. The indexing of the US dollar to the gold ended together with quitting of this system by the US in 1971. Hence, the golden money system came to an end.

As a result of technological progress and increasing global trade, the digitalization process of money has also begun. This process started with the development of EFT (Electronic Fund Transfer) system in USA. The use of ATM machines and credit cards followed to this. Money transfer has increasingly become digital, especially with the effect of the advancement in internet technology after 2000. As a result of these, the transition to crypto currencies started (Dilek, 2018: 9).

It can be said that the 2008 Crisis had an impact on the process of transition to crypto currencies. Having confidence in central banks and financial institutions has declined considerably together with the 2008 Crisis. The distrust against to the US dollar and Euro which are the global reserve currencies has also begun. Along with the experiencing of global crisis, the crypto currency Bitcoin was firstly mentioned in the article "Bitcoin: A Peer-to-Peer Electronic Cash System" written by Sathoshi Nakamoto.

In the relevant article, Bitcoin, the first crypto currency, is defined as an electronic payment system based on the encryption and in which the two sides are directly associated to each other. This study, describing Bitcoin, criticizes the intermediary services provided by banks, and emphasizes that there is no need for banks to realize the trade by considering the rising trend of electronic commerce. At the same time, a new insight about how the trust problem can be solved through technology after the global crisis, is tried to be given in the article. In this context, the trust which is the most important feature of the crypto currencies and which based on computer algorithms and mathematical rules reveals instead of the trust against authorities which have the power to issue money.

Blockchain technology, which appeared with Bitcoin in 2009, is seen as an important revolution. Blockchain is a constantly growing distributed database where records are linked to each other by cryptographic elements. The popularity of Blockchain technology has significantly increased with Bitcoin. Bitcoin, whose

value has increased rapidly in terms of both trading volume and market value since its emergence, has become phenomenon in recent years. Bitcoin is generally described as a digital value that is derived from the idea of a utopian crypto anarchist community and that is independent from states and has decentralized and encrypted network. The biggest feature that makes Bitcoin different is that it changes hands directly between the buyer and seller without need for an authority in the digital field.

It is seen as a transfer and investment tool since the digital transaction costs defined as crypto currency unit are very low and the transactions can be realized very quickly. The reason of be in need of this type of digital / virtual coins is having desire of people for being more free and for transferring their money in a cheap, comfortable and safe way. Another important factor is that they seek to compensate their lack of confidence against the banking sector with virtual currencies (Dilek, 2018: 13).

The information about major crypto currencies is given in following table.

Table 1: Most Powerful Crypto Currencies (2018)

Crypto Currencies	Symbols	Total Market Value (USD)	Current Value (USD)	Average Trading Volume (Daily, USD)	Percentage in Crypto Currencies
Bitcoin	BTC	133925007	7947.6	11792800	35.36
Ethereum	ETH	78235387	802.71	5315660	20.66
Ripple	XRP	30129548	0.772	1907880	7.96
Bitcoin Cash	BCH	16426880	968.91	596955	4.34
Cardano	ADA	9780183	0.377	1246710	2.58
Litecoin	LTC	8166372	148.19	922754	2.16
Neo	NEO	7401810	113.87	724572	1.95
Stellar	XLM	6884729	0.373	418426	1.82
Eos	EOS	5515333	8.44	1184200	1.46
Nem	XEM	5400338	0.60	74682	1.43

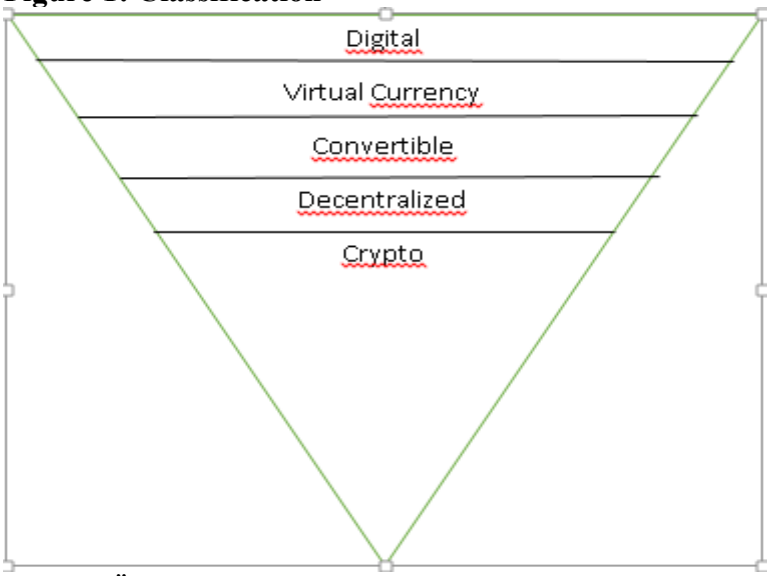
Source: Dilek 2018: 13

At this point, we can classify crypto currencies.

There can be a matter of many different classifications related to crypto currencies. The classification issued by the International Monetary Fund (IMF) in 2016 is as follows. According to the classification herein, the assets that represent a digital value are named the digital currency. E-currency and Paypal are given as examples which are not defined as credit money in terms of digital currency units.

Those which are not defined as credit money are named Virtual Currency (VC). There are varieties of VCs that can be converted according to their link with external world and that cannot be converted like online game money. The convertible currencies are divided into two as centralized and decentralized. Decentralized ones which use cipher science as a validation system are named crypto currencies (Üzer, 2017: 15, 16). The classification is as follows:

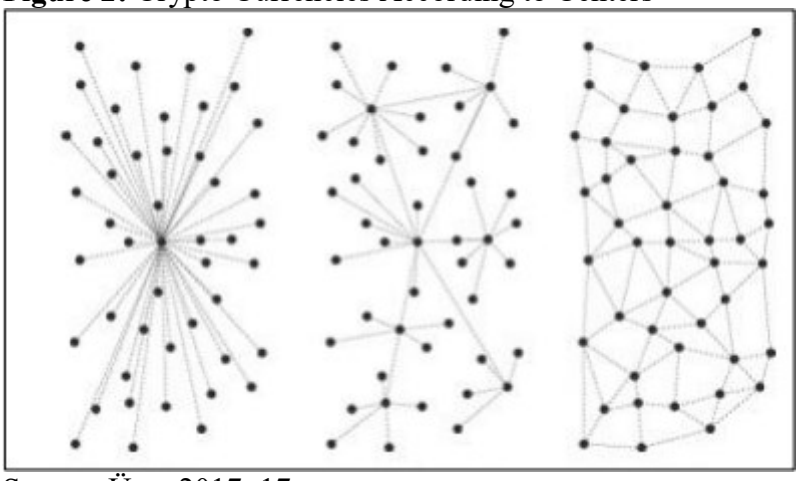
Figure 1: Classification



Source: Üzer 2017, 16

As shown in the figure below, the present VCs are in different forms from the centralized ones to the completely decentralized ones.

Figure 2: Crypto Currencies According to Centers



Source: Üzer 2017: 17.

Third one is the figure which is most similar to the shape of today's crypto money structure.. Decentralized VCs constitute a large part of the ecosystem. Therefore, it is inevitable that such VCs are classified among themselves. The three basic and technical aspects which play role in classifying decentralized VCs in their own are as follows (ECB, 2015):

- Approval mechanism: The first examples of decentralized VCs such as Bitcoin, Litecoin and Dogecoin have adopted the proof-of-work system. The proof-of-work is a series of data that is both time consuming and costly to produce but easy to be verified by other participants of the system. As the proof-of-work process involves approval of transactions by reaching an algorithmic solution through random trials, this process causes both too much error and high energy expenditure. As an alternative to this, Peercoin developed the method of proof of ownership. 7 In this system, the approval of the transactions takes place according to the share of the user in the system.

- Algorithm: Algorithm is the set of rules that determine mathematical processes such as calculating the speed at which data outputs are generated, and the way in which new currencies are exported. There are basically two algorithms. The SHA-2568 algorithm is used in VCs such as Bitcoin, Peercoin, Namecoin and Mastercoin. In words of one syllable, special equipment is required to realize the mining activities that can be called as VC production, and users should be competent in mining. Litecoin, Dogecoin and Auroracoin use the Scrypt algorithm, which can be defined as the extension of SHA-256, but require more

physical memory. Scrypt allows users doing mining to realize activities with average computers.

- Supply: The supply of the currency is constant in many VC samples such as Bitcoin, Litecoin, Namecoin. For example, currently around 16 million Bitcoin is in circulation (Chart 1.1). According to the Bitcoin protocol, the final total will be 21 million and it is expected to be reached to this number in 2040. There is no supply limitation in some VC samples. For example, Peercoin supply is designed to provide 1% annual inflation and have unlimited supply. (Üzer, 2017: 19).

2. THE FUTURE OF CRYPTO CURRENCIES

The digital values that allow cryptographic / ciphered safe transaction and additional virtual money supply is called crypto currency. Crypto currencies are in decentralized type unlike centralized electronic money and banking systems. Control of this decentralized structure is performed by the Block-Chain transaction databases. Crypto currencies are alternative currencies, they are digital and they are also virtual money (Çarkacıoğlu, 2016: 8). Frequently, digital and virtual money are mixed with Bitcoin and its derivatives. Digital and virtual currencies other than Bitcoin and its derivatives are not the currency by themselves. They are based on the national currency of the country that they represent and can be regulated and controlled by the central authorities of that country. Bitcoin is a spontaneous currency and cannot be regulated and controlled by any central authority (Rotman, 2014: 1-2).

There are two important dimensions in discussing the future of crypto currencies, which are the main purpose of the study. The first is whether the crypto currency will fulfill the functions of money and the second is the attitude of the central banks against the crypto currency in terms of the effectiveness of the monetary policies. Therefore, these issues are discussed in this part of the study.

2.1 CRYPTO CURRENCIES AND FUNCTIONS OF MONEY

In order that any asset is considered as "money", it must be able to perform some functions. The first of these functions is that it has to be a unit of account or a common value tool. All economic activities are carried out on a common norm. This norm is money or rather unit of currency. That the money is a good norm of value depends on remaining its value as stable as possible. Otherwise, it shakes confidence in money by affecting the general value norm of money negatively. And over time, money becomes not to perform this function.

The value of crypto currencies occurs at the point where demand and supply are balanced, as in all other goods, products and money. Bitcoin's value is associated with its geographic suitability, prevalence, acceptability, investor's confidence, its ability to be the instrument of payment in real life and the current sensitivity of the market (McDonnell, 2015).

The weakness of the legal infrastructure of the crypto currency, the excessive fluctuations in its value, the value of losses or gains being experienced due to speculative attacks, seem to be a problem. The main point which is sought by economic units in the money that is used as payment instrument and unit of account is stability. Therefore, crypto currencies have difficulty today at the point of demand in terms of users. However, as Bitcoin users increase and Bitcoin use prevails, the price volatility is expected to decline. The investors who think that Bitcoin's price is cheaper can plan to buy it, and keep it for long-term, and sell when it reaches to the target price.

Being a tool of change and payment is another function of money. When economic units purchase any goods or services, they pay money to the seller in exchange for the goods or services, and the transfer of money to the seller in exchange for the goods bought points out function of money as medium of exchange. International trade, financial movements and technological developments have also brought some innovations for providing that money can fulfill this function. Together with the establishment of the EFT system in US as the first time in the world and the transfer of money in the electronic environment, the digitalization process of the money has started. The bank card or credit card applications following the EFT transactions also changed the people's money usage habits and the use of electronic money gradually gained momentum. Together with the widespread use of electronic money, the problem of information security, the increased costs of transfers and the increasing profit ambition of financial institutions, especially banks, caused the realizing of the money transfers at high costs. This situation has increased the need for safe and fast money transfers with low costs and crypto currencies were emerged. Satoshi Nakamoto who sees the gap and the need in the system, introduced a payment system based on bitcoin in his article "Bitcoin: A Peer-to-Peer Electronic Cash System" in which he criticizes the high cost of money transfer transactions offered by banks and reveals that there is no in need for banks. From this point of view, it can be stated that the need for payment function of money is the factor in the emergence of crypto currency.

The most important feature that makes money valuable is the confidence of people in money. One of the important elements behind this confidence is the state authority behind it. The states have established trust by means of regulations in the financial field together with the transition to the electronic money. Blockchain technology in crypto currency is the element that provides trust in this money phenomenon where there is no state authority. It is continuously stated that the blockchain technology, which forms the infrastructure of crypto currencies, has high security. On the other hand, the stock market and account books serving to crypto currencies are one of the important aspects of the security problem. In addition, since crypto currencies are not managed by any head office or institution, when there is a loss of the account password or when crypto currency is mistakenly transfer into someone's account there is no return of these transactions and there is no institution to apply legally. Additionally, since it is not regulated and audited by any authority, for instance, when an account in the Bitcoin stock exchange is stolen, the issue of what are the legal obligations of the stock exchange is still one of the controversial issues, and any legal legislation has not been developed.

The fact that the withdrawal and transfer transactions are carried out independently of the country's financial system increases the demand for crypto currencies. Particularly, it is preferred in transferring money abroad in the case of leaving a country for reasons such as a war or financial crisis.

In order that money can perform this function properly, its amount must be sufficient to make the exchange of goods and services in the economy without interruption. We can say that there will be some disruptions in performing this function due to the amount of bitcoin to be produced is limited. However, considering the increases in the amount and diversity of crypto currency, it can be stated that such a problem will not occur.

Speed is increasingly gaining importance in the information economy and it is becoming one of the most important areas of competition. Big fish can no longer swallow small fish; instead, fast fish can swallow slow fish (Jennings and Haughton, 2001: 22). One of the most important issues in money transfer is speed. Transfer of international funds by traditional methods takes 3-4 days. The speed is very high in crypto currencies and the speed difference between different crypto currencies is one of the main components of the competition. The Central Bank of Saudi Arabia has agreed with Ripple to make payments faster and safer. While Ripple states that it can done cross-border money transfer in 4 seconds, this transaction time for Ethereum is over 2 minutes. Another important difference of

Ripple is the presence of a head office and therefore presence of an addressee. This example also gives a clue as to the future of crypto currencies. That Ripple is more preferable in time due to this feature perhaps will pull other crypto currencies in this environment.

One of the most important criticism, related to the payment or transfer function of crypto currencies is about their use in illegal activities (World Bank, 2016: 98). Since the crypto currencies are open to money laundering, the restrictions in their use imposed by the states or the being asked that the accounts are named with real identities may decrease the demand for these currencies and reduce their values significantly. Many states and G20 have explanations on this issue.

When the status of the crypto currencies as a payment instrument is evaluated related to the function of money, at least, it can be stated that it cannot fulfill this function sufficiently for it has not been stabilized yet. In addition, the policies which are implemented by states as a strategy against money laundering and the use of illegal activities will reduce the demand for these currencies.

Another function of money is the saving. Undoubtedly, there are many assets outside the money that have the feature of saving, but the money has an important feature: The likelihood of losing value is close to zero. In fact, a security or real estate can also be used as a savings tool, but they may experience serious depreciation if they need to be quickly turned into cash. In other words, their liquidity degrees are low. As to money, as it is already cash it can be turned into cash without scarcely losing in its value. This feature makes money the most basic and important saving tool. That the money is able to be a good saving tool depends on its ability to maintain its value. The money whose value often changes and especially which lose its purchasing power begins to lose function as a good saving tool. Therefore, it is possible to state that crypto currencies may have difficulty in fulfilling this function due to fluctuations in the present value. The fluctuation experienced in the crypto currencies can be seen in figure 3.

Figure 3: Fluctuations of Bitcoin

Source: https://tr.investing.com/charts/cryptocurrency-charts

Another point to be considered at this point is whether crypto currencies will be classified as a currency unit or as an investment tool such as asset or commodity. Considering its first emergence, bitcoin can be expressed as a means of payment. In fact, the Nakamato does not mention anywhere in his article that bitcoin is an investment tool. He only mentions that it is a means of payment facilitating payment transactions at very low costs, and he explains its technological infrastructure (Erdinç, 2017). In spite of these explanations, it is seen that a value of crypto currency has been created in the market, even though an international consensus has not yet been achieved and legal regulations have not been sufficiently realized. In the current status, some countries regard crypto currency as goods legally and others regard as financial asset (Dilek, 2018: 28). Moreover, in some studies in which bitcoin is seen as a speculative investment tool or a

means of exchange or a wealth accumulation tool by some individuals who do not know anything about its function, it is concluded that bitcoin is seen as investment tool (Glaservd. 2014; Kristoufek, 2015; Back and Elbeck, 2015; Baur et al., 2017; Dorfman, 2017). Crypto currencies in the crypto money market unless identification problems and uncertainty are eliminated will continue to be dependent on the speculative movements, and it will be discussed in terms of clarity and security and in terms of financial stability continuity (Ceylan et al. 2018: 273).

In case crypto currencies are considered as an investment tool, it will be appropriate to identify the factors affecting their demand. The two main factors affecting the demand of an investment instrument are risk and return. Investors decide to invest by considering these two variables. Crypto currencies do not yield returns when considered in this respect. Bitcoin owners have control of all their wealth. Their wealth is not entrusted to any bank or financial system. Those who wish to earn interest yield from Bitcoin can transfer their Bitcoins to another Bitcoin address and may earn interest yield. However, this is a highly risky situation, and the sent Bitcoins are unlikely to be taken back except voluntary basis. For example; https://www.bsave.io/ yields an annual interest of 2.51% for Bitcoin. Bsave is operated by Coinbase, one of the world's largest and trusted Bitcoin exchange and account operators. The purpose of interest yield is to provide its own liquidity. Similarly, companies such as Bter, HaoBTC, BitBays, Bitcoincryptobank also provides different interest rates and investment options (Dean, 2015). However, if we pay attention the risk is very high in this area and it is not rational to carry out such an operation in order to yield interest income.

In this case it is possible to say that the purchase of crypto currencies for investment purposes can be preferred to provide capital return with a speculative purpose. Hence, there will be a return based on price increases. This makes crypto currencies, especially bitcoin, be speculative and unstable. On the other hand, another challenge for person who invest in crypto currency will be the determining the exit price for the investment. In case of investing in a country's financial instruments as traditional investment instruments, the economic and political risk of the country in question affects the value of the financial instruments and a price expectation is created with respect to this risk environment. That the crypto currencies are not associated with any central authority or intermediary institution eliminates this risk. However, that it is not dependent on any central authority can make it dependent on all countries where transaction volumes are high? Because the arrangements that different countries will make related to crypto currencies at different times will have important

effects on their values. One of the important issues discussed will be on the taxation of their returns if they are accepted as a goods or financial instrument. The differences that will arise between the implementations of countries regarding the taxation of the earnings depending on the both price change of the crypto currencies, and regarding earnings depending on mining will cause the activities related to this field to be different between countries. For example, the National Tax Administration of Japan imposes a tax rate of 15% to 55% on earnings in the crypto currency.

Another example related to differences in implementations of countries regarding crypto currencies is perspectives of Muslim societies or states on such a financial instrument. Although Saudi Arabia made an agreement with Ripple, the agreement is related to the payment system. Considering as an investment instrument, it is observed that fatwa institutions in Turkey, Egypt and Palestine do not accept crypto currency impermissible (Kaya, 2018: 15-17). On the other hand, Turkey Ministry of Religious Affairs, by pointing that money either should be valued by state authority or should have inherent value such as gold, made a statement that crypto currencies could not be considered as a currency.

The use of Bitcoin as currency, money transfer tool and digital payment system is defined as Bitcoin 1.0. The creation of all financial and economic applications technology such as bonds, bills or loans in the near future by using the Block-Chain is defined as Bitcoin 2.0 (Swan, 2014). For now, Bitcoin only can be bought, expended and saved in Bitcoin system. However, in Bitcoin 2.0, loans will be able to be borrowed, interest will be able to be yielded or a variety of rights will be able to be purchased in financial products. Companies can theoretically issue their shares directly through the blockchain by using the features of Bitcoin 2.0. These shares can then be purchased and sold in a secondary market located above the block chain (Hayes, Date not specified, a and b). Both banks and other financial institutions, which foresee these changes that are expected to be experienced in the future, have not excluded themselves from this technology; and they are increasingly investing in this area by showing their interest in these areas (Adkins, Date Not Specified).

It is also very important whether crypto currencies will be accepted as investment and debt instruments. In the context of this issue, it is also important to see whether countries will gain a profit if they create their own crypto currencies. A scenario analysis can be done via Turkey to clarify the issue at this point. For example, suppose that creation of crypto currency within the boundaries of the country is regulated by a legal arrangement and only Central Bank of Turkey

(TCMB) or another state authority supplies crypto-currency named Turkey-Coin. At this point, what may motive foreign investors and global portfolio managers to buy the Turkey-Coin? At this point, interest income comes to the fore. There is no widespread interest pay in crypto currencies around the world. The main reason for this is that crypto currencies are not used as the borrowing and lending tools. Therefore, since it cannot be mentioned about interest income in the current situation, the only motivation of investors for buying Turkey-Coin is to benefit from difference between the purchase and sale price of crypto currency. At this point, the benefit of Turkey which supplies the Turkey-Coin is to prevent decrease in the seigniorage income of Central Bank stemming from crypto currencies that are not in control of the state. In case any crypto currency outside government control reduces the demand for TL and the seigniorage income of Central Bank, Turkey-Coin may be engaged. Government entity which supplies Turkey-Coin such as TCMB will also generate seigniorage income.

That the Turkey supplies its crypto currency will benefit in terms of the real investments and economic growth / development. For example, many investment projects that cannot be funded under normal conditions or can be funded at high cost can be funded by bonds / bills issued in Turkey-Coin denominated. For example, many Turkish companies seeking funding for project financing may be able to issue bonds / bills in domestic crypto currency in the bond market. It can be said that financing cost of borrowing in TL denominated will be lower than borrowing in foreign currency, in case of financing with Turkey-Coin. At this point, not only the companies but also the Undersecreteriat of Treasury may issue in bills / bonds in Turkey-Coin denominated. This will give the Treasury a separate borrowing alternative and an opportunity to reduce borrowing costs. In addition, if the domestic crypto currency is used for borrowing purposes, the profit which is as far as interest rate of the crypto currency will also be yielded naturally. The providing of the Turkey-Coin interest return will also motive many foreign investors to buy Turkey-Coin.

Crypto currencies have various effects on the world economy. These effects can be listed as commercial, economic, financial political and tax effects. We talked about commercial, financial, political and economic impacts. Crypto currencies can be used for tax evasion. Tax evasion occurs unless the gains from the trading of crypto currency are declared (Ağan ve Aydın, 2018: 6-10).

2.2 CRYPTO CURRENCIES AND CENTRAL BANKS-MONETARY POLICIES

The central bank generates a very important seigniorage income by banknotes that it issued and noted. If the crypto currencies quickly supersede the banknotes in economies, the seigniorage income of central banks will reduce. This will be on the strategy practiced by both central banks and countries against crypto currencies.

As crypto currencies become more widespread and increasingly began to use for transaction purposes, there will be serious falls in the seigniorage income of central banks. The widespread use of crypto currencies will seriously damage the reserve money status of the global major currencies. As a result of this, there will be a serious decline in the seigniorage income of the major central banks together with using crypto currencies as reserve money in international and national business transactions. The reaction of the central banks and states to these decreases will be the determinant of the global monetary system.

A part of the seigniorage income created by the central banks depending on the monetization will pass to the miners who produce crypto currency. Mining refers to economic units that verify and record transactions. Miners ensure the security of the blockchain system and the realization of crypto currency transfers. By the cost that they bear and the transaction power that they provide, they get the crypto currencies into circulation in exchange for the system verification and registration service and thus they gain profit (Dilek, 2018: 18). The income obtained in this way can be compared to seigniorage income. The most important cost that miners bear is the cost of electricity. Since the most important element of the system is security, the system consumes very high levels of electricity. Because the lack of a central authority in crypto currency transactions requires the system to protect itself against attack and corruption and this task is carried out by miners and thus electricity consumption increases. This brings about the shifting of mining activities and investments to countries such as China where electricity prices are low. The fact that the activities related to crypto currencies increase the electricity consumption reveals that there are also environmental and social costs. It is stated that the increasing electricity consumption associated with crypto currency activities may lose its attractiveness due to global warming and environmental problems and even the system may collapse (Citigroup, 2017). However, it can be said that the amount of energy required by the system may decrease due to the changes in the technological area and the problem will decrease in time.

As time progresses and the decisive power of crypto currencies on the economic system increases, states will want to have control over crypto currencies. In other words, after a while, the states will begin to issue their crypto currencies themselves and will not allow other private institutions / individuals to issue crypto currency. The trend is likely to be in this direction. This will most likely be through either central banks or "Central Electronic Money Banks" established by countries. For example, the British Royal Mint has released its gold-based crypto currency. Thus, gold-backed crypto currency was put onto the market and steps were taken to eliminate the criticism that they have no monetary equivalent.

At this point, we can say that states and central banks have two options as response. The first option is the prohibition of crypto currencies. We can consider this option as "first best" if the prohibition attempt is successful. Because, provided that the prohibition attempt is successful, the crypto currencies will be eliminated and danger regarding seigniorage income loss of central banks will end. However, it is controversial whether this prohibition attempt will be successful in today's information age. If the prohibition attempt is unsuccessful, crypto currency will continue to be used in the global system and as a result, the state's monetary policy effectiveness will reduce. In addition, if a country prohibits crypto currency, the capital will began to flow towards the countries that do not prohibit them and these countries will gain advantage.

Monetary policy is the most commonly used instrument in economic policy (Doğan, 2005: 26). The effectiveness of monetary policy is very important for the stability of economies. The monetarists point out that money supply plays an important role in determining economic performance (Düzgün, 2010: 230). Maintaining price stability and financial stability are one of the most important goals of monetary policy. However, apart from the currencies that the central banks have officially released, the effectiveness of central banks on monetary policy will be largely lost if crypto currencies are widely used in the economy.

Since Bitcoin cannot expand the monetary base, there are also claims that this currency may cause serious deflation when used widely (McDonnell, 2015). However, this situation can be seen as a problem that can be overcome, or even is not expected to emerge due to the entry of new crypto currencies into the market.

The second option that can be applied by the state against crypto currencies is that the state supplies its own crypto currencies. In this case, even if there is a significant increase in the use of crypto currency, the state will be able to maintain its effectiveness on the monetary policy by taking it under its control.

When analyzing the future of the changes in the prices of crypto currencies, it would not be correct to disregard the policies of major central banks. Crypto currencies are competitors of classic banknotes. This means that the money supply decisions of major central banks will have a direct impact on the value of crypto currencies in the coming period. For example, there is a negative correlation between gold, silver and other precious commodities and US dollar. Besides, there is also causality between the dollar and the goods. The source of this correlation is the causality in question. Since the precious metals and other goods such as gold, silver are bought and sold with the US Dollar today, the price of these goods increases as the supply of the Dollar increases and its value decreases. When the supply of the dollar decreases and its value increases, prices of goods fall, except for the times when there is a risk of global war and conflict. While a similar causality and correlation may change over the long term, it will be valid at least for crypto currencies in short and medium term. That is, as the major central banks make monetary expansion and the supply of banknotes increases, the price of crypto currency will increase, because the crypto currencies are currently traded with these banknotes and as a more fundamental reason, they are rivals to these banknotes. While in times of monetary tightening, since the trust in the major banknote currencies will increase, the price of the crypto currencies will decrease.

CONCLUSION

Crypto currencies will be discussed in public and economic literature for a long time, because, it is an issue that will affect all the global monetary system due to its structure. Crypto currencies have various effects on the world economy. These effects can be listed as commercial, economic, financial political and tax effects. The existence of crypto currencies will have a significant impact on the global reserve money system as well as on the monetary policy effectiveness. In this case, the reaction of states to this process will be the determinant of global monetary system as analyzed in our study. Under the assumption that attempts to prohibit crypto currencies in today's technology age will most likely fail, there are high possibility to supply their own crypto currencies for states and central banks. Thus, states will be able to maintain their effectiveness on economy and monetary policy. It is difficult for Bitcoin and others, whose legal infrastructure is not yet established, to supersede the legally equivalent currencies in the short term. In the medium and long term, it seems that non-state actors who can shake up the monopoly power of central banks in monetization, will have the strategies to become partners of sovereignty of nation-states and then to implement their own

political forces. As a concluding remark, crypto currencies are seen as the future money.

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