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## **CREATING INCLUSIVE CITIES THROUGH THE SUCCESSFUL IMPLEMENTATION OF LAND VALUE CAPTURE IN SOUTH AFRICA**

**By F. Gethe, P. Simbanegavi and P. Ndlovu**

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### **ABSTRACT**

South Africa continues to experience fiscal constraints and economic contraction as a major hindrance to deliver infrastructure projects. Because the process is disintegrated, the aim of this paper is to recommend practical guidelines using planning gain investment and land tax theories on ways to guide the implementation of land value capture financing to fund infrastructure development by the South African local government to create inclusive cities. The study was conducted using the qualitative approach where semi-structured interviews were conducted with the aim to investigate the problems and challenges that deter the effective use of Land Value Capture (LVC) in South Africa, as well as to investigate concrete proposals and legislative amendments that are required to circumvent the current limitations that exist and emerge from the application of LVC. Interview data from local government experts helped the study to draw practical guidelines on how LVC can be used in an effective manner in South Africa. The relevance of this study lies on the premise that there is a dire need for the South African government to expedite infrastructure development that were once curtailed by apartheid systems in order to anchor the imperatives of inclusive cities as the economy grows and urbanisation ensues.

**KEY WORDS** Land value capture (LVC), Inclusive cities, Practical guidelines, Cost recovery, Infrastructure funding, Government affordability, Value creation, Public-Private-Partnership, Local government

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Faranani Gethe: School of Construction Economics and Management, University of Witwatersrand, Johannesburg, South Africa,  
Email: [faranani.gethe@wits.ac.za](mailto:faranani.gethe@wits.ac.za)  
Prisca Simbanegavi: School of Construction Economics and Management, University of Witwatersrand Johannesburg, South Africa,  
Email: [prisca.simbanegavi@wits.ac.za](mailto:prisca.simbanegavi@wits.ac.za)  
Pride Ndlovu: School of Construction Economics and Management, University of Witwatersrand Johannesburg, South Africa,  
Email: [pride.simbanegavi@wits.ac.za](mailto:pride.simbanegavi@wits.ac.za)

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## 1. INTRODUCTION

The developing world continues to experience rapid population growth, and this has had a dire impact on governments' ability to provide basic services for the average citizen (Tsoka, 2014). Adding to this, is the inevitable reality that is rural-urban migration which has increased exponentially in the past few decades. In fact, studies indicate that the number of people in urban areas in Africa is currently sitting at 472 million people; and that this number is expected to double in the next 25 years, averaging the urbanisation rate at 39% - with countries like Nigeria, the Democratic Republic of Congo, and Egypt contributing the most to the urbanisation rate (Blimpo & Cosgrove-Daves, 2019). With this growth, comes an urgent need for cities to develop quality infrastructure that will accommodate this anticipated growth. The problem, however, lays in the fact that the traditional funding mechanisms tend to fall short of this current demand for infrastructure projects which are in dire conditions in the typical African city.

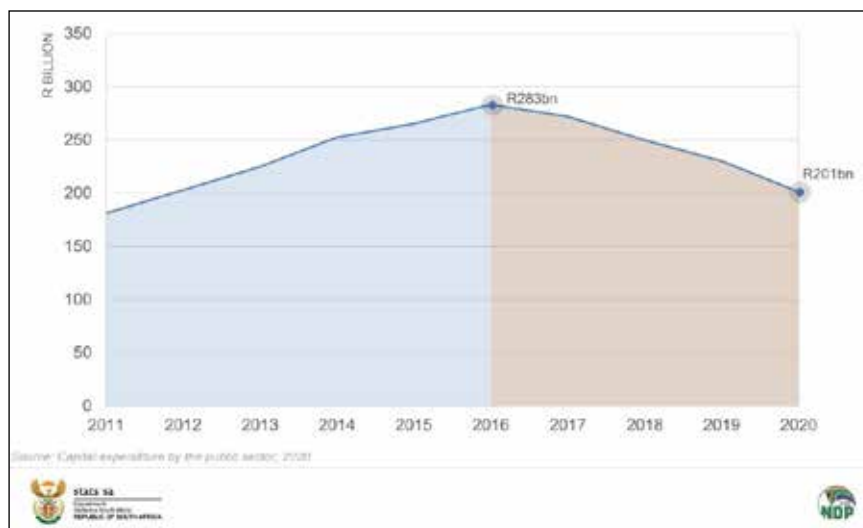
As the global economy declines, South Africa revises its public expenditure as tax revenues are negatively impacted. The fiscal constraints are not unique to South Africa and according to Commonwealth of Australia (2016), these fiscal constraints restrict investments that are funded through government tax revenues. This results in a huge demand for the provision of infrastructure with only minimal traditional funding means that can meet this demand. The fiscal constraints are a major hindrance towards implementing many global infrastructure projects and the inflow of the rural population into already over-crowded urban areas is hampering local authorities to provide adequate infrastructure and inclusive cities.

This raises a pertinent question regarding government's affordability and capacity to fund infrastructure projects for the much-needed development to create inclusive cities. Land Value Capture

(LVC) is about identifying value created by new infrastructure development, linking it to the accrued costs of development. This concept assists governments to deliver infrastructure projects through a more objective model. The proceeds of value created should be specifically utilised for infrastructure development. Better understanding of the relationship between projects and beneficiaries can improve land use planning policies and infrastructure investment by government (Commonwealth of Australia, 2016) and new infrastructure developments such as railway lines, hospitals, schools, and road networks create increased value to surrounding properties (Berrisford et al. 2018).

The South African Budget Review 2019/2020/2021/2022 confirms that the South African economy continues to contract with tax revenues declining by great margin. According to National Treasury (2019), the country's economy was projected to grow moderately from 1.5% in 2019 to 2.1% in 2021; however, the Covid-19 pandemic deterred this and, instead, resulted in the plummeting of the economy to -6.43% in 2020 (Statistics South Africa, 2020). These poor performances have resulted in tax revenue shortfalls of approximately R213.2 billion in the 2020/2021 financial year (National Treasury, 2021). According to Figure 1, all of these resulted in total public sector capital expenditure decreased by 29% in 2020 compared to 2016.

**Figure 1: Capital expenditure decreases by the South African government from 2016-2020.**



Source: Statistics South Africa (2020).

These challenges have resulted in government applying significant budget cuts on their expenditure sheet which has had a direct impact on public infrastructure funding. This, in turn, compromises the quality and sustainability of infrastructure which directly affect the general communities that rely so much in this public infrastructure (Groot et al., 2012). As shown by Figure 1, the national capital expenditure has been decreasing between 2016 and 2020. As part of the 2019 budget priorities, government resolved to stimulate growth by strengthening public infrastructure investments; however, government remains under pressure to fund infrastructure projects that are the backbone for the country's overall development. In this case, LVC can be effectively used by cities to fund infrastructure projects given the budget constraints that are experienced by the South African government. The desired growth of the economy will require extraordinary intervention by government. Chigbu (2021) recommends a local self-governance of cities with less interference from national and regional governments, allowing city administrators and their residents to develop visions and implement activities to fulfil the specific needs of their city through land-

based methods. This way, investment from the private sector should be further encouraged to aid the improvement of infrastructure-projects implementation.

McGaffin et al. (2019) argue that inadequate infrastructure investment has failed to adequately address the developmental challenges that have been worsened by historical inequitable urban planning regulations, hindering the creation of inclusive cities. One of the main contributors of insufficient provision of infrastructure by local government is the continuous decline in revenue sources and rising operational & expenditure costs (McGaffin et al. 2019, South African Cities Network 2016, 2015 & 2011). The empirical consequence of the problem is that municipalities are failing to address the much-needed infrastructure to create inclusive cities in previously prejudiced areas that experience rapid urbanisation and poor maintenance of existing infrastructure.

## **2. INFRASTRUCTURE INVESTMENT**

### **2.1. Contributor to Economic Growth**

Globally, infrastructure development is known as a key factor for economic growth and because of this, it is a tool to alleviate poverty, unemployment, and other socio-economic injustices that pester society (McGaffin et al. 2019). Furthermore, infrastructure development serves a critical role in nation building and economic stability, development, inclusivity and sustainability (Scientific Council for Government Policy, 2008). McGaffin et al. (2019) further states that, traditionally, governments have been the primary provider of infrastructure around the world- and even though there has been lot of public-private partnerships (PPPs) around the world, governments remain the primary provider of infrastructure development. Van der Waldt (2018) concedes to the idea that infrastructure development plays a critical role in economic development, and that rapid urbanisation of sub-Saharan African cities places pressure on

cities to provide sufficient infrastructure & services to its populations. Vukeya (2015) expands this notion further, stating that for emerging economies to experience significant economic growth, infrastructure investment equivalent to 25% of gross domestic product (GDP) is required; but with South Africa having so many socio-economic challenges carried over from the colonial and apartheid eras, it is almost impossible to have infrastructure investment equivalent to 25% of GDP. It is, therefore, imperative to explore other avenues in South Africa that will be able to fund infrastructure investment equivalent to the said 25% in order to meet the socio-economic goals that will curb the soaring unemployment and poverty levels.

### **2.2. Traditional method of funding Infrastructure Investment**

In an attempt to forge economic growth, the South African government has, in recent years, set up various economic and social infrastructure investment programmes (South African Cities Network 2020, Vukeya, 2015.), however there has been a persistent decline in the global economic growth which is evidence that a lot needs to be rectified (Rai & Rawat 2022). Literature reveals that the root of the challenges of the programmes that exist lies mainly in the funding model, hence the low produce of infrastructure in South Africa. Gong et al. (2021) emphasizes that conventional revenue resources seem inadequate to respond to the increasing need to provide infrastructure around different economies, and these findings reinforce the importance of having alternative funding models such as LVC to relieve pressure off the already burdened traditional method.

### **2.3. Status of SA Infrastructure Investment**

According to the South African Cities Network (2016, 2015, 2011), the sphere of government largely responsible for social & economic infrastructure development is local government. Local government

is funded from revenue collection, and national government transfers based on the Division of Revenue Act. The ability of national government to fund local government through national transfer is constrained by the decline in economic growth and government's reduced tax revenue collection (McGaffin, 2019 and Vukeya, 2015). The funding constraints places pressure on cities to do trade-off between infrastructure investment for economic development & re-dressing historical imbalances (McGaffin et al. 2019). Amid all these challenges, South Africa continues to battle with aging infrastructure and insufficient infrastructure development, which perpetuates the challenge of infrastructure development.

## **3. THEORETICAL UNDERPINNINGS; UNDERSTANDING LAND VALUE CAPTURE**

### **3.1. Introduction**

This paper explored two theories to understand the concept of Land Value Capture and how it can be used by cities to fund infrastructure development for the creation of inclusive cities. The first theory explored is the "Planning gain theory" which is the anchored on the fact that improvements on the land or change in land rights always increases the value of the land. The second theory explored is the "Henry George single tax" which anchored around shifting all taxes to land value, he suggests that all other taxes such as income, capital, etc should be stopped. The unearned land value increases should be captured and be distributed for the public benefit.

#### **3.1.1. PLANNING GAIN THEORY**

LVC is a concept developed from the theory of 'planning gain' where private developers cannot recoup sufficient returns on their investment unless developers upgrade public roads and water supplies to service surrounding areas as well as their own development (Higgins, 2019). Simbanegavi (2019) acknowledges this notion, that planning

gain theory assumes that there is an increase in land value resulting from land rights granted for that land accruing to the landowner. A levy or tax may be applied to divert some of the planning gain for redeveloping the area. Higgins (2019) found uplift in value for properties due to transport infrastructure upgrading in the United Kingdom. This concept is similar to 'Tax Increment Financing' (TIF) by which approved development companies use the concept of 'value capture' to redevelop deteriorated neighbourhoods (Squires and Hutchison, 2014). According to Scopus database LVC was first introduced into literature around the 1970s in the article titled *Suburban Land Appreciation and Public Policy* which was published in the Journal of the American Institute of Planners. According to Allan Schmid (1970) the land market value in the United States of America doubled between 1956 and 1966, where the total value moved from 269 billion US dollars to 523 billion US dollars over this 10-year period. This increase was not related to increase in general price level, but to changes linked with land use rights.

### 3.1.2. HENRY GEORGE SINGLE TAX THEORY

Henry George contends that economic decision-making should not exclusively consider the economic dimension, but should also encompass a moral component. He posits that individuals who derive economic benefits solely from land ownership have a moral obligation to contribute to the broader public good. George's central thesis revolves around the concept of unearned value inherent in land, which, in his view, should be harnessed for the betterment of public development. In pursuit of this objective, he advocated for what is commonly referred to as the "Single Tax" proposal. This proposal entails the cessation of all other forms of government taxation, such as income and capital taxes, with the exclusive utilization of land taxation for the purpose of promoting public welfare.

The concept of Land Value Capture aligns seamlessly with George's

theories. It revolves around the idea that the incremental increase in land value, which is influenced by public interventions, should be systematically harnessed and directed towards serving the public's interests and development.

### 3.1.3. VALUE CREATION

Gong et al. (2021) states that value created can be determined by linking land value increment with initial investments, and the difference lies in capital gains derived from public improvements. Infrastructure gives most perceptible and tangible benefits to its users and can be translated as value created. In addition, the relationship between land value and the type of infrastructure is directly proportional. Value creation occurs each time when an action where the benefits exceed the costs are taken (Slegtenhorst, 2013). According to Ontario (2010) value is an individual's perception of the production and the appetite to pay for the gains that come with the product. Take for instance a railway infrastructure project; this type of project possesses the benefit of improving access to public transport to the local citizen. The land value of surrounding properties in that area will increase because the newly developed railway infrastructure increases convenience in terms of access to the neighbourhood and will also most likely attract the investment of supporting land uses; all of which contribute to the increase in land value.

### 3.1.4. LAND VALUE CAPTURE INSTRUMENTS

Following the dynamics discussed surrounding value creation, it is imperative to then delve into understanding what needs to be put in place to ensure that the value created is now captured.

Value capture can be defined as the process of claiming value that has been created by the action performed during value creation, of which Offermans & van de Velde (2004) state that there usually exist different instruments that are used

to capture this value. Gong et al. (2021) goes on to say that local authorities should accept the responsibility of capturing value as a critical approach in obtaining value created. The approach of capturing should be clearly outlined and implemented to ensure maximum capture of capital gains (Gong et al. 2021, McGaffin et al. 2013, Medda 2012).

There are instruments used to claim a share in the resultant value increase of land and property directly or indirectly (Offermans and Van de Velde, 2004). The idea is that the claimed back funds can be used to fund more projects and stimulate developments. The relevant success of LVC is seen through the case studies of Hong Kong and Shenzhen, where railway stations are developed through "Rail Plus Property Model" which is also referred to as the R+P model (Gong et al. 2021). This LVC model operates in such a way that the land parcels around newly developed railway stations are exclusively granted to the government agency responsible for implementation of development at a 'before rail' price and then sold to private sector developers at an 'after rail' price. The difference in the two prices is that the value captured is used to cover some of the development costs which could not have been covered by the project's allocated funds. The successful use of this model by both Hong Kong and Shenzhen can be clearly measured by its high-quality train services and relatively low fare price (Gong, et al. 2021). Some of the LVC mechanisms highlighted in literature include developer contributions, betterment levies/tax, property rates and major beneficiaries' contributions.

- **Developer contributions** is a tool mainly used by local government where the developer pays a once-off fee as a condition of development permission or rezoning (Commonwealth of Australia, 2016; Offermans & Van de Velde, 2004). Payments from the market are usually designed to recoup cost of infrastructure

(roads, sewer lines) related to the development.

- **Betterment levy or property rates** are recurrent payments by landowners regardless of new development status charged by local government (Medda, 2012). The recurring payments charged are highly dependent on the nature of land or property value, thus, property rates are area and value based.
- **Major beneficiaries' contributions-** This concept is accurately coined by Medda (2012), who explains that the major beneficiary contribution tool is negotiated between the developer (government) and those parties that benefit significantly from a project. An example includes cross rail in London, England where major contributions came from Canary Wharf Group, Heathrow Airport, and Bekerly Homes. The gains transferred to end users of the infrastructure are the most significant indicators of value created. LVC presents benefits gain for both end-users and public office, where end-users or beneficiaries enjoy the value created while public office is subsidized for infrastructure financing.
- **Tax Increment Financing (TIF)** involves debt funding raised against the future anticipated increase in rates and tax collection which would be as a result of the infrastructure improvement in that specific geographic area (McGaffin et al. 2019). This mechanism has been popular in the United States of America, where local authorities estimate revenue/ value increases from LVC projects and use that value to issue bonds for private sector investments. TIF's reliance on rising property values after infrastructure investment makes it simpler

to link beneficiaries and value created, correct beneficiaries pay for the value. As Medda (2012) pointed out, the development of regulations following the LVC concept in the United Kingdom, the Garden City at Letchworth (1903), and the Milton Keynes Development Corporation (1967) where land value arising from residential development were reinvested in local infrastructure developments.

### 3.1.5. INCREASED TAX BURDEN

The property industry in Australia has shown discomfort with the value capture concept when first introduced and it was argued that it was just another tax burden on developers and end users (Commonwealth of Australia, 2016). Gong et al. 2021 acknowledges this idea and further adds on to state that stakeholders may view LVC more as a tax burden. It is, therefore, critical to have stakeholder engagements as a prerequisite to ensure support from stakeholders, objective and interests need to be clearly defined (Gong et al. 2021).

### 3.1.6. IDENTIFYING THE BENEFICIARIES OF THE LVC PROJECT

According to Commonwealth of Australia (2016), developing a value capture strategy becomes challenging in identifying and measuring those who will benefit from the project being delivered. The identification of relevant beneficiaries is critical in implementing LVC projects. This is essential because it mitigates the risk of claiming value from incorrect beneficiaries while simultaneously denying those who actually need to benefit from the said project. For effective capturing, it is imperative to separate direct and indirect beneficiaries, and to ensure a clear comprehension of different beneficiary groups as result of that specific public action (Commonwealth of Australia, 2016)

## 4. RESEARCH METHODOLOGY

For this study, data was collected through semi-structured interviews from municipal experts on policy making, property development, planning and infrastructure delivery from the study areas: the City of Johannesburg as well as the City of Tshwane. Alshenqeeti, (2014) & Buharein, (2008) define *interview* as a dialogue between interviewer (researcher) and interviewee (the individual who essentially contributes to the data). The purpose of conducting interviews is, mainly, to expand the body of knowledge that already exists. This is because the knowledge harboured by individuals may, to a certain degree, be knowledge that has not been revealed yet and will thus expand the body of knowledge that exists and may even go as far as contributing to the conception of new theories that could have an incredible impact on the research question and problem statement.

The study conducted semi-structured interviews with 10 different participants with significant experiences in the South African local government (municipalities), planning, infrastructure delivery, finance, and municipal policy. The participants were purposefully selected based on the relevant knowledge and experience on the subject matter. The time taken to complete each interview averaged at 45 minutes, and the interviews were conducted via Microsoft Teams. All the interviews were recorded, and the function of transcription was used to translate all voice sound into written conversations. All ethical considerations, including permission to conduct interviews at the two metros, signed consent forms from participants were followed.

### 4.1. Data Analysis

This study adopted thematic analyses to analyse the data with the aim to make recommendations on practical guidelines towards better implementation of LVC. Thematic analysis is a method for analysing qualitative data that entails

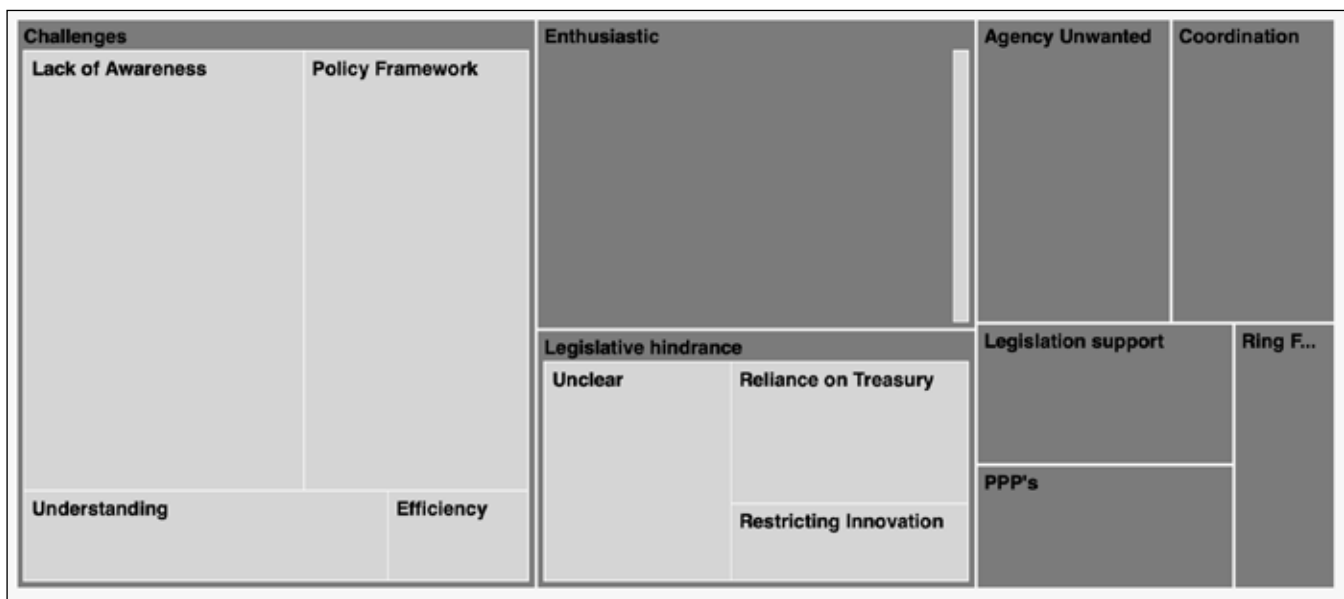
searching across data sets to identify, analyse, and report repeated patterns (Braun and Clarke, 2006). Mohammed (2012) defines this as a process of interpreting data by developing codes and themes found in the data and states that it is suitable in generating theories. The choice to use thematic analysis is informed by the nature of study a researcher is undertaking; for example, “an inductive or deductive study that needs an interpretation of qualitative data” (Saunders et.al 2016). Thematic analysis is, therefore, appropriate in studies that aim to understand the current practices of the organisation, event, individual, et cetera. In this study, thematic analysis was used to interpret and analyse data from semi-structured interviews using NVIVO (2020) software.

## 5. ANALYSES, FINDINGS, & DISCUSSION

### 5.1. Introduction

The findings that emerge from this section were from interviews conducted with 10 participants employed in local government, whose roles and functions are within the confines of development planning, infrastructure delivery, finance, and municipal policy. Figure 3 below depicts the main themes that arose from the interview data sets which were analysed using thematic analysis on NVIVO 2020 Software.

Figure 3: Results found from the semi-structured interviews. Compiled by Author (2022).



### 5.2. Challenges

From the semi-structured interviews, the theme of **challenges** in implementing LVC was the most prominent theme as it resembled highest coding references than all other codes. The results indicate that 'lack of awareness' of the LVC concept in the local government space is the major challenge deterring effective implementation of LVC. A reference from *Participant 1* reads as follows “... so for us, it's quite a new concept. It's a coincidence that I'm doing this interview now because I think a couple of weeks ago my line manager sent me an invite to a webinar...”

Another participant stated that “...we have been exploring alternative sources of funding, but LVC was not a part of those things.”

The references from these two participants confirm that there is a general lack of awareness regarding LVC. Following this is the lack of policy framework, where more participants emphasised the lack of municipal policy framework as a significant challenge deterring effective implementation of LVC. The last two identified challenges are lack of understanding and efficiency of municipalities in the order of their prominence respectively.

### 5.3. Enthusiastic

*Enthusiasm* is the theme with the second highest references. Participants have shown a level of eagerness and willingness to expand their knowledge on LVC which will then lead to the effective adoption LVC in local government. One participant, for example, indicated their keenness to explore LVC as a possible means of an alternative source of funding.

The theme of enthusiasm came unexpectedly as the study initially did not intend to investigate the willingness of municipalities to further explore and adopt the LVC method.

#### 5.4. Legislative Hindrance

The results obtained reveal that there is an element of legislative hindrance in implementing LVC by South African municipalities. The legislative hindrance theme had the third highest number of references.

The analysis shows that often the legislature is unclear on LVC implementation, and in fact, there is minimal information on legislature that speak directly to LVC. The results also indicate the over expectation on National Treasury in implementing LVC other than municipalities. Municipalities have limited power to act on their own without constantly obtaining approval from National Treasury.

The last legislative hindrance that emerged from the findings is the restriction of innovative ideas. LVC as a concept is very versatile. With this said, different and innovative approaches to implement LVC can be explored; however, the current legislations are quite rigid and leave very little room for the innovative implementation of LVC.

#### 5.5. Agency Unwanted

A significant number of participants are of the belief that new agency within municipalities dedicated for the implementation of LVC is not necessary, which indicates that to them, the introduction of new agency within municipalities is most likely not the ideal solution to the successful implementation of LVC.

#### 5.6. Coordination

LVC is a multi-disciplinary concept that requires coordination from different interlinked departments within the municipality. For example, for the concept to work to its optimal potential, it will require departments such finance, planning, and the infrastructure department working together to realise this vision.

Thematic analysis reveals that there is poor coordination between different

disciplines of the local government. Different disciplines are either not communicating with each other or communicating ineffectively. Strong coordination between relevant department is part of the important aspect in implementing LVC effectively and without it, the implementation of LVC will most likely fail.

#### 5.7. Legislative Support

The data collected indicate that the current South African legislation allows for the implementation of LVC, however, the legislation is unclear. Participants have indicated that there is no legislation that exists that averts the use of LVC in South Africa. The issue is that the legislation speaks less about the concept and, at times, does not refer to this concept at all.

Participant 11 spoke directly to this theme stating: *“...and maybe then maybe there’s a gap, but I’m not convinced that, like I said, the first immediate thing is to create specific legislation. I think we need to refine the current instruments to better capture the value.”* This statement clearly reinforces the idea that current legislation doesn’t avert the implementation of LVC.

#### 5.8. PPPs and Finance Ring Fencing

Thematic analysis shows PPP’s and Finance Ring Fencing as one of the nodes that the interviewees highlighted as the least prominent, yet important. Participants emphasised on the role of PPP’s model in implementing LVC successfully. Participant 5 made an example using Hatfield- a suburb in the CoT- as a good example of successful business improvement district. They further went on to state that *“...the reason why Hatfield is thriving is not only because of government but the partnership with private sector...”* This verifies that PPPs are considered as an integral part in implementing LVC successfully. Finance Ring Fencing is a finance phenomenon where funds generated from a specific type of revenue

is set aside to only be used for certain defined purpose. In this study, it refers to funds being generated from LVC to only be dedicated for infrastructure development and delivery. For the realisation of successful implementation of LVC, participants are suggesting that the value generated from land value increase should be ring fenced for the use of infrastructure development & planning.

### 6. CONCLUSION ON IMPLEMENTATION OF LVC IN SOUTH AFRICA

The results indicate significant challenges and legislation shortcomings experienced by the South African local government in implementing LVC effectively. There are significant inconsistencies between how LVC is being currently implemented and what the interview data appraises it to be. It can thus be concluded that the use of LVC to deliver infrastructure is still hazy and fragmented to guide its successful implementation by municipalities. There remains a considerable amount of work to achieve the ideal criteria for a successful LVC.

The study reveals a significant number of challenges such as lack of awareness, understanding, policy framework, efficiency, coordination, and legislative hindrance as the major problems deterring the successful implementation of LVC. These findings confirm the claims made in the literature review concerning the ‘lack of awareness & understanding’ by McGaffin (2019; 2013). This study’s findings on ‘Finance-Ring-Fencing’ conflicts the finding of Hickey-Tshangana (2011) who found that the South African National Treasury prohibits municipalities from implementing income ring-fencing. This study concludes that Finance Ring Fencing is crucial for successful implementation of LVC as claimed by McGaffin et.al. (2019) and it is not prohibited by legislation as found in the interviews conducted. The study further conflicted with literature on LVC agency. Literature review had envisaged LVC agency as one of the guidelines

towards successful implementation of LVC by local government in South Africa, but the results obtained concluded that LVC agency cannot be a solution towards successful implementation of LVC.

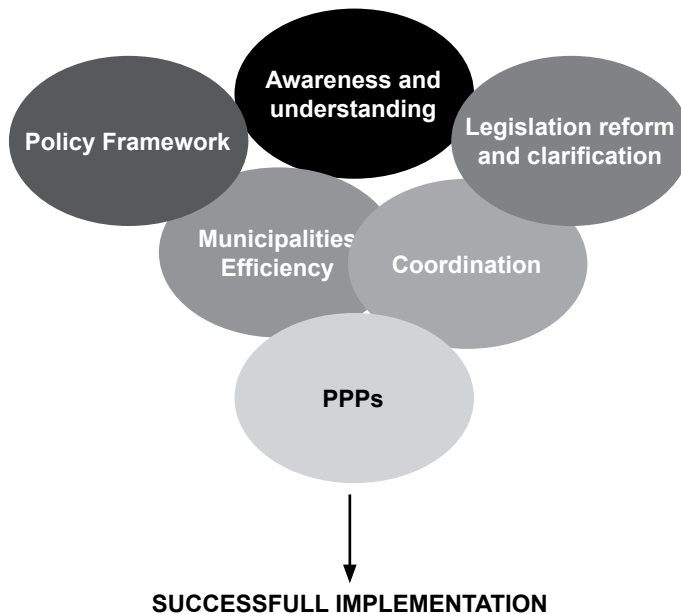
The study reveals that the current limitations of applying LVC can be circumvented through the elimination of challenges by taking necessary steps to remove these challenges. Most challenges limiting the successful use of LVC are anchored around the implementation processes & legislation. In support of the claims made by McGaffin (2013), legislation in its current form does allow the implementation of LVC, however, it is unclear and too silent. Legislative reforms and amendments that allow for clarification, specificity & intentionality around LVC should be seriously considered. The integration of LVC into municipalities infrastructure delivery plan will ease a lot of the pressure from government.

**7. PRACTICAL GUIDELINES TOWARDS SUCCESSFUL IMPLEMENTATION OF LAND VALUE CAPTURE IN SOUTH AFRICA.**

It is, therefore, recommended by Figure 4 below that the sustainable development of inclusive cities can be ensured by implementing these practical guidelines:

- LVC requires an investment in awareness and understanding.
- Municipal policy framework on LVC and other legislations should be introduced, and existing legislation that touched on the LVC concept should be amended so that the concept can be clarified and emphasised.
- There is need to promote efficient coordination between local government departments.
- PPPs should be further promoted and prioritised.

**Figure 4: Guidelines towards successful implementation of LVC in South Africa.**



Compiled by Author (2022)

**8. RESEARCH CONTRIBUTION & FUTURE RESEARCH**

The study contributes by bringing a solution to an infrastructure funding gap problem in South Africa, and the solution to this problem is put forth in the practical guidelines towards the successful implementation of LVC as an alternative funding mechanism. Existing literature focuses more on the justification and need to use LVC, but little research exists on how to implement it successfully. These results demonstrate that there is important element about implementing LVC successfully which has not received enough attention. The justification and need to use LVC is imperative, however, the “how” part is equally important and the practical guidelines towards successful and effective use of LVC is equally crucial. This study agrees with the existing literature in relation to how LVC can be an alternative funding mechanism to ease pressure from government budget and further contributes to the body of knowledge by investigating challenges that deter effective use of LVC and how these challenges can be circumvented. Practitioners of local government can practically and easily adopt the recommended guidelines to better implement LVC in South Africa.

The study is limited in a sense that it only considered two metropolitan municipalities in south Africa, and the findings could differ with other metropolitan areas. The study recommends that future research should focus on land value deterioration/ destruction in South Africa and how local government is addressing this issue. Another future research focus should be on municipalities efficacy & capacity to solve the problem of inefficiency that exist across South African municipalities. Further research should also focus on the relationship between South African National Treasury and municipalities in relation to LVC implementation

## **9. FUNDING, CONFLICT OF INTEREST AND ACKNOWLEDGEMENT**

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