RETHINKING THE CAPE TOWN PROPERTY DEVELOPER:

Understanding the local developer's perspective of the City of Cape Town Municipality and comparing this perspective to local Transit-Orientated Development policy constructs of the developer.

Mohammed Perwez Abdullah
ABDMOH020

A minor dissertation presented to the Department of Construction Economics and Management in partial fulfilment of the requirements for the degree MSc in Project Management

October 2020

DECLARATION

1. I know the meaning of plagiarism and declare that all the work in the document, save for that which is properly acknowledged, is my own.

2. This thesis/dissertation has been submitted to the Turnitin module (or equivalent similarity and originality checking software) and I confirm that my supervisor has seen my report and any concerns revealed by such have been resolved with my supervisor.

3. I have used the Harvard convention for citation and referencing. Each significant contribution to, and quotation in, this dissertation from the work, or works, of other people has been acknowledged through citation and reference.

4. I have not allowed, and will not allow, anyone to copy my work with the intention of passing it off as his or her own work.

5. I hereby grant the University of Cape Town free licence to reproduce for the purpose of research either the whole or any portion of the contents in any manner whatsoever of this dissertation.

Signature:

Signed by candidate

Date: Saturday, 17 October 2020

ABSTRACT

Purpose – This dissertation investigated the degree to which the City of Cape Town understands a 'notional' Cape Town property developer within the Transit-Orientated Development ("TOD") context. This dissertation is not meant to draw a distinction between a right or wrong model of a local property developer, but to investigate what a richer model would look like using alternative economic perspectives that capture the multiplicity of reality and possible TOD policy implications.

Design – A literature review was undertaken to understand institutional and behavioural economic frameworks, how each framework relates to the property market, and how to use the frameworks to assist in defining a developer. Further research was conducted to consider the property development process from the perspective of the Complex Adaptive Systems (CAS) framework. The property developer as an actor within the property market was then deconstructed. Alternative approaches to local government involvement in the development industry and the developer's perspective on TOD was also explored. A qualitative, semi-structured localist interview was conducted with nine major developers operating in Cape Town. They were selected because they are likely to participate in catalytic TOD-type projects. The interview aimed to understand their world view and how their lived experience relates to the City of Cape Town municipality.

Findings – There is a 'definition gap' between how the City of Cape Town has defined a developer and the findings of this dissertation. Policy implies a developer has perfect decision-making qualities pursuing maximum profits, whereas this dissertation found that developers tend to be focussed on risk reduction and exhibit satisficing and loss-averse behaviour. There are also those who prefer to build and hold a portfolio of rental properties which are not defined in policy. This type of developer possesses a different outlook and investment behaviour than the one defined in the TOD Strategic Framework. The City of Cape Town does not appreciate its positioning within and its influence on local property market dynamics, as it relates to the 'rules of the game'.

Practical Implications – Without understanding these distinctions, developers may not necessarily, predictably and readily respond to any TOD incentives and levers as set out in the Framework, resulting in policy perpetuating the very spatial inequalities and *status quo* the City of Cape Town aims to redress.

ACKNOWLEDGEMENTS

I would like to thank my wife for her endless support and patience during my dissertation researching and writing.

I would also like to thank my supervisor, Professor François Viruly, for his sage advice, guidance, direction, and for his availability, even during his train journeys through South Africa.

Contents

List of Figures

"You see, very few things in life are black and white—there are layers, nuances, hidden patterns to most things you will encounter in life. It's true that Christopher Columbus was one of the great explorers of history who single-handedly changed the course of the world, but it's also true that he was an enabler of slavery; by most metrics Bill Clinton was a successful president, but he was also a sexual predator—both realities co-exist, in both cases."

Catilin Long, 2018

CHAPTER 1

CHAPTER 1: PROPOSAL

1.1 Introduction

There have been many global studies examining the effects of transit investments on private property prices. In particular, and most often, how an *increase* in private property prices can justify 'capturing' a portion of the value increment, in what is known as, 'Land Value Capture' or "**LVC**".

LVC is an approach in terms of which a public authority can 'capture' private land value increases, arising from public or government investments. This captured value can be used to offset the costs of the government investment or be used to fund the general fiscus.

This dissertation does not conduct a deep analysis of the concept of LVC in South Africa, in terms of which plenty of research has already been conducted, which examines various of the main components of LVC. That said, one key aspect of LVC has yet to be thoroughly interrogated. That is, what is required, in the first instance, *before* the private market can react to a public investment, and what local government can do to ensure that certain prerequisites are achieved for property value increments to be maximised and properly reinvested. It is posited that only once such prerequisites are understood, facilitated, and secured, can the LVC tool be effectively utilised.

This dissertation therefore focuses on this component of LVC, and sets out to define these prerequisites; particularly, those prerequisites required for private property developers in a Transit-Orientated Development (TOD) context to be incentivised to participate in, or to implement developments and reinvestments from within this context.

In doing so, this dissertation relies on the City of Cape Town ("**CCT**") as a local government case example, and seeks to define the specific prerequisites required in order for developers in Cape Town to be incentivised to carry out developments, operating within the perceived policy confines of the CCT's recently adopted Transit Orientated Development ("**TOD**") Strategic Framework (the "**Framework**") (CCT b, 2016). In many ways this dissertation seeks to understand

and to 'construct' a notional Cape Town property developer (Adams, Croudace & Tiesdell, 2012) in a TOD context.

1.2 Understanding the TOD Strategic Framework

The Framework is primarily a policy mechanism to implement TOD in Cape Town. It is also an exploration of possible tools and mechanisms to be used by relevant stakeholders who have a collective impact on the urban form so that the CCT's built environment becomes more sustainable, compact and equitable.

The concept of TOD

The concept of TOD originated in North America during the 1980s as a form of 'New Urbanism', New Urbanism is a response to the growing negative effects, including the "proliferation of sprawling, mono-functional spatial patterns" (Bickford, 2016: 13), of placing the private car at the centre of city development, while ignoring the end-user (Carlton, 2007). New Urbanism is a planning and development approach based on the principles of how cities and towns had been built for the last several centuries. That is, with walkable blocks and streets, housing and shopping in close proximity, and accessible public spaces. In other words, New Urbanism focuses on human-scaled urban design (Wilkinson, 2006 and Carlton, 2007). To ensure that this form of urban growth is sustainable, there must be less reliance on access to private automobiles, and more support for and dependence on public infrastructure and non-motorised transport options. Consequently, to support and drive dependence on public transport infrastructure and human-scaled mobility, development (SAPOA, 2016)) must be synchronised with and complement public transit infrastructure such that commuters' lifestyle choices are positively affected.

Bickford & Behrens (2015) observe that car dependency is increasing in South African cities and that apartheid spatial planning persists, thus contributing towards inequality. African and Coloured townships are reliant on walking or public transport for carrying out daily activities and inhabitants cannot afford a private car. This "'captive' transport user" (Wilkinson, 2006: 228) is usually found at the sprawling fringes of the city, forced to endure long journey times and a disproportionally high cost. (City of Cape Town b, 2016).

If the genesis of TOD lies in creating human-scaled and human-centric development with less reliance on the private car, then TOD offers a "potentially useful concept to drive the restructuring of South African socio-spatial patterns." (Bickford & Behrens, 2015: 375).

The Framework defines TOD for Cape Town based on principles and not discrete pre-requisites. The core TOD principles for Cape Town are defined below:

1. Affordability – reduce the cost of public transport to commuters and the cost of providing public transport to the city.
2. Accessibility – facilitate equal access to social and economic activity through strategic urban development and the provision of safe public transport.
3. Efficiency – provide an environment and level of service that reduces trip lengths and dependence on private vehicles.
4. Intensification and densification – manage the desired form, composition and location of urban development conducive to affordable, accessible and efficient public transport.

It is interesting to note that the principle of affordability only applies to public transport and not to housing.

The Framework is placed at the centre of the CCT's future spatial urban growth planning and recognises the interplay between transit and urban development, its effect on the urban form, and how these two levers can be used to create optimised movement patterns that influence the urban landscape efficiently and sustainably to reduce social and economic inequalities (City of Cape Town b, 2016; City of Cape Town c, 2017). The Framework also recognises that in order to improve efficiency and sustainability and to reduce inequality through transit and urban development, property development must be compact, walkable, and transit supportive (Rodriguez, Vergel-Tovar & Camargo, 2016) and must be able to support the costs of implementing TOD and to fund transit operations.

South African cities face considerable hurdles in achieving this type of property development. Such hurdles include a considerably overburdened national fiscus, historic inefficient land-use patterns, inefficient transport behaviour (Scorcia & Munoz-Raskin, 2017) and ailing rail infrastructure (Bosch, 2018). Cape Town is no exception, with all these factors conspiring against the successful implementation of TOD.

The graphs below depict population densities of emerging-economy cities in South America against those cities' Bus Rapid Transport revenue's proportional fare coverage of operating costs. The City of Johannesburg is included as a proxy of South African metropolitan cities and clearly indicates that the sustainability of TOD (of which BRT is an important transport mode) transport is highly dependent on population density, particularly around transit nodes.

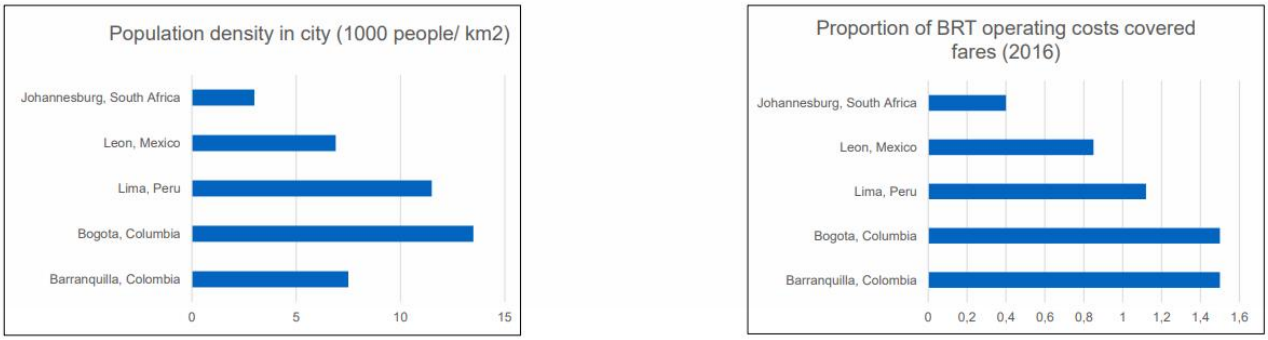


Figure 1: land-use patterns of SA metropolitan cities conspire against the mass public transit systems to sustain itself (Cartwright, 2018)

In order to achieve this required level and quality of dense and intense property development; that is, property development which is capable of supporting and sustaining TOD implementation costs, funding transit operations, and in so doing, maximising return on public investment (Beukes, 2016), the CCT will not only have to undertake a considerable infrastructure spend but will have to properly understand the motives and behaviours of property developers operating in Cape Town. In effect, the CCT must invert the old order of spatial and transit planning in which "the transportation system [was] subservient to and conditioned by the existing spatial structure."(Rodriguez, Vergel-Tovar & Camargo, 2016: 2).

The study conducted by Beukes(2016) demonstrates the negative fiscal impacts of a costly rollout-out of transit-adjacent systems. Beukes (2016) examines the rollout of the MyCiti BRT ("**MyCiti**") in Cape Town and identifies it as an example of where a lack of understanding of local property market dynamics in fact has the effect of undermining any planning assumptions that triggered the implementation of the MyCiti in the first place (Scorcia & Munoz-Raskin, 2017).

Beukes (2016) states further that as the rollout of the BRT infrastructure continues, the CCT will have to fund an increasing operating deficit. It is clear therefore that there is great financial

impetus on ensuring that TOD projects (which require massive capital expenditure) are financially sustainable and that they generate critical passenger mass in order to sustain operational costs without undermining the financial stability of the CCT. To reach the critical passenger mass threshold, it is important for TOD projects to leverage the untapped real estate demand in and around designated TOD areas.

Currently, the City's sprawling urban growth and relatively low densities of suburban communities entrench the dependence on the use of private automobiles (Bosch, 2018) and therefore challenge the sustainability of the MyCiti, and by implication TOD rollout and operations (Scorcia & Munoz-Raskin, 2017). For the 2016/2017 financial year, the MyCiti service ran at a weekly loss of R1m. This deficit reflects the travel behaviour of citizens and the inefficient spatial and land-use dilemma (Beukes, 2016).

The Framework acknowledges that to overcome the operating cost hurdles associated with TOD projects, the CCT must seek alternative sources of funding and partnerships (CCT A, 2016) to fund the TOD rollout and BRT operations, in order to rely less on the national fiscus.

Along with the various mechanism or tools that CCT may potentially employ as part of its strategy in the rollout of TOD, the Framework, in its 'Financing Toolkit', recognises LVC as such an alternative financing tool capable of accommodating these scenarios and overcoming TOD operating costs hurdles.

1.3 Real estate market requirements for LVC in the TOD context

If used optimally, the Framework also envisages that LVC could potentially do much more than simply be an alternative source of financing, but that it could also enable the CCT, in collaboration with the private sector, to:

i. be proactive and responsive towards infrastructure projects, as opposed to being subjected to onerous national and local government capital projects financing procedures, particularly, where direct transfers from National Treasury are required;
ii. support infrastructure projects that directly influence and aim to redress economic, social and spatial transformation of the Cape Town

iii. leverage funds without negatively affecting the debt ratios, and ultimately, the balance sheet of the CCT (McGaffin et al., 2016)

Before these benefits can be realised however, the CCT must pause to consider the pre-requisites which must be in place in the property market before LVC can be optimally engaged. Beukes (2016) highlights the marginally negative effects the MyCiti infrastructure has had, and continues, to have on property values. As already discussed above, these negative effects suggest that transport infrastructure on its own won't automatically deliver incremental increases in property values.

A closer reading of Beukes' (2016) work reveals that a nuanced approached is required when trying to understand what effects transport infrastructure, and by extension, the TOD rollout, will have on local property markets. Beukes (2016) finds that no conclusive variables, including BRT, were found to have any material impact on house prices. He observes that in respect of a suburb with high income single residential use dominated by private cars, BRT has in fact had a marginally negative impact on house prices within a 500m radius of a stop.

Santos, Alorro & Goliath (2016) presented a layered research on nine popular and possible LVC tools which the CCT could potentially use to fund its TOD infrastructure and its operational expenses. The research was based on global case studies, each with its own unique ecosystem. However, it should be noted that these case studies were limited in scope, focusing only on “best practices" (Thomas & Bertolini, 2015: 141). The report did not include for instance, consideration of the state of the underlying economy & local property market dynamics, the state of relations between the public and private sector, the institutional set-up and power relations of the stakeholders, and the role of the municipality in making TOD and LVC attractive and viable for both local municipalities and developers.

By considering only best practices, these studies lead to a survivorship bias; that is, considering only the views of those cities that succeeded, not those that tried and failed. The danger therefore exists that in trying to recreate these best practices, the CCT might fail to consider the ‘unseen’ factors which lead to the success but importantly does not examine other cities failed and flawed attempts at implementing LVC.

"No ambiguity is evident when we view the past. Only the things that happened, happened. But that definiteness doesn't mean the process that creates outcomes is clear-cut and dependable. Many things could have happened in each case in the past, and the fact that only one did happen understates the variability that existed…the history that took place is only one version of what it could have been." - (Marks, 2007: 8)

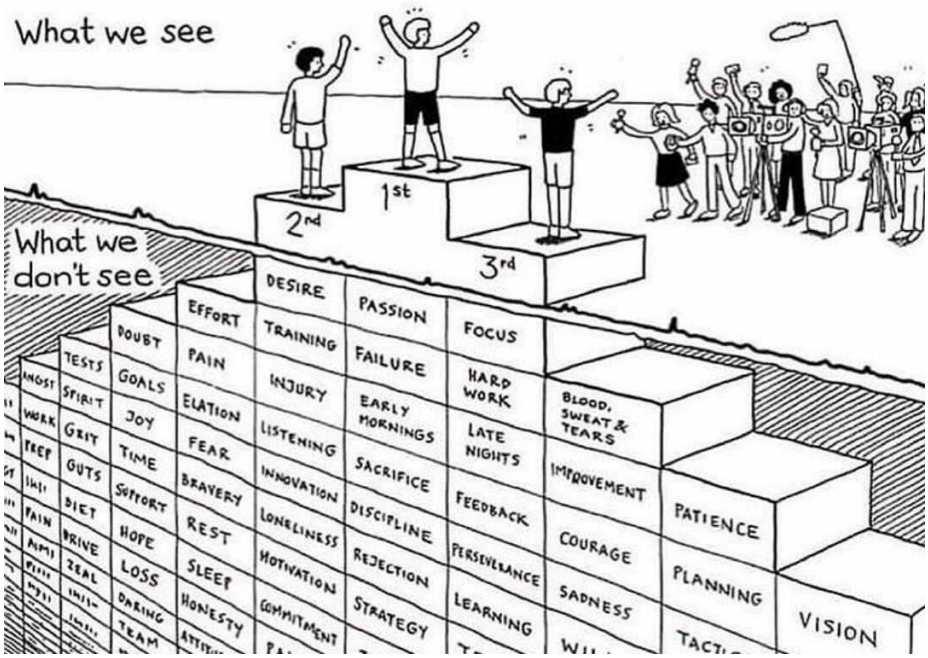


Figure 2: we don't only see what we see, we also see what we don't see (unattributed)

Accordingly, for the CCT to secure meaningful private sector commitment to TOD, it must not focus solely on global best practise, nor on ascribing prototypical behaviours to developers. It is not enough to list factors that influence developer behaviour, it must also examine and understand how and why economic actors, in this case, developers, make decisions that they do within a TOD context. Figure 3 below maps the complexity of the property market.

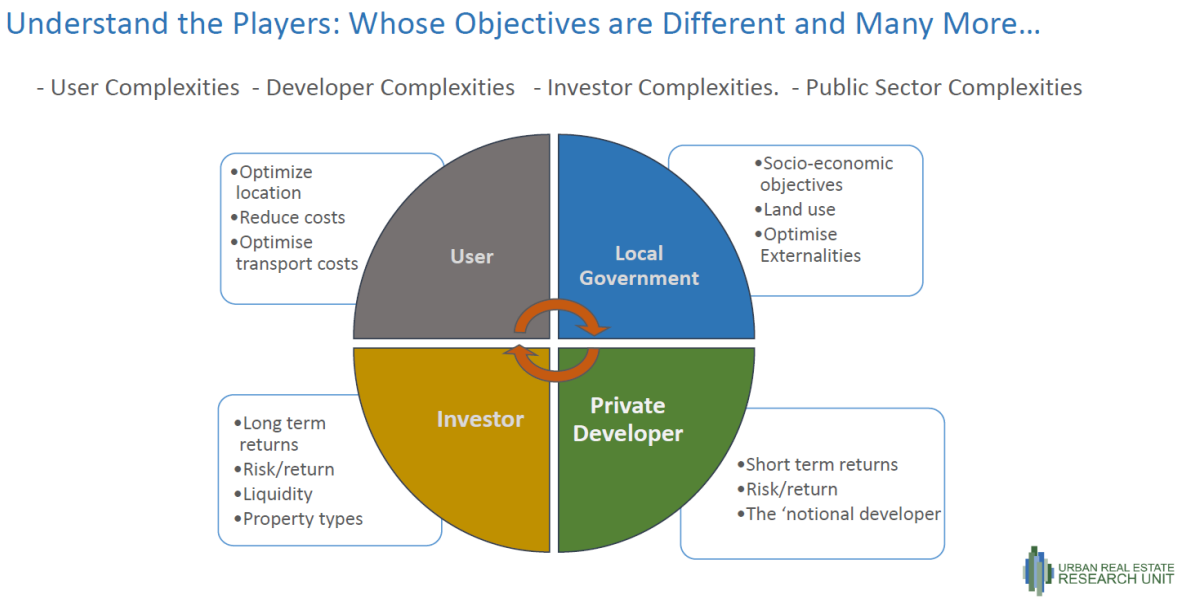


Figure 3: Breakdown of players in the property market and market complexities (McGaffin, 2014)

Figure 3 shows that there are four main actors in the property market, each with their own objectives, behaviours, motives and risk tolerances, and that these factors may at times conflict or align with each other. As one of the four actors, the 'Private Developer', as referred to in Figure 3, is commonly understood to be the primary built environment change agent, and his/her interest in the development, along with the development activity, and availability of land, "are important conditions for transit oriented development…." Rodriguez, Vergel-Tovar & Camargo (2016:13). Despite their importance, very little is understood about developers (Adams, Croudace & Tiesdell, 2012) beyond their characterisation as "profit-maximisers" (Mohamed, 2009; Morgan, 2010 and Bross, 2014) whose reactions to policy can be prescribed by policy-makers (Adams, Croudace & Tiesdell, 2012).

Local government often only focusses on what the built environment should look like, without paying equal (or in some cases, any) attention to the developer as the primary change agent. In gaining a better understanding of the developer, such policies will also stand a better chance of shaping developer behaviour to meet policy objectives (Adams, Croudace & Tiesdell,2012 and Thomas & Bertolini, 2015). The CCT acknowledges its shortcomings in this regard and has admitted that historically, developers have largely ignored the CCT's proposed spatial policies. This is due, largely, to a lack of an understanding of the market, and particularly, the motives that drive developers (CCT b, 2016).

Thomas & Bertolini (2015) add that TOD projects are on a delivery scale that requires stakeholder engagement and involvement that is often complicated and difficult for cities to implement on their own. This relationship, between private developers and the CCT, therefore needs to be explored further as both parties have little understanding of each other and have not interacted within a TOD paradigm before (CCT b, 2016).

McIntosh (et al., 2015); Rodriguez, Vergel-Tovar & Camargo (2016) and Thomas et al., (2018) all agree that certainty for developers is a *minimum* pre-requisite for private sector buy-in for TOD implementation. Rodriguez, Vergel-Tovar & Camargo (2016) add that where it was found that transit systems stimulated land development, the stimulated development was *preceded* by local area-specific conditions that were conducive to private property development and attractive to developers.

There is no question that property developers will be a critical group in ensuring TOD and LVC success, but the benefits of providing developers with certainty and other development incentives must be balanced against the resultant societal costs, including the entrenchment of current spatial inequalities that may arise from traditional formulations of what a developer is.

1.4 Problem Statement

Research has shown that public investment, on its own is not a catalyst for property value increases, and may in some instances, be a value detractor. Value detraction may arise through, amongst many other factors, a misunderstanding of the property market and its actors. Whilst the Framework recognises the role and influence that the private property market, in particular, the property developer plays in determining the success of TOD and catalytic projects, the CCT admits that it has a "sub-optimal relationship with the private sector" (City of Cape Town b, 2016: 15) mainly due to previous spatial policy informants that did not understand developer behaviour and its motives, which in turn led to anodyne policy and instrument prescripts. This Framework has however framed and centred its understanding of developer behaviour, and the property market and its motives/drivers, within a normative neo-classic economics framework. This lens has led to the formulation of certain tools and incentives that the CCT intends to use to *"shift their behaviour which will in turn alter the form and manner in which development occurs*

across Cape Town and facilitate the orientation of development around transit." (City of Cape Town b, 2016: 22).

Morgan (2010) and Moore (2015), critique that property development and property market academic research narrowly centralise and isolate the developer's role in the development process (without considering systemic or institutional influences). Furthermore, current property development research is fixated on identifying industry best practice, measuring development goals/outcomes and the types of tasks undertaken by a developer. The replication of studies such as these has led to weak academic literature on property developers and development in general, which has in turn, led to a weak understanding by the State of these key actors in the property market.

By casting the property developer in the neo-classical economic mould, the CCT may have placed its faith on the application of a construct that is limited to "Western, Educated, Industrialised, Rich and Developed (WEIRD)" (Sutherland, 2018: 1) investment behaviours. This interpretation *"leaves no role for reframing a problem or anchoring a price, for providing guarantees or reassurances, for overcoming inertia, for signalling, for satisficing, for shame, for norms, for psychophysics, for choice architecture, for social proof or any of a host of perceptual and persuasive tools that can have a decisive effect on how people think, decide and act."* (Sutherland, 2018: 3). The Framework itself limits its scope of understanding of the developer: a) by ignoring institutional arrangements and the influence of these arrangements and b) by focussing on the "factors that inform their decisions and actions" (City of Cape Town b, 2016: 22) not the 'how' and 'why' of their investment decision-making under uncertainty and how both institutional and behavioural aspects (including the CCT's behaviour) affect the developer's decision-making.

In adopting a limited scope of understanding, the CCT not only limits the framing of the tools and incentives it intends to use shift developer behaviour within a TOD context, but may miscalculate how developers eventually react to TOD policies and tools.

1.5 Research questions

In order to address the research problem stated above, the following research questions will be examined:

1 What is the depth of the City of Cape Town 's understanding of a developer?

2 What perceptions do developers have of the City of Cape Town and what has given rise to it?

3 What effects, if any, will the Transit-Orientated Development Strategic Framework and other related spatial policies potentially have on the developer's investment behaviour?

4 Are there opportunities for public officials to re-cast themselves?

1.6 Research aim and objectives

Considering the research questions formulated above, the aim of this research is to present a more nuanced understanding of a notional property developer in Cape Town, thereby allowing for the advancement of a developer policy construct and the formulation of tools and incentives predicated on behaviour rather than on policy itself.

In other words, this dissertation aims to use the TOD paradigm to explore whether the CCT , understands the developer beyond "…what drives the development process or motivates individual developers…" (Adams, Croudace & Tiesdell, 2012: 2592) simply as profit-maximisers and as actors "…whose occasional inappropriate behaviour could be corrected …" (Adams, Croudace & Tiesdell, 2012: 2592) through policy tools and incentives. It also aims to mitigate the risk of TOD policy failure by understanding the private sector's perspective on TOD and what it means in the sector. Ultimately, it is envisaged that this research will contribute towards correcting the sub-optimal relationship the CCT has identified and will reduce uncertainty and risk for developers looking to participate (Thomas & Bertolini, 2015) in TOD. Moreover, it aims to improve institutional maturity so that LVC becomes a viable funding tool for future TOD projects (Goliath, 2015).

Accordingly, this dissertation sets out to achieve the following objectives:

- To conduct a detailed literature review using oft-ignored frameworks and paradigms to view urban real estate economics, including setting out a brief overview of property development models, understanding property development using an alternative framework (Complex Adaptive Systems), conducting a deep-dive into the construct of the developer and its behavioural characteristics, and defining the role of the public sector in TOD property development.

- To conduct qualitative research that will help establish a more accurate construct of a property developer, more accurate tools and incentives to shift the behaviour of the developer and to assist in correcting the current sub-optimal relationship that the CCT has with private sector actors.
- To use the interview method to gain primary evidence, experiences and perspectives on the property developer in Cape Town.
- To analyse and interpret results of the interviews and to distil key themes that will support the assertion that the CCT needs to re-evaluate how it perceives the developer.
- To provide conclusions and present recommendations based on the research.

1.7 Research Proposition

The point of departure for this research is best summarised by Belzer & Autler(2002) who state that TOD cannot be rolled out in isolation of the lifestyles of transit users and the real estate market but must be cognisant of the influence that the real estate market will have on TOD projects (Belzer & Autler,2002 and Rodriguez, Vergel-Tovar & Camargo,2016.

Thus, the research proposition is stated as follows:

The current policy paradigm within which the CCT understands a property developer may not incentivise the developer sufficiently to act in accordance with TOD policy, resulting in the CCT's failure to achieve its TOD objectives.

1.8 Research Justification

According to Scorcia & Munoz-Raskin (2017), the implementation of South Africa's BRT systems was premised on, *inter-alia*, the *expectation* that BRT systems would be able to operate *without* subsidies as is the case in Colombia. In light of the current strain on CCT coffers brought about by high MYCiTi operating costs (Bosch,2018), where fare revenue continues to underfund operating costs (see Figure 4 below), this dissertation will scrutinise the CCT's assumptions around the construct of the property developer and the tools and incentives it intends to use to direct property development towards the CCT's objectives. By scrutinising these assumptions

and offering an alternative based on this dissertation's findings, the CCT may prevent further self-induced fiscal pressure and potential TOD policy failure.

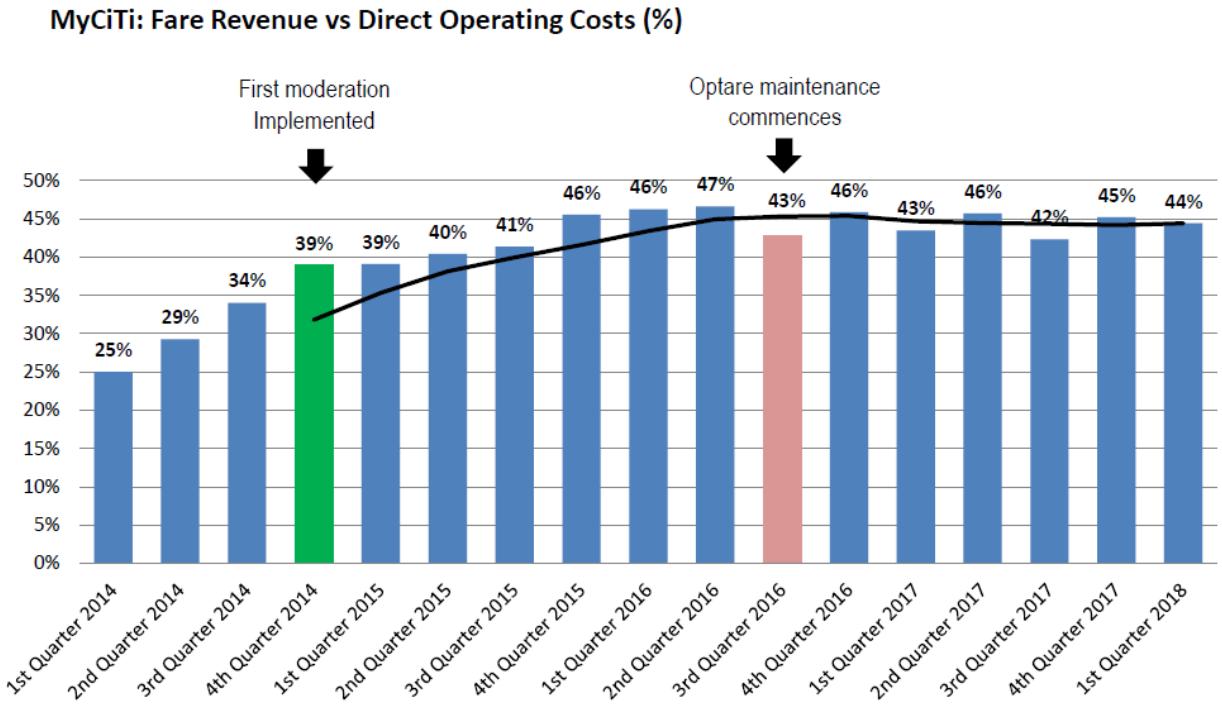


Figure 4: proportion of MyCiTi fare revenue covering direct operating costs incurred by the RBT system (Bosch, 2018)

As stated earlier, LVC is being touted as one source of funding for rolling out and servicing TOD infrastructure. Research by Goliath (2015) and McGaffin (et al., 2016) confirms that land value capture is a viable mechanism to finance TOD infrastructure and fund transport operating costs. However, private sector developers must be confident that public transit investments *will* unlock or create property values. McIntosh (et al., 2015) cautions that TOD infrastructure on its own is not enough to enable public transport to vie for market share from the private automobile's users money and time. Meta-analysis by Suzuki et al. (2015) and Smith, Gihring & Litman (2018) both demonstrate that the capitalisation of transit investments or interventions into property values is not axiomatic.

A TOD project must achieve a lifestyle that is enticing enough, of high quality and offers comparative time and cost savings. This leads to an increase in the level of spend in an area, which in turns leads to unlocking of land-use changes and land value increases (McGaffin, Napier & Gavera , 2014 and McIntosh et al.,2015).

If TOD is being used as a lynchpin for directing spatial development and growth within Cape Town, then the CCT must understand certain principle actors of the urban development market, primarily the developer. Other than what TOD aspires to achieve, it can be argued that for the first time, the skill, effort and energy of a private developer is intertwined with the systemic delivery of public goods, community goodwill and opportunities for undeserved communities (Belzer et al., 2009).

Furthermore, if TOD and the property market are intertwined as suggested by Belzer (et al., 2009) then both public and private development actors need to understand that real estate values are partly dependant on any changes in development policies and real estate submarket dynamics (Rodriguez, Vergel-Tovar & Camargo, 2016). However, the public sector limits its involvement to setting and imposing policies and has conceptualised the property developer in an ideal world, devoid of market and economic actor realities (Adams, Croudace & Tiesdell, 2012).

This dissertation differentiates itself from research already available in that it looks at the local government and the property developer nexus and seeks a more nuanced understanding of a notional property developer in Cape Town, thereby allowing for the advancement of a developer policy construct and the formulation of tools and incentives predicated on behaviour rather than on policy.

In essence, this dissertation calls for a 'New Real Estate' paradigm (Lister, 2007) to match the CCT's 'New Urbanism'. This New Real Estate paradigm must usher in a new approach to understanding the private property developer. This means the CCT's new methodology of spatial re-ordering and targeting must be matched in new approaches to viewing and understanding the private property developer.

1.9 Research Design and methodology

Nine developers in Cape Town were willing to be interviewed. Based on the research questions and objectives articulated, a phenomenological approach was adopted, using the localist semi-

structured interview method and memo-ing technique for data collection, and computerised content analysis techniques (Guthrie & Fan, 2016) as tools of analysis.

The phenomenological strategy aims to understand a person's point of view and the lived experience of a phenomena in a context-specific setting. The phenomological data is provided by participants and how they perceive things. This is then unpacked empirically with the overarching question being, "what was your experience?". This strategy rejects the notion that generalisations can be made (Amaratunga et al., 2002; Groenewald, 2004 and Bell & Bell, 2015).

To undertake the phenomological research strategy, the context-specific setting must be understood. This means probing two diametrically opposed parties in the property development industry: the private property developer (market actor) and the local municipality (the welfare actor). This dissertation will however only focus on the developer's version of the truth and their world and ideas of the truth so as to stitch together a better understanding of and to construct the phenomenon as they have experienced it. The Framework finds itself wedged between two truths that still need to be explored. This dissertation will examine the truth of the developers.

	City of Cape Town	**Developers**
Truth	What truth does the City believe about developers and their willingness to participate in City-run TOD projects or private TOD projects. What informs their belief?	What truth do developers believe about developing property in Cape Town?

Table 1: Unpacking the truth and world view of the City of Cape Town and Developers (Abdullah, 2019)

1.10 Structure of this dissertation

The research begins with a literature review in Chapter 2, providing an overview of the current juncture facing real estate, and particularly property development research. It presents alternative viewsof: (i) the property market (institutional economics view); (ii) the property development process (Complex Adaptive System approach); (iii) the property developer as an economic actor (behavioural economics); (iv) and the reimagined roles for local government in TOD property development.

Chapter 3 sets out the research methodology that will be used in this dissertation, the justification for using the semi-structured qualitative interview, and the strength and weaknesses of this approach. Chapter 4 will discuss and analyse the data found during the qualitative research. The dissertation will conclude with Chapter 5 which will set out practical recommendations and high-level conclusions based on the discussion and analysis in Chapter 4.

1.11 Chapter summary

This chapter has laid out that public investments in and of itself will not automatically lead to a rise in property values. There are many factors that must align before any public investment is made that will lead to an increase in private property values. One of these factors is understanding a primary economic actor in urban development, the property developer. The CCT's current definition of a developer has been used as a basis for developing tools and incentives that it perceives will assist the city in unlocking property values and achieving spatial objectives. The dissertation questions whether such incentives and tools will be effective in incentivising the property developer to behave or act according to CCT's objectives.

CHAPTER 2

CHAPTER 2: LITREATURE REVIEW

"I don't know why finance gets to be a department in a university, but real estate doesn't. That is just a historical accident…What I am saying is you folks ought to develop your own real estate theory which addresses itself very much to the liquidities of the problem, and you want a theory that is practical"- Harry Markowitz (Bell & Bell, 2015)

2.1 Introduction

There are many theoretical frameworks each competing to be the prime paradigm for understanding real estate, property development and property developers. The protagonists of these respective frameworks don't readily realise that having diverse viewpoints on a single subject brings a richer and deeper understanding of the development process, the industry and actors alike. Each perspective adds value to the discipline by studying an aspect that is not normally found within another paradigm. Thus each new magnified aspect brings a new discovery to the relatively young area of real estate studies (Guy & Hanneberry, 2002). The prevalent issue with real estate research is its domination by normative and quantitative-based research on a subject that, as this chapter explains, is in a human and socially-weighted domain. Sound theoretical insights strengthens predictive powers in the field and this ultimately leads to better policy (Camerer, Loewenstein & Rabin, 2004).

The *"analytical ambition"* (Guy & Hanneberry, 2002: 286) of this dissertation is to showcase a richer view of property developers and the local government nexus within a Transit-Orientated Development (TOD) framework. A conceptual framework and overview of chapter 2 is dematerialised in Figure 5 below with section summaries. This framework illustrates the analytical ambition of this dissertation and the presents a broad overview of the untapped richness in understanding the property developer and the local government nexus.

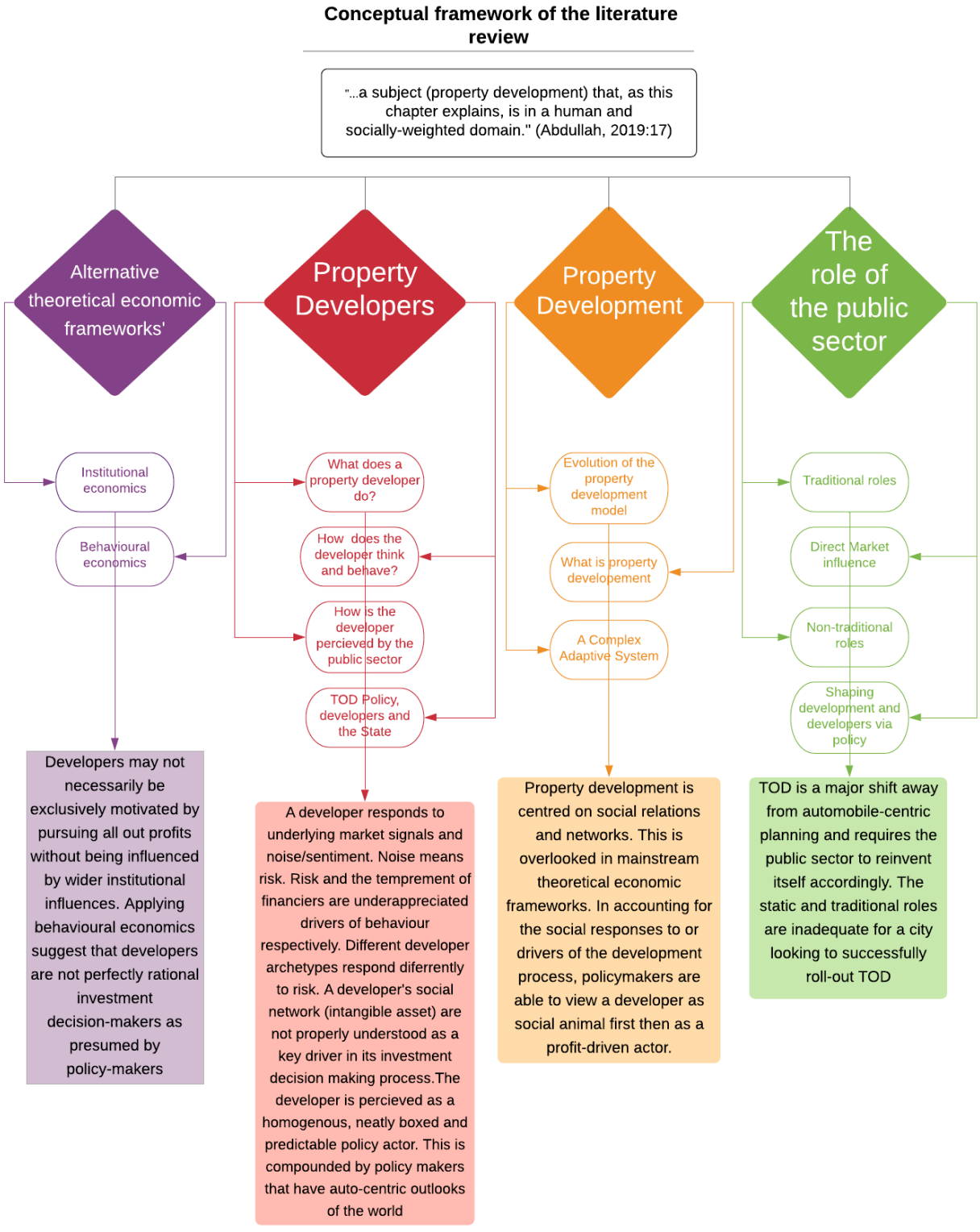


Figure 5: A conceptual overview of Chapter 2

2.2 Short overview of the property market economic theoretical frameworks

Most of the real estate research has been based on quantitative and neo-classical economic perspective., (Coiacetto, 2001; Arvanitidis, 2006; Morgan, 2010; Knight, 2011; Drane, 2012; Henneberry & Parris, 2013).

One potential reason for this research bias is that developers themselves do not fully appreciate the role they play in the urban economy. Knight (2011) found that, at least for the trader-developer archetype, developers understand what they do within the development process but cannot adequately explain the role they play. Another reason for the bias is the dominance of neo-classical economics throughout the world. Mirowski (1992) criticises mainstream neo-classical economics, from which real estate research takes its cue, and accuses it of 'physics envy' (Mirowski, 1992:65) in that it appropriated physical science models for the sake of legitimising what is essentially a study of human behaviour (Chang, 2014).

Chang (2014) believes that the mainstream neo-classic school of economics has dominated our world because it appeals to the desirous notion of freedom of the individual, and that therefore market freedom is inexorably linked to individual freedom. This notion is premised on two assumptions, first, that there is a perfect actor, and second, that there is acceptance of the status quo. In other words, this notion does not question whether actors' choices are truly rational and what influences their choices, nor does it acknowledge wider institutional arrangements and social structures and how these arrangements and structures influence actors, and vice-versa.

An alternative perspective sees the property market as a fundamentally behavioural discipline. So, to understand the market means an undertaking to understand the processes and decision-making of developers, space users and space facilitators (the State). Where the interests of these three actors intersect, this is where the built environment is formed, operated and where value is produced (DeLisle, 2010) or assigned (Arvanitidis, 2015).

DeLisle (2010) argues that the main actors mentioned above are social creatures, thus real estate should not be seen exclusively from a positivist or neo-classic view. Property is a scare resource that changes ownership or its state through a social exercise. It is primarily through the process of negotiations that a trade or development takes place. It is because of this that real estate

research should seek out other means (other than normative and quantitative-based research concepts) such as behavioural economics to understand the property market (Bell & Bell, 2015).

One of the core concepts of behavioural economics is 'bounded rationality' and strikes at the heart of the neo-classical school of thought. The world is complex and uncertain and thus our ability to be rational is constrained or 'bound' by overwhelming information and the decisions that we need to make based on this information. In order to overcome this avalanche of information and uncertainty, we develop heuristics to find the optimal decisions based on limited brain processing power and time (Keogh & D'Arcy, 1999; Mohamed, 2006, 2009; Barros, 2010; Chang, 2014). It follows that contrary to what mainstream economics thinks, we do not possess unbounded rationality, unbounded willpower and unbounded selfishness (Kahneman, 2011; Chang, 2014). We are not an "omniscient economic man" (Lewis, 2001).

Kahneman (2011) states that heuristics ('expert judgement', 'common sense', 'instincts and 'intuition') is a cognitive response to continuous decision-making under uncertainty and complexity. These decisions are made with decreasing energy and effort because with increased exposure to these kinds of problems, the brain produces a mental model or pattern of thought that aids us in making 'optimal' decisions, thereby also limiting our choice-sets that may yield a better possible outcome. Optimal decision- making therefore means using as little mental energy as possible as a means of self-preservation. In narrowing our choices to a pre-defined set of possibilities, we choose an option that is good enough, but not necessarily one that is utility-maximising as espoused in the expected utility theory. This is also known as 'satisficing' (satisfied + sufficing) (Simon, 1997; Barros, 2010; Etzioni, Piore & Streeck, 2010).

It is in this processes of creating neural paths of least resistance to form heuristics and judgements (Thaler & Mullainathan, n.d.; Diaz & Hansz, 2007; Kahneman, 2011) that we also establish institutions to reduce uncertainty, bring a sense of order to a complex world (Keogh & D'Arcy, 1999; Ebohon, Field & Mbuga, 2002; Arvanitidis, 2006; Etzioni, Piore & Streeck, 2010; Chang, 2014b; Taruvinga & Mooya, 2016) and reduce transaction costs (D'Arcy & Keogh, 2002).

National Treasury has already deployed behavioural economics in trying to understand and contextualise the average South African saver before proposing draft policy to incentivise

discretionary savings levels. Behavioural economics is partly responsible for the Tax-Free Savings Account which was promulgated in 2014 (National Treasury, 2014 and Leigh, 2015).

The table below presents the dichotomy between the mainstream neo-classic economics approach to real estate studies- and understanding developers, juxtaposed against a richer institutional-behavioural economics approach.

Mainstream view: neo-classical	**Qualities**	**Richer view: institutional & behavioural**
"Individuals know what they are doing, so leave them alone- except when markets malfunction." (Chang, 2014b: 120)	**One-sentence summary**	"Individuals are products of their society, even though they may change it (society) later." (Chang, 2014b: 151) & "We are not smart enough, so we need to deliberately constrain our freedom of choice through rules." (Chang, 2014b: 151)
Demand-side analysis in influencing the value of goods. Markets are constantly adjusting to state of long-term equilibrium, leaving society in a better-off position i.e.: there is no need to be altruistic because the markets leave everyone, on aggregate, better off. Positivist approach: how the world should work	**Focus**	Actors must be understood within the context of the institutions, rules, norms, standards and societal cultures which mould the individual (and vice-versa) while actors navigate the world and grapple with limited cognitive abilities. Realist approach: how the world works in reality
Expected Utility Theory: maps changes in net wealth. Markets are considered a gathering of rational self-serving actors who seek only to maximise their utility.	**Central theory when making decisions under uncertainty**	Prospect theory: maps changes in value from a reference point. There is a diminishing sensitivity to gains/losses and Loss Aversion Bounded rationality & satisficing: the world is complex and uncertain and thus our ability to be rational is constrained or 'bound' by overwhelming information and the

		decisions that we need to make based on this information. To overcome the avalanche of information and decisions, we develop heuristics to find the optimal decisions based on limited brain processing power and time. People will settle for the first satisfactory solution (and not the solution that maximises utility). It is within this bounded rationality that the developer sets objectives, assesses his tolerance for risk, foresees the future and makes decisions under uncertainty
Man is best placed to make decisions for himself to increase his welfare and the welfare of those close to him so long as it is cost-effective. No need for government intervention to help make decisions.	**Imbued behaviour**	Man is a complex actor with layers of motivation behind his behaviour, including instincts, habit, belief and reason. He is susceptible to making decisions based on sentiment, biases, cognitive dissonances, etc. His innate behaviour is moulded by the institutions surrounding him.
Quantitative-based modelling that aggregates nuances of sub-markets, themes, locations etc. Uniform market behaviour can be represented by formulae.	**Public policy and modelling behaviour**	Underdeveloped, over reliance on quantitative or sociological formulations
Markets are efficient: assets reflect all known information accurately and instantly, resources are allocated appropriately but property market is slightly inefficient. There are high transaction costs and the asymmetric flow of information when trading in property makes pricing challenging over the short-term.	**Property market efficiency**	Efficiency isn't measured by efficient pricing and the time taken to reach price equilibrium; it is a function of how the macro-institutional context (economy, political landscape and socio-cultural) and institutions (actors, organisations and networks) which constitutes a system, adapts to, anticipates and accommodates internal and external stresses of the urban economy.
Built environment is deployed at its highest and best use for rational actors. Property values are correctly	**Property market and pricing**	The market is the facilitator of development activity and a mediator of diverse and opposing property

priced and reflect derived demand in the long run, despite high transaction costs and information asymmetry.		development interests. Property value is driven by heuristics, biases and sentiment to compensate for our limited cognition. Therefore the information used to calculate and inform asset prices may not be correct or correctly processed given our tendencies to react to sentiment, biases, cognitive dissonances, etc.
Exists to derive the highest profit from an investment in providing space where there is demand for it (City of Cape Town b, 2016). Always and sufficiently responds to demand provided he or she is adequately compensated for the risks he or she will be exposed to. Allocates resources to meet market expectations, bringing to market what the user demands.	**Developers**	Developers may influence the market and the market may influence developers. In other words, the actions of developers are in response not only to market movements, but also to shifts in institutional arrangements. Developers faces complexities but will only experience these when he commits to development, despite the best efforts to calculate/forecast returns, plan the development and foresee any issues arising in the future. Therefore, he is not a reliable co-ordinator or resource allocator.
Developers readily responds to the market efficiently while the market is perfectly adjusting to supply and demand of real estate products. Property values are correctly priced into the product.	**Developer impacts**	In the long run, the reaction to market demands (and the perception and processing of market information) on imperfect information leads to an over/under allocation of resources and real estate products. This imperfect allocation leads to long-term institutional change (the mediating effect of the property market and broader economy).
The government won't intervene in markets because rational and self-serving actors will in the long run correct any short-term negativity to reach a new state of price equilibrium, leaving everyone, in aggregate, better off. Incentivise developers to act in a desired	**Basis for State involvement**	Cannot trust the market to reflect proper value if it views inherent characteristics of property as inefficient. The State may develop supportive or detrimental institutions for property development and break the hegemony of institutions that produce negative externalities. People

manner, maximises his chances of creating surplus value and lowers his profit risks.		must be shepherded into certain actions based on how they treat risk and reward as they don't know any better and struggle to align current behaviour with a future state.
The dominant view: planning must regulate land use and building development and ensure there are no market-generated negative externalities.	**How are developers viewed by the State**	There is a societal interest in having public interventions because unlike other real property (e.g.: art and cars) immovable property can have outsized negative externalities on society that may not be reversed or remediated. Political interests are swayed by both nomadic and local development cultures and vice-versa. The State can also influence the development industry structure and facilitate a diverse competitive or oligopolistic/monopolistic industry.

Table 2: the key distinctions between the mainstream neo-classical and the institutional-behavioural approach to understanding the property market, property development and the State's relation to both. (Keogh & D'Arcy, 1999; Coiacetto, 2001; D'Arcy & Keogh, 2002; Gallimore & Gray, 2002; Arvanitidis, 2006, 2015; Mohamed, 2006; Diaz III, 2010; Etzioni, Piore & Streeck, 2010; Adams, Croudace & Tiesdell, 2012; Drane, 2012; Pirounakis, 2013; Alexander, 2014; Chang, 2014b; Jones, 2014; Waights, 2014; Leigh, 2015; City of Cape Town b, 2016)

The next subsections will delve in more detail on how both institutional and behaviour economics separately views the property market, and by implication the property developer.

2.2.1 Institutional view

"…theory building in the built environment tends to be fragmented, under-resourced and explored from the limited properties of individual disciplines or interest groups within the construction/property industry" (Koskela, 2008: 211)

Keogh & D'Arcy (1999) state that the basic premise of institutional economics is that institutions and actors (collectively called the "institutional framework") emerge to bring certainty to society and to reduce transaction costs amongst actors by providing beliefs, perceptions, conventions, culture and expectations, etc. or 'the rules of the game'. These rules mirror the interests of a select group that represents power within society. It is in the interest of this select group to uphold the institutional framework or amend it if it is in their interest to do so. This is echoed by Fainstein (1990) who concluded that it was because of an absence of community/working-class

mobilisation on housing affordability that New York City was "…hostage to developer interests." (Fainstein, 1990: 563).

Arvanitidis (2006) augments this premise by saying that the presence of institutions does not remove uncertainty for society because the certainty that arises from institutions only serves those with power and influence. This certainty also comes at the price of constraining market actor behaviour. According to Ramabodu, Kotze & Verster (2007), the development industry in South Africa reflects its socio-cultural and economic history, as well as the current political framework. For instance, Fainstein (1994) describes the New York development industry as highly entrepreneurial, strongly mirroring the aspirations of those behind it. She found that large projects in London and New York were driven by a particular types of developers, that possessed *"male egos that find self-expression in building tall buildings and imprinting their personae on the landscape"* (Fainstein, 1994: 4).

It follows then that if institutions are formed in the image of groups who have power and influence, then these groups will co-ordinate amongst their peers to drive down intra- group transaction costs and allocate resources to further their interests- this resource includes political influence (Olver, 2019). Therefore, the property market cannot be relied upon as an arbiter of market value, nor can economic growth be purely driven and achieved by the property market in order to uplift society. Consider that developers, as a power group, may collude to fix prices, collectively reduce supply or lobby government to change formal rules in their favour. Uppink (2016) found that the Greater Tygerberg Partnership (the "**Partnership**"), a multi-stakeholder partnership to drive inclusive regeneration and local economic development primarily along the Voortrekker road corridor, was initially captured by private and political elites ("urban patronage" (Uppink, 2016: 89)). This temporarily resulted in the Partnership focusing on mega-block projects for high-income earners while important planning and detailing of "*inclusive transit-oriented development are missing or have not been developed nearly to the same level of detail as more private sector focused projects"*. Moreover, *"inclusive city-building strategies such as social and affordable housing and local economic development"* (Uppink, 2016: 88) were not prioritized, despite inclusive development being one of the Partnership's stated aims. While Olver (2019) reported that the civic groups in Bo-kaap, Observatory, Sea Point were 'captured' by developers with intentions of furthering their own interests.

Coiacetto's (2009) findings reflect and reinforce this phenomenon. He found that the development industry is organised as an oligopoly. While legal regulations and State actors play an influential role in structuring the industry, large actors with money and power possess a disproportionate amount of influence in structuring the property market by:

- exploiting current legal/regulatory avenues to stifle smaller firms and may not react positively to exogenous factors.
- abusing the planning approvals process by hampering or slowing it down or funding court action by protest groups, thus impeding competition and entrenching oligopolistic or monopolistic industry (Coiacetto, 2009).

What this also demonstrates is that the State has a direct and indirect influence on the development industry structure. Onerous planning submission requirements and a reluctance to provide infrastructure entrenches an oligopoly structure as it precludes smaller developers from operating (Coiacetto, 2009).

According to Keogh & D'Arcy (1999), the property market as an institution consists of and is positioned as depicted in level 2 of Figure 1, below. All three levels interact with each other and can adapt these interactions through experience and action. What is clear is that all institutions and organisations involved in property development are intrinsically linked to each other.

Figure 6: The institutional hierarchy of property markets (Keogh & D'Arcy, 1999)

Level 1: the institutional environment: the overarching political, social, economic and legal institutions that set the formal rules and conventions that govern society (Keogh & D'Arcy, 1999). According to D'Arcy & Keogh (2002), the broader institutional environment can affect development in the following ways:

- **Political:** political risks or policy interventions may increase risk to developers or set out a public good which the developer must produce;
- **Social:** attaches social significance to the process of property development;
- **Economic:** generates supply and demand in the use and investment of property and can create adjusted pricing to incentivise the supply of property development; and
- **Legal:** the overarching framework which dictates what is permissible or not mainly via planning departments but also dictates and gives effect to enforcement of private property rights.

Level 2: the property market as an institution: the property market constitutes a hierarchy as depicted in Figure 6 above, and as a network in **Error! Reference source not found.**7 below and s

ets “formal and informal rules governing the behaviour of diverse property actors” (D’Arcy & Keogh, 2002: 20). The rules have two primary functions; they can be either be restricting (impose prohibitions) or permissive (impose acceptable behaviour but only under certain conditions) (Ebohon, Field & Mbuga, 2002). In this regard, see Table below.

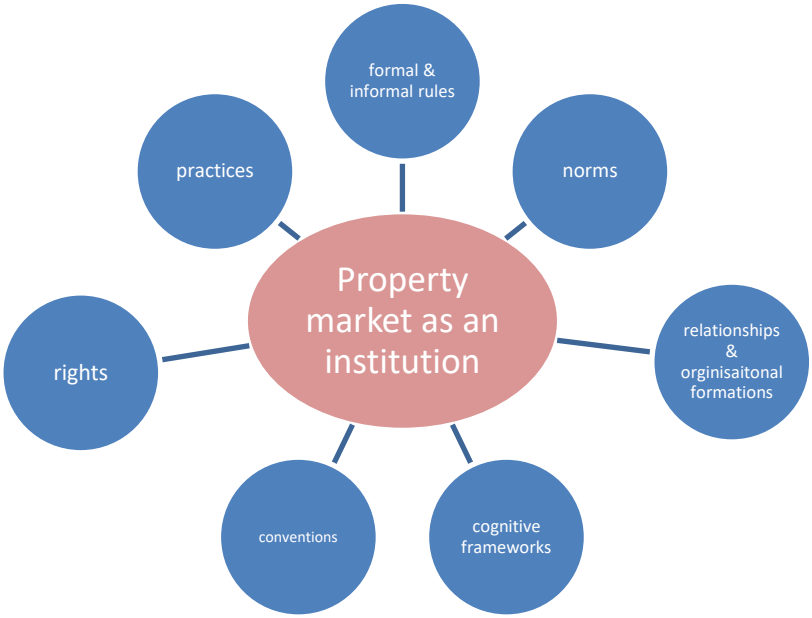


Figure 7: A detailed breakdown of what the property market as an institution entails (Arvanitidis, 2015)

Formal rules in the property market	Informal rules in the property market
Devised to govern conduct: professional bodies, agents, developers, property law, industry codes of conduct.	Evolved through convention and acceptable codes of behaviour societal values/attitudes on property. Includes such concepts as the gentlemen’s agreement or builders’ holidays
Formal transaction costs: development charges, application fees.	Informal costs: intangible costs, misreading local sentiment.

Table 3: Definition of formal and informal rules in the Property Markets (Ebohon, Field & Mbuga, 2002 and Arvanitidis, 2006)

Keogh & D’Arcy (1999), D’Arcy & Keogh (2002) and Arvanitidis (2006) agree that the property market as an institution is not a reliable co-ordinator or resource allocator, which means it cannot always provide certainty to everyone. Thus, some developers may be risk averse because of the uncertainty, or some may attempt to purchase certainty by bribing planning officials. In the long run, the reaction to market demands (and the perception and processing of market information) on imperfect information leads to an over/under allocation of resources and real

estate products. This imperfect allocation leads to long-term institutional change, resulting from the mediating effect of the property market and broader economy. However, this change will only be to the advantage of those who are in, to the detriment of society at large (D'Arcy & Keogh, 2002).

Arvanitidis (2015) adds further that for cities, this means that their property markets are intrinsically linked to their economic performance (though economic performance is not exclusively dependant on property markets). Moreover, the property market efficiency of a city, in an institutional context, is where the market can adapt its structure and provide for the needs of economic participants, primarily, by reducing uncertainty and being sufficiently adaptable. An efficient property market is when both developer and user have low transaction or information costs, and not just developer.

Level 3: Property Market Organisations: all actors within property market organisations impact upon property development decisions:

- Users demand certain types of space in a certain area which then inflates property prices. Developers are incentivised to respond if it is worth the risk and time.
- In the long run, the institutional environment may consist of institutional forms and arrangements that support or deter (knowingly or otherwise) property development (D'Arcy & Keogh, 2002).

The Institutional view of the property market allows the reader to view it as one consisting of formal and informal rules of the game, its structuring in favour of those whom possess power and influence and that institutions help shape developer perceptions (D'Arcy & Keogh, 2002).

2.2.2 Behavioural economics

The dominant economic framework in real estate studies is neo-classical economics. Neo-classic economics is centralised on 'expected utility theory', which states that an actor processes information perfectly under uncertainty leading to decisions that that will bring the highest expected utility (Descak, 2017). Behavioural economics has discovered many shortcomings in how we rationalise the world, make decisions under uncertainty, over-rely on heuristics and suffer from cognitive dissonance. These shortcomings lead to sub-optimal and sometimes irrational choices.

Financial decision-making during the development appraisal phase is where most of the important development decisions are made. There is one central theory (developed by psychologists, not economists) that helps explain investment decision-making where risks exist and presents a counter-vailing view on how a developer may make decisions under uncertainty. It must be stated upfront however that using Behavioural Economics is not a panacea to modelling human financial decision-making, but its use adds another dimension in understanding and explaining human behaviour especially under uncertainty (Leigh, 2015).

Prospect Theory's (Kahneman & Tversky, 1979) basic premise is that people are not striving to increase their absolute level of wealth but are concerned about changes to their *relative wealth* point. In other words, people are only concerned if their immediate decisions will lead to a gain or loss for the specific decision that they are currently facing, and not the global effect it will have on their wealth. Unlike expected utility theory they also do not consider whether their choices will maximise their utility. Actors view each decision faced under uncertainty in isolation of another decision.

The fixation on increasing relative wealth leads to behavioural traits, mapped according to the graph below (Ettinger & Ettinger, 2015).

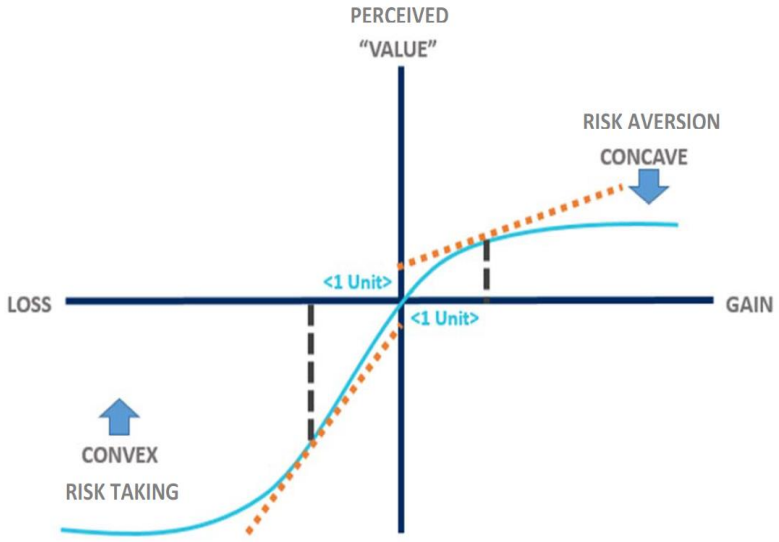


Figure 8: The prospect theory value function denotes asymmetrical lines (concave and convex) compared to the traditional symmetrical lines of the expected utility theory graph. In expected utility theory an actor who makes decisions under uncertainty is risk-averse and both upper right and lower left quadrants value function is the same. An actor is not willing to make risky decisions when faced with the prospect of a loss or a gain.
In prospect theory, an actor perceives a higher value for a unit of loss (lower left quadrant) than for the same unit of gain (upper right quadrant). This depicts an actor as loss-averse (as opposed to risk-averse) and implies that actors are in fact willing to make risky investment decisions ("risk taking") in order to stave off the prospect of a loss (Ettinger & Ettinger, 2015)

The practical implications of viewing developers under Prospect Theory shows that developers may exhibit the following financial behaviour traits:

- **Diminishing sensitivity to gains/losses:** a R10 gain on R20 is felt more than a R10 gain on R1000, even though the reference points (R20 and R1,000) increased by the same value (R10 relative gain) and the absolute wealth is higher at R1010, than the relative wealth of R30 (Mohamed, 2006).
- **Loss aversion:** people feel an acute sense of loss compared to a mild sense of gain for an equal change in value; i.e. a R10 loss is more painful than a R10 gain. This leads to the actor making risky investment decisions when faced with a potential loss (to prevent facing the prospect of a further loss) and they become risk-averse when they are certain to capture a gain (to protect the prospect of gain) (Mohamed, 2006).

Diminishing sensitivity and loss aversion are one of many behavioural biases which real estate actors, and by implication developers are susceptible to when making investment decisions. Descak (2017) lists additional biases which may go unnoticed.

Name of bias	Implications	Consequences on the real estate market
Overconfidence →	People overestimate their abilities and precision of their knowledge (Lichtenstein et al., 1982) →	Excessive investment activities due to perceived ability one can beat the market and predict the course of events
Overoptimism →	Expecting the bright future and perceiving that good things happen to one more than to other market participants (Weinstein, 1980) →	The perception that the prices will recover even if they are currently dropping so the investment is not endangered
Loss aversion →	Avoiding the pain of losing by intaking more risk →	Refusing to sell real estate for lower price than it was bought for regardless of the market dropp
Hearding →	Assuming the public or others know better and should therefore be followed →	Following the trend of buying a property even if one's credit capabilities are poor.
Anchoring →	Being influenced by an arbitrarily chosen reference point (anchor) when making estimations (G.B.Northcraft , M.A.Neale , 1987) →	Using the buying value as a baseline for evaluation of current value of the real estate neglecting the market situation

Table 4: Descak (2017) lists common behavioural biases real estate actors face when making investment decisions under risk and uncertainty and the impacts these have on the real estate market. It must be noted that this list is not exhaustive.

Mohamed (2006 and 2009), Morgan (2010) and Bross (2014) have specifically used behavioural economics in their research to understand the decisions of the property developer. Their research will be used in the sub-section of this chapter called 'Property Developers'. More importantly, their work acknowledges that developers themselves are prone to errors in judgement, cognitive dissonances and an over-reliance on heuristics. They also call for policymakers to be aware of these fundamental behavioural traits.

Policymakers themselves are no less prone to the traits referred to above, recent studies show that "behavioural public choice emphasises how psychological biases may lead to policy errors" (Hallsworth, M. et al., 2018:15). Hallsworth, M. et al., (2018) thus recommend that policy-makers be alert to their own errors in thinking about the world and mitigate against the biases shown in Figure 10 below.

Here, identical policies were *framed* in terms of gains or losses (thus invoking Prospect Theory) where, if policy-makers perceive the prospect of a loss of life due to a potential policy measure, the policymakers themselves may become more tolerable to risk and thus implement risky or .

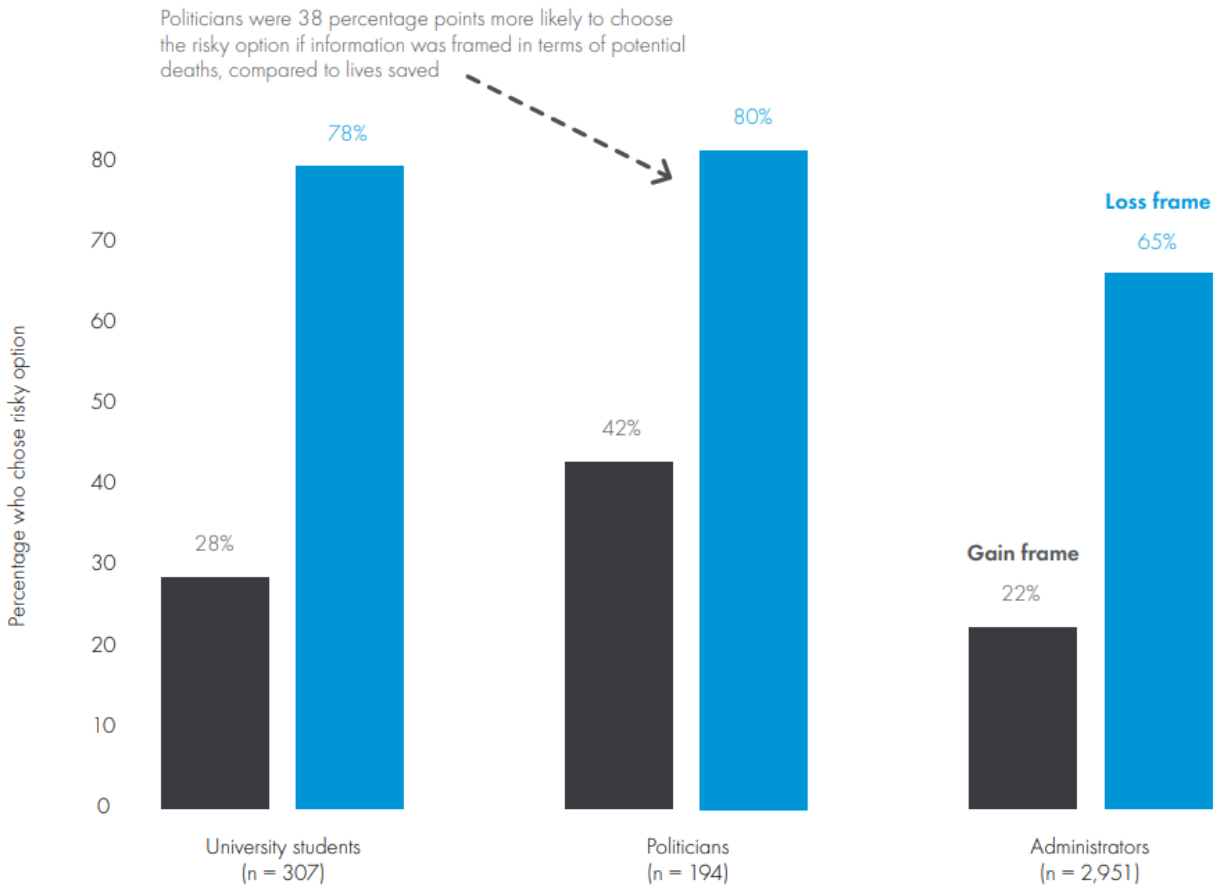


Figure 9: Evidence of loss aversion among students, politicians and administrators (Hallsworth, M. et al., 2018)

Behavioural economics is a new economic discipline that is still muscling its way amongst more established schools of thought. This means that it has a nascent body of knowledge and which Etzioni, Piore & Streeck (2010) argue is its weakness mainly because its methods of scientific discovery are mainly based in labs, devoid of, inter-alia, real world or institutional influences.

This section has introduced a relatively unused (institutional) theoretical economic framework and a relatively new one (behavioural) into this dissertation's discourse. It was shown that according to these frameworks' developers may not necessarily be exclusively motivated by pursuing all out profits without being influenced by wider institutional influences and that their mental processes may not lead to such profits. The next section covers the property

development process and explores a relatively novel approach to understanding the property market as a Complex Adaptive System.

2.3 Property Development

2.3.1 Brief overview of the evolution of the property development model

A property development model attempts to depict the development process in a generalised representation so that model results can be repeated and studied under various conditions. According to Drane (2012) a property development entails (in no particular order):

- An action that is contingent on the land dynamics on which the development is based.
- A transition period to a new state, which includes a new value
- Distinct sub-markets that the development process interacts with, requiring various specialised skills.
- Changes which may be invisible to the naked eye, such as rezoning approvals and change in ownership.

These characteristics add to the complexity and scope of a property development model, and when taking these characteristics into account, preceding models seem myopic and limited to theoretical frameworks and lack of exposure to actual property development actors (Drane, 2013).

Guy & Hanneberry (2002) found that preceding popular development models were mainly developed by non-development and non-financier practitioners, while Drane (2014) adds further that such practitioners view real estate through their specialisation. In conducting a historical study of the property development models, Drane (2012) found that property development models were not given much attention in academia since 1992 and where models were proposed, they shared little in common with real estate practitioners. Table 5 below graphically shows that no new theoretical model has been developed since 2012. The table also depicts the waning influence of both Marxist and neo-classic economics, and in its place, the rise of institutional and political-economic paradigms. However, the latter models were developed by non-real estate academics and individuals who specialised in mainly town planning, economics,

and social theory respectively. They have had little interaction with the development actors and focused mainly on residential developments (Drane, 2012).

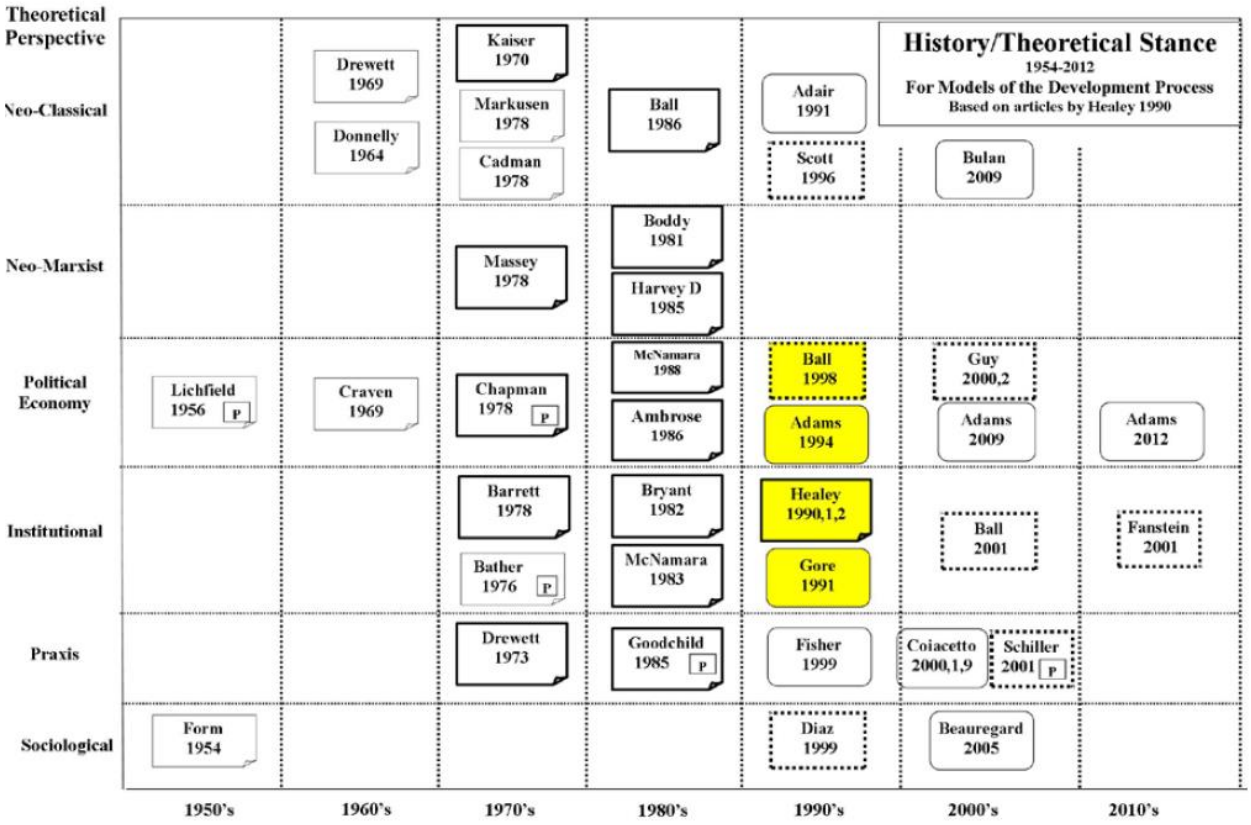


Figure 10: Historical and theoretical stance Map of property development models from 1954 to 2012 (Drane 2012)

Diaz III (2010), Knight (2011) and Drane (2012) stress that it is not that there is a total lack of real estate-backed academic research in these models. But rather an absence of conceptual theories and models based on the development practice where the practice and/or the developer is placed at the centre of the model. In other words, there are no models based on praxis, a developer as a social, rather than economic being; and the behaviour and culture of the developer. Drane (2013) adds that *"there is a more contemporary and perhaps richer view of the property development process but without a contemporary model"* (Drane, 2013: 11).

Morgan (2010) describes the tendency in real estate literature to treat the development industry as a homogenous, predictable group as a *"fallacy"* (Morgan, 2010: 58) at an industry level, when in fact the size of the developer differentiates how it behaves. The City of Cape Town (CCT b, 2016) acknowledges that each developer is unique, but bases this characterisation profit

benchmarking. Refer to Annexure A for Morgan (2010)'s classification of characteristics of a small and large developer.

Moore (2015) adds that qualitative researchers tend to use superficial qualitative research when interviewing developers, thus missing out on subtle, yet key behavioural and cultural signalling. Thus, when policymakers rely on this research, they formulate policy on normative-based qualitative research. When the same superficial research approach is used to study the developer in the new policy setting, equally superficial research results are produced and used by policy-makers.

This negative feedback loop manifests in the 'missing pieces' of a developer construct as highlighted by Adams, Croudace & Tiesdell (2012) on how the Scottish executive viewed the developer in relation to industry policies. Drane (2013) concluded on Adams, Croudace & Tiesdell (2012) findings that the public view of the property developer "creates possibly the greatest comment on the coverage of the topic (the property developer and the development process) and its collective understanding." (Drane, 2013: 11).

Other important missing pieces are identified by Diaz III (2010), Black et al. (2003), Henneberry & Parris (2013) , Doak & Karadimitriou (2007) and Bell & Bell (2015). They argue that real estate problems shouldn't be treated purely as a financial or mathematical problem, because the real estate market is a deeply human process and the mainstream frameworks lack the centralisation of the human actor. Academics and practitioners miss the opportunity to use insights from other disciplines and overlook intangible issues that are connected to property development. Real estate research should go beyond the analysis of numbers and step into the mind of the stakeholders in real estate (Black et al., 2003). Gallimore & Gray (2002) found that there are scant studies conducted examining how a property investor makes investment decisions within the wider societal context, how he or she processes information, and how rational his/her decision-making is.

Trevillion (2002) adds that positivist development models force the socially interactive components of property development to fit into a mathematical model. Coiacetto (2001) admits that no one model is perfect, only that some models are more flawed than others. Doak &

Karadimitriou (2007) criticise those that employ the institutional economics approach to property development as it lacks a solid body of theory and it is devoid of quantitative tools. Doak & Karadimitriou (2007) state that institutional economics *"is a framework in need of a theory rather than a full-blown alternative paradigm."* (Doak & Karadimitriou, 2007: 213). Henneberry & Parris (2013) add that these models don't account for the developer and development activity at a local level where local developers are "embedded within local institutional networks" (Henneberry & Parris, 2013: 230).

In its place Doak & Karadimitriou (2007) propose a framework that can take into account the behaviour of actors, the inter-relationships and the deep effects networks have on the local context, the ecosystem, and developer culture, using complexity theory and the networks formed or "…webs of consumption and production…" (Doak & Karadimitriou, 2007: 216).

The next two subsections will question what the property development process entails and applying complexity science to understand how property development fits into the property market and how it may influence it.

2.3.2 What is property development?

Property development is a creative and social market activity where a web (Guy & Henneberry, 2000; Doak & Karadimitriou, 2007 and Henneberry & Parris, 2013) of participants, including land owners, developers, planners, contractors, local communities, wider society, and financial institutions (D'Arcy & Keogh, 2002) compete against disparate interests and values (Knight, 2011), are influenced by the regulatory and policy environment (Henneberry & Parris, 2013), and where the end result is a built product that is a collective expression of these participants. Property development is based on networks of actors within and adjacent to the built environment, that interact (actively or passively) through a process of imitation, learning, adaption, evolution and extinction until the site itself is embedded within this network of actors, who individually and collectively, generate meaning and value for this site (Doak & Karadimitriou, 2007). This interpretation of property development acknowledges that development cannot be considered in isolation of the wider social, economic and relationship dynamics (Henneberry & Parris, 2013).

The interpretation above encapsulates property development as a deeply social exercise because it is through negotiations, coalitions, and relationships that a development is packaged and executed (Guy & Henneberry, 2000; Trevillion, 2002; Doak & Karadimitriou, 2007; DeLisle, 2010 and Moore, 2015).

2.3.3 Property development as a component of a Complex Adaptive System (CAS)- the Property Market

Baptista et al. (2016) used complexity science to how study macro prudential policy changes may affect UK housing market. Housing is considered the largest asset class in the world and any changes to the housing market (as a system) will affect other sectors of society (or other systems). They motivate that the use of complexity science allows them to study a system (housing market) whose sub-systems are rife with heterogeneity. Its consist of different product (flats, houses, low density, high density, etc), tenures, actors (home owner, tenants, banks, etc.) ,each group with its own behavioural traits that has a bearing on other sub-system and the system itself.

What also differentiates the use of complexity science modelling from traditional economic models is the introduction of spatial properties in the model. This allows for identifying location-dependant attributes. The breadth and depth of heterogeneity in the housing market represents disparate sub-system behaviour that is traditionally modelled on a universal rational representative agent model. The universal rational representative agent model tends to aggregate behaviour from a sub-system (e.g. a developer specialising in commercial developments) leaving the system-level behaviour (e.g.: the entire development industry) modelled on assumptions and heuristics or what Baptista et al. (2016) describes as “postulating top-down, theoretical behavioural”. Complexity science however studies different sub-system behaviours, its interaction with each other and allows for the study of policy impacts at a sub-systems and system level.

The property development process and its outcomes can be modelled as being part of a complex adaptive system (CAS)- the property market. Development is a complex physical and an intense social undertaking (Guy & Henneberry, 2000; Arvanitidis, 2006; Doak & Karadimitriou, 2007 and Drane, 2014). The development process has deep linkages to other wider institutions (sub-

systems) and involves numerous actors who must co-ordinate, compete and interact with each other in non-linear, multifaceted, conflicting, sequential and concurrent activities.

The result of the development process is a built product that affects the built environment and the wider property market institution (D'Arcy & Keogh, 2002; Trevillion, 2002; Kaisler & Madey, 2008; Coiacetto, 2009 and Knight, 2011) as illustrated by Trevillion (2002) in figure 11 below. The figure illustrates how the production of commercial property ('new supply') and local government's twin role of influencing office demand and the supply of commercial land interacts with other sub-components within this system. The system then adapts, via feedback loops, to changes in the sub-systems.

Ultimately, when recognising development as part of a CAS, it is an acknowledgement that no one agent or grouping has a monopolistic influence on the development process, whether it is local government and its policy tools or a development financier with low-interest rate financing (Productivity Commission of New Zealand, 2017).

A CAS can be defined as a system (e.g.: the property market) where the outcomes cannot be deterministically predicted even when it is broken into its sub-systems. Below are key traits that define a CAS:

- **Non-linear interactions and tipping points:** The emphasis of study must be on the interaction and relations of the sub-systems with each other, and external environs, and not the composition of the sub-systems: *"Studying individual ants will never…never give us an idea on how the ant colony operates"* (Taleb, 2016). Non-linear and tipping-point interactions occur where actions have a disproportionate effect on the system and where small changes to a sub-system may lead to a sudden change in state of the whole system. Think of a 0.25% increase in interest rates in an over-levered property market. Doak & Karadimitriou (2007) motivate that the links between the sub-systems emerge to produce an interconnected web of networks from within and outside the system. Established networks of interactions produces novel information or novel behaviour. Novel behaviour is also known as an emergent property (Mitchell, 2011; Colander & Kupers, 2014 and Holland, 2014).

- **Emergence:** Novel behaviour or information that is exclusive to a network of interactions is a defining characteristic of a CAS. It is a property that can *only* be produced when the sub-systems interact with each other to form the system. This makes the studying and predictive value of these networks redundant especially when agglomerating to the system level. In other words behaviour of the system or understanding it in its entirety cannot be predicted based solely on the composition of the sub-systems (Colander & Kupers, 2014 and Holland, 2014). The presence of emergent properties adds to the unpredictability of the system: "… *the ensemble behaves in way not predicted by the components."* (Taleb, 2016). The popular phrase the "invisible hand" of the market connotes the emergent events/properties of the market (Mauboussin, 1997).
- **Feedback loops and signalling:** A mechanism that gives the system its dynamic behaviour. Feedback loops carry the signals of key relationships between sub-systems to the rest of the system which will then adapt appropriately to these signals. Adaption may be non-linear where the rate of change over time and in response to environmental change differs such that small environmental changes may absolutely change system behaviour (Gleick, 2008).
- **Structure:** The hierarchical ordering of key relationships where each level of a sub-system follows its own set of rules. The structure allows for each sub-system to influence a lower or higher sub-system level. Exogenous factors and the system itself affect the behaviour of the structure of the system. It is the structure of key relationships that defines how the CAS reacts to external forces (Holland, 2014).
- **Self-organisation:** The system or network responds to changes occurring from outside the system boundary (perturbations) or from within the system boundary (fluctuations) (Colander & Kupers, 2014 and Holland, 2014). Self-organisation occurs at the system level and is an emergent response. Self-organisation allows the system to overcome shocks that the sub-system would not survive on its own, and in fact, may result in redundancy to a sub-system while the overall system remains stable (Trevillion, 2002 and Kaisler & Madey, 2008).

There are various vehicles that initiate adaption such as cognitive stimulation, sharing information or an evolutionary response (Solé & Elena, 2019). Viewing property development as

a sub-system or component of the property market institution through a CAS perspective may assist policy makers to better understand market dynamics and mitigate against and address the predictive failures of traditional economic theory (Battiston et al., 2016).

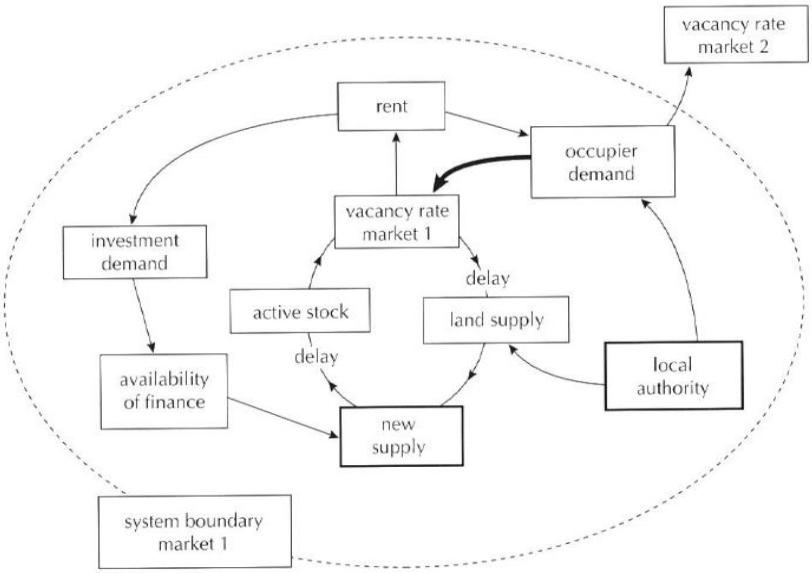


Figure 11: CCT's potential impact on the property market (as a CAS) as a developer of commercial offices (Trevillion, 2002)

Figure 11 above depicts the local office market as a system with fluctuations, perturbations and feedback loops. What is important to note, in this example, is the local authority's influence is not just limited to planning and building development management but supplying commercial land too. The adoption of a CAS perspective of the property market does not purport to make development and its outcomes more predictable, but by focusing on (i) the non-linearity of practitioner actions and external events; (ii) openness of the development system, and (iii) the social dependency of networks, practitioners will change their views on what the traditional, closed, sequential models of development see as "unintended consequences" or "great disasters" (Doak & Karadimitriou, 2007: 214).

Instead, CAS allows policymakers to simulate their attempts to influence development and developers through an informed understanding of relationships and interactions between actors, systems and components, and the accompanying feedback loops that are present in the development process (Trevillion, 2002).

The incorporation of a social network concept within the development process contradicts neo-classic economics which downplays social relations. In fact, Knight (2011) found that a developer's social network is critical to a developer's project pipeline: *"Relationships with contacts are a major influence on development, from opportunity identification and planning consents, through to completion and sale; finance and land are often accessed via links within the property field."* (Knight, 2011: 15). In accounting for the social responses to or drivers of the development process, policymakers are able to view a change in demand for certain real estate products as a change in cultural desires or needs (Guy & Henneberry, 2000).

The following sub-section now looks more deeply into the property developer as an actor operating within the Property Market. It specifically questions what exactly a developer does, what influences a developer's investment decision-making, how are they perceived by the public sector and where do they fit in relation to policy and the State.

2.4 Property Developers

2.4.1 What does a property developer do?

Developers have been described as having the ability to interpret and translate user requirements; signal acceptable parameters of risk/reward expectations (Coiacetto, 2001) or shape (Henneberry & Rowley, 2002) the built environment. They are the central instigator of change in the built environment, and can even influence the local economy (Ball, 2002). Developers are the drivers and co-ordinators of the property development process (Henneberry & Parris, 2013) or the "*progenitors of changes in the physical form*" (Fainstein, 1994: 4).

Guthrie & Fan (2016) describe the developer as the agent for implementing the TOD vision which local authorities set, while Belzer et al. (2009) describes a TOD developer archetype as someone who is mission-driven, often a pioneer, willing to take up the risk and challenge of trying to up-end the private automobile-centric built environment. The developer involved in a TOD project will be comfortable interacting and collaborating with social housing NGOs, housing advocacy groups and financiers. The TOD developer archetype recognises that he or she is creating long-term wealth and public goods through their investment and development work, while remaining professional, bringing industry expertise, financial sense, and entrepreneurial and creative

energy to the creation of TOD projects. These developers will temper the idealism of planners and local communities (Fainstein, 2000) to the market reality because the developer performs functions which the local government doesn't have the capacity and capability of doing. They provide skills in entitlement, financing, planning, timing, and building (Belzer et al., 2009 and Goliath, 2015).

The developer however does not need to possess specialist skills (such as an architect or structural engineer) in order to produce a real estate product, but must be capable of organising and directing the skill and labour of others towards his/her objectives (Coiacetto, 2009).

If the developer has correctly interpreted and translated the competing user demands and development finance on offer, and if the real estate product's value is greater than the costs of constructing it, then he derives a profit for his effort and time. The developer will continuously monitor the property market for opportunities to extract further profits (Ball, 2002 and Henneberry & Rowley, 2002).

Ultimately, and as is explained in detail in the section above titled, "Short overview of the property market economic theoretical frameworks", developers respond to institutional and market arrangements. In altering the lens through which developers and the ways in which they operate are viewed, less emphasises will be placed on superficial policies that have a limited view of the developer's world. Herriges (2018) noted that to exclaim that *"'there are too many people here already. Just stop all this overdevelopment!' is [to] look at the building of homes as the root cause of growth, rather than as a result of the economic forces that drive growth and make it profitable. To [these people], developers are the ones visibly, obviously changing the landscape around them in a way they don't like.*" (Herriges, 2018). Now that the reader understands what a developer does, the next section will attempt to answer how a develop thinks and behaves.

2.4.2 How does the developer think and behave?

This section examines the thinking and behaviour of developers, by considering (i) how he or she perceives risk; (ii) how developer behaviour is influenced by financing; (ii) how the developer makes investment decisions; (iii) and how the developer perceives and reacts to policy and TOD.

2.4.2.1 How does the developer perceive risk?

"It's the indeterminate nature of future events that creates investment risk. It goes without saying that if we knew everything that was going to happen, there wouldn't be any risk" - (Marks, 2014: 5).

The CCT's TOD Framework lists the uncertainty of public interventions as a key challenge to overcoming the suboptimal relationship with developers. According to the Framework, this uncertainty is driven mainly by the statutory development processes (City of Cape Town b, 2016). The Framework goes on to note that this is a deterrent to development or is cost, thereby constituting an investment risk of sorts. However, the Framework fails to define how this uncertainty, and therefore investment risk, affects the developer, and, how it affects the developer's investment decision making.

Investment risk can be defined as the cause of a permanent loss of capital. A developer will mitigate against this risk by trying to ascertain what a future property development will generate in profit while considering factors that will either increase the probability of profit or decrease the probability of a loss. This future state should not be viewed as a fixed outcome, but as a range possible outcomes attached to the likelihood of occurrence (Marks, 2014) as depicted in Figure 12 below.

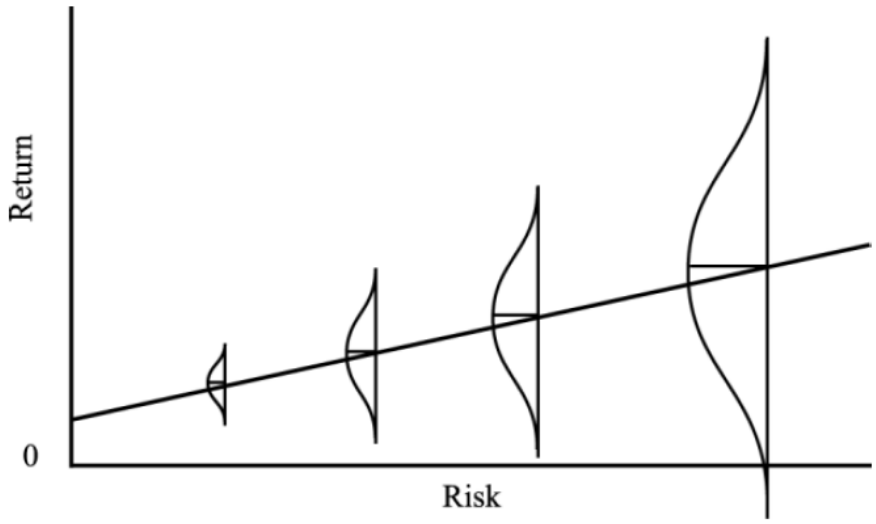


Figure 12: The future should be viewed as a range of probable outcomes, where increased risks generates a higher range of possible returns (Marks, 2014).

Developers see themselves as risk-takers, and in most cases it is a quality that is perceived as innate (Knight, 2011). The level of risk that the developer is willing to take on is primarily dependant on whether the development is speculative or bought/rented out before completion of the project. However, there are other factors considered by the developer when assessing risk, including, the target market, the state of the general economy, developer equity and history, required statutory approvals, geographic area, period of development, the state of the site, and the extant political power structure, to name a few.

In a TOD context, risk reduction measures include a commitment to, all else being equal, developments along transit corridors, certainty of transit infrastructure (Guthrie & Fan, 2016), and high-income earners. Thus a developer will not participate in TOD projects in weak real estate markets, even if the project site has been granted TOD up-zoning (Belzer et al., 2009). A developer's perception of TOD riskiness will change when other developers who have participated in TOD projects discuss their experiences in the peer network (Bross, 2014).

The usual structuring of development finance means a developer does not bear direct financial risk if the project fails, but risks reputational damage, which will in turn limit future financing opportunities (Knight, 2011).

According to Coiacetto (2001), larger developers don't assume too much risk in the location of a property relative to smaller developers. This can be attributed to the fact that larger developers have more resources and capabilities to develop across wider geographic areas.

Mohamed (2006) found that developers focus on one project at a time and mentally creates its future pipeline of developments sequentially. This requires predictable approvals processes which allow developers to plan with confidence. Mohamed (2006) concludes that policy should perhaps allow developers to group risks across projects as this will lead to lower risk aversion. However, this may be hard to achieve because the developer must overcome the tendency to mentally bracket individual projects (the developer's mental faculty focussing on the relative wealth point). He also suggests that planners must have a grasp of the profit margins developers may need to build in target areas (Mohamed, 2006).

Technology too has influenced developer investment behaviour. Progress in construction technologies has led the developer to have a shorter time horizon outlook. This adds to risky behaviour, particularly in boom times, because the developer may see a recession looming, but may proceed with a development in spite of this due to the confidence of the developer that the new building can be offloaded before the recession hits (the 'Overconfidence Effect') and can be sold to an unsuspecting, greedy buyer ('the 'Greater Fool Theory') (Fainstein, 1994 and Henneberry & Rowley, 2002).

2.4.2.2 How does financing affect developer behaviour?

Morgan (2010) points out that the level of and access to development financing is a fundamental driver of developer behaviour. Developers seek funding to finance their property developments if they themselves do not possess all the required capital. There are two types of finance that they can access; namely, short-term financing (for land acquisition, professional fees, building costs and marketing costs, etc.) and long-term financing (for financing of loans). If the developer successfully pays off its debt, the he or she will continue to strengthen relationships with funders in order to finance future developments (Knight, 2011).

Fainstein (1994) questions the accepted logic and influence of neo-classical economics on urban redevelopment. The neo-classic influence has lead scholars, and more importantly, policy-makers to believe that the development industry will neatly respond to economic demand and that it is government's role to allow legislation and bureaucratic space to meet this demand. Fainstein (1994) counters the notion that developers respond to market demand, and instead posits that they respond to the opportunity that they themselves "construct and perceive" (Fainstein, 1994: 18) through the *belief and actions of lenders* operating under conditions of uncertainty.

Mohamed (2006) and Morgan (2010) found that easy access to capital encouraged speculative developments especially amongst the trader-developer archetype. This type of developer tends be inexperienced, unable to meet user demands and has no intention of developing long-term holdings. He or she is also considered a major source of property market volatility (Henneberry & Rowley, 2002). Fainstein (1994) discovered that cheap financing perpetuated the skewed development in favour of the captains of industry. Financiers can also exacerbate a property

recession by constraining development financing during these periods (Henneberry & Rowley, 2002) due to added scepticism.

The America context has found that the funding regime of the industry has perpetuated spatial inequality and the proliferation of real estate that has little or no enduring value, in spite of supportive TOD town planning policies in place (The Transportation Research Board & National Academies of Sciences, Engineering, and Medicine, 2004; Lister ,2007; and Belzer et al., 2009)). In order for developers to access funds on the capital markets, the product they build has to be understood by disconnected investors who can only readily understand "standardised, single-use real estate products." (Lister, 2007: 21). Therefore, TOD requires new real estate financing such as:

- **The deployment of Patient equity or Impact Funds:** no defined payback period and is funded by more patient investors such as pension, impact or development funds. Lowering the cost of capital and term makes the increased construction costs more palatable for developers because TOD infrastructure financing and real estate financing are misaligned (government-based financing vs capital market-based).
- **Real Options Appraisal:** TOD projects are complex in nature, but they also offer flexibility and adaptability to surprises in unpredictable markets. Real Options Appraisals can be used to value TOD flexibility and adaptability.
- **Derivatives:** developers or owners of the TOD asset can use the asset to set up a derivate futures contract as a hedging mechanism. The developer may sell the asset before it is built on the futures market, thus offering liquidity on an asset that isn't easily tradeable (Lister, 2007).

According to Mohamed (2006), developers are also prone to mental accounting, and this further influences his/her behaviour when seeking financing. Developers' in Mohamed's (2006) study found that when sub-dividing plots, developers view each subdivision individually and approach financial institutions in the same manner. Furthermore, once funding is granted, developers tend to self-impose liquidity constraints and try to limit the development envelope and features even if regulations are relaxed and additional features may increase the per unit premium. Thus, if a developer perceives regulations to increase costs, they will develop in areas outside of the policy-target areas, even if these additional costs may increase the incremental profits.

The State can also affect developer behaviour through financing, as evidenced in the UK. Financial incentives from the State aimed to boost housing supply by offering a home deposit subsidy program to first-time buyers. Despite this, developers were seen to perpetuate housing inequality by not ramping up commensurate supply, and by not passing on healthy profit margins to the cost of the house for end-users, but rather to its private shareholders. The UK's "Help-to-Buy" programme has issued ±R120.6 billion to first-time buyers to fund their deposits, and yet supply has not balanced out demand. Now the central government plans to use a multi-pronged policy approach to increasing housing supply by: 1) providing the local government with funds to increase housing supply (He, 2017); 2) conducting reform planning so that it is more facilitative toward housebuilding and re-configuring non-residential properties for housing purposes; and (3) revaluating national or local greenbelt policies to release land for targeted housing sub-markets (UK Parliament, 2015). Figure 13 above, illustrates that since the Thatcherite years, Council houses have been dramatically culled leaving the supply of homes (especially affordable and social ones) to private developers and housing associations (who are dependent on grants from HMS Treasury) (Fainstein, 1994).

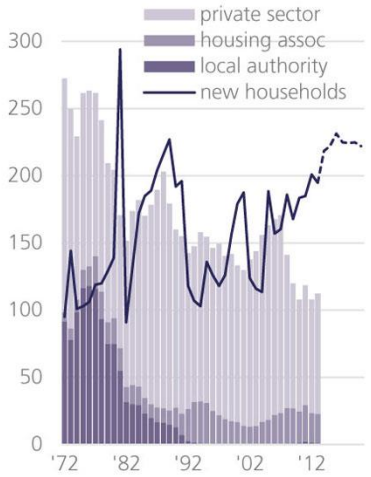


Figure 13: new household formation in the UK against dropping housing supply (UK Parliament, 2015)

Even where developers understand the merits and profit potential for TOD developments, financing concerns make them apprehensive despite supportive TOD regulatory incentives (Transportation Research Board & National Academies of Sciences, Engineering, and Medicine, 2004). The CCT has acknowledged the influence of financiers on the development industry and has engaged institutional funders and found that on the face of it, TOD may be viable because of its value proposition and the long-term market dynamics in Cape Town (City of Cape Town b, 2016).

2.4.2.3 How does a developer make investment decisions?

"our ultimate conclusions can be influenced by a frame of reference, and because we need to believe in patterns, we find them where they do not exist and extrapolate into the uncharted dark" (Diaz III, 2010: 2) and *"the market is not driven by experience or technology but by emotion*" (Fainstein, 1994: 64)

Inherent characteristics of the property market result in information asymmetry and lack of transparency, forcing the developer to make judgement calls (also known as heuristics or rules of thumb) which are guided by an appraisal model and market noise or sentiment (Gallimore & Gray, 2002 and Crosby, Devaney & Wyatt, 2018). This increases the probability of mispricing because investors react emotionally or price market noise into developments. Lowies & Hall (2016) found that South African property fund managers are also susceptible to making emotional investment decisions in reaction to government policy or actions. The study revealed that none of the fund managers surveyed experienced a positive influence from local government on their investment decision processes.

Despite the reliance on noise or sentiment, appraisal models do not account for such factors in the developer's decision-making process (Gallimore & Gray, 2002) and when aggregating regional markets, sub-markets or themes, these appraisal models remove the nuanced understanding required to successfully invest within such markets (Guy & Henneberry, 2000).

Gallimore & Gray (2002) and Knight (2011) found that property developers use market sentiment as an important source of information which they tap into. These networks are particularly important for sourcing new development opportunities, planning consents approvals and building bridges to new geographic markets where local networks (particularly in secondary markets) are territorial. Gallimore & Gray (2002) add further that personal networks are called upon more regularly than public/private information databases, and that sentiment and market data are held in equal importance. Guy & Henneberry (2000) also highlight the highly social nature of a developer by arguing that the property investment decision is formed through an evolving process of negotiation and experiential learning with peers.

In order to determine whether a development is worth his time and effort, the developer will first undertake an appraisal of the project. The variables used in the appraisal is contingent on

past market performance and shapes a developer's profit expectations. A cautious or contrarian developer may acknowledge the overpriced market, but may still concede and give into the herd mentality because his/her competitors are still developing contrary to market sentiment (Henneberry & Rowley, 2002 and Knight, 2011) or because he/she is confident of selling to a 'greater fool' (Fainstein, 1994). This behaviour feeds user and developer exuberance and leads to detrimental overheating of the demand/supply dynamic (Henneberry & Rowley, 2002), thus leaving the development industry worse off. Fainstein (1994) found that this behaviour was not limited to blue chip developers and buyers only, but lenders and regulatory officials too.

Unlike the financial sector, which is premised on the Efficient Market Hypothesis, sentiment is used alongside empirical data, not necessarily because property investors are more irrational, but because of the high information asymmetry and transaction (information) costs (Gallimore & Gray, 2002) associated with development.

Bross (2014) found that there are 11 variables that influence whether a developer will produce affordable housing within a TOD. The primary variables are those in the "economically dominant group''. If any of these factors are not to his or her satisfaction, they will look for other opportunities and are not willing to negotiate. In addition to the investment decision of inclusive affordable housing, the developer must contend with complex TOD idiosyncrasies, market uncertainty and volatility, unclear regulatory costs and an evolving and heated advocacy climate. Thus the developer will levitate towards satisficing: reduce risks while earning a satisfactory profit, and avoid a high-risk development (which a TOD is perceived to be) that has profit maximising potential (Mohamed, 2009). However, larger developers compare opportunities across a larger territory, ensuring a wider project selection to test investment criteria against. Consequently, larger developers are more able to pursue profit maximising behaviour (Mohamed, 2009) and a are more willing to participate in TOD projects.

Economically dominant group (primary group)	Regulatory moderating group	Advocacy moderating group
Land costs	Zoning requirements	Neighbourhood advocacy
Housing market conditions	Infrastructure requirements	Political advocacy
Public subsidies	Parking requirements	Non-profit advocacy
Return on investment	Mixed-use requirements	

Table 6: factors that a satisficing developer uses to decide whether to include affordable housing in his TOD project (Bross, 2014)

Mohamed (2009) and Morgan (2010) contend that small developers who trade in residential properties tend to display satisficing behaviour, adhere to simple and stubborn rules and readily rely on past decisions as a benchmark for measuring good decision-making. Mohamed (2006) adds that bounded-rationality only partly explains a developer's satisficing behaviour and that prospect theory enriches the understanding of the satisficing developer. It would seem then that, unlike larger developers, small developers will be less likely to readily adopt TOD principles to any of their developments.

2.4.2.4 How does the developer perceive policy and TOD?

When it comes to TOD projects, developers view it from the market perspective and tests which sub-market will be best served by TOD in a target area. Guthrie & Fan (2016) reasoned that *"strong demand (not just for TOD lifestyle developments) overall and site specific advantages of transit access combine to make TOD… an especially attractive prospect."* (Guthrie & Fan, 2016: 5). The developer also sees TOD projects as more complex and a niche offering compared to standard mixed-use high density developments (Fleissig & Carlton, 2009 and Guthrie & Fan, 2016). When affordable housing is included in the project package, the complexity is ratcheted up to the point where developers conduct *"brain damage work"* (Belzer et al., 2009: 38) which the public sector cannot endure. Therefore, they first try and understand which sub-market is best suited to this niche development.

In the United States of America, the Transportation Research Board & National Academies of Sciences, Engineering, and Medicine (2004) and Guthrie & Fan (2016) found that developers learnt that young, childless households (millennials) and senior households will be an important

TOD market in the future because they will put a premium on transit accessibility, while Belzer et al. (2009) found that TOD's marketability will be underpinned by demographic and cultural changes. Currently walkability (to/from work and amenities) is seen as more important than transit accessibility (Cervero & Dai ,2014 and Guthrie & Fan ,2016) and if done correctly, walkable TOD developments will command a premium (Belzer et al., 2009).

Despite the potential that developers see in TOD projects, they have cited the following concerns:

Increased development complexity	This includes restrictive building envelopes along transit ways and within dense urban areas and intense co-ordination amongst stakeholders. There are community objections to intensification and densification. These is sophisticated use of public and private finance.
Extra-costs	Speculation leads to increasing land costs and requires compulsory TOD infrastructure. Alternative sources of financing are required.

Table 7: TOD-specific characteristics that developers must grapple with (Lister, 2007; Belzer et al., 2009; Guthrie & Fan, 2016)

Morgan (2010) states that small developers have a larger degree of location freedom in terms of potential project sites and can thus operate with more flexibility and develop more intensely and closer to the urban core. Mohamed (2009), however found that when applying a behavioural economics framework, the satisficing small developer tends to move to large exurban greenfield developments, not because land is necessarily cheaper, but because he or she is reluctant to take on more complex urban infill density development. These developers prefer to employ a "cookie-cutter" approach to exurban subdivision developments and move to areas where infrastructure costs and time requirements are lower. These characteristics are the antithesis of a potential TOD project.

Mohamed (2009) suggests that to encourage densification and a reduction in upfront infrastructure costs to developers without requiring residents to subsidies the infrastructure, government pays for the infrastructure and recoups the costs once the units are sold, *but* this

payment arrangement can only be allowed where densification occurs. This is like a Special Assessment District where infrastructure costs are recouped against the assessed value of the improved property but is paid back over period of at least 10 years. In this case however, the infrastructure is paid up prior to transfer to the first owner. The advantages of this are:

- Where the infrastructure is of a high standard, developer profit increases marginally but project finance risk is decreased, and the development becomes marketable. This is important for TOD-type projects.
- This incentive scheme allows local governments to redirect development to ideal.
- That speculative purchases by the off-plan purchaser are dis-incentivised locations (Mohamed, 2009).

However, Mohamed (2009) cautions that such a scheme will only work in a strong market because the costs can easily be passed onto the buyer, but in weaker markets, the developer may have to bear a larger percentage of infrastructure costs.

2.4.3 How is the developer perceived by the public sector?

"a fervent wish on the part of the public agencies…to get external developers involved in their major projects…has not served the city very well…none of these developers have performed in the way that they told Council they would. They promised a lot and delivered very little…"

(Henneberry & Parris, 2013: 239)

How the developer is perceived by the public sector is perhaps best addressed by asking how the public sector should *not* perceive the developer. Fainstein (1994) and Adams, Croudace & Tiesdell (2012) state that the public sector tends to view the developer with reverence or even "*impresarios*" (Adams, Croudace & Tiesdell, 2012: 2582). There is a risk that this perception allows the developer's behaviour to go unchecked and uncontested by institutions responsible for societal welfare. This also explains the development industry's exploitation of this perception, and its protection of the very institutions that revere them (Keogh & D'Arcy, 1999; Arvanitidis, 2006).

If TOD is used as a policy intervention for property-led regeneration in weak property markets, then the CCT should be weary of TOD being hijacked by such 'property-market-led regeneration'. Public agencies of the 1980's in the UK and USA promoted property-led redevelopment that were too focused on generating surplus and 'trickle-down' wealth. This policy definition led to skewed positive impacts in favour of highly skilled professionals while increasing social and spatial inequality. So vast and entrenched was this spatial restructuring favouring the wealthy that its lasting impacts permeates time and economic cycles, and even in downturns, this property-led inequality cannot be not reversed. In fact, such pro-developer policies may exacerbate the proliferation of these redevelopment programs. As further funding is stymied by national government during a recession, cities will entice developers with greater incentives out of desperation (Fainstein, 1994).

Coiacetto (2009) stated that radical policy change (such the CCT's TOD Framework) may only work where its objectives are aligned to those of the development industry and added that planners tend to see developers as a homogenous group and thus treat them identically. Yet policy will affect various developers differently, by either discouraging or incentivising (Coiacetto, 2001) them.

Adams, Croudace & Tiesdell (2012) suggest that government should adopt an institutional view and see the developer in relation to the State and the market. Yet it is difficult to view the developer in this way when the perception of the developer and the polices built around that perception are superficial and based on neo-classical economics (Fainstein, 1994; D'Arcy & Keogh, 2002; Guy & Hanneberry, 2002; DeLisle, 2010 and Adams, Croudace & Tiesdell, 2012). Even in the spatial modelling of the developer, his/her behaviour and speciality is overlooked or neatly defined characterisations. (Morgan, 2010). These are the same shortcomings that complexity science tries to mitigate against when modelling human or complex adaptive behaviour as presented in the previous section.

In the study by Adams, Croudace & Tiesdell (2012), they found that the executive in Scotland viewed developers as built environment allies whose behaviour can be influenced by policy instruments because they have shared objectives. However, developers saw their relationship with planners as one of conflict, which worsened during economic recessions. What is more

interesting is that their finding is implied after reading policies from the executive in Scotland. None of the policy documents reviewed could explicitly answer how it views a developer.

Adams, Croudace & Tiesdell (2012), Pirounakis (2013), Coiacetto (2001) and Taruvinga & Mooya (2016) state that policy makers should not look at property markets as a homogenous collection of economic actors, but rather as a disaggregated view of nomadic or embedded developer, sub-markets, specialists, geographic spread and size, each with its own drivers, behaviours, strategies and dynamics towards servicing certain sub-markets.

Local or embedded developers are more likely to *"actively work with the grain of a city…"* (Coiacetto, 2001: 199), to take into account community concerns, be more innovative (Henneberry & Parris, 2013), and be more inclined to keep heritage aspects of disused buildings intact (Ball, 2002). Monolithic institutional developers on the other hand, replicate unimaginative developments across geographies (Guy & Hanneberry, 2002 and Adams, Croudace & Tiesdell, 2012), and speculative developers are more susceptible to a planner's influence (Coiacetto, 2001). In understanding these aspects, policy makers can tailor and shepherd specific types of developers and strategies to respond to policy goals. Coiacetto (2001) believes that there is no absolute developer typology and development model and thus policy cannot be developed as if one exists.

A disaggregated view allows for focussed policy intervention that is cognisant of each sub-sectors characteristics, and an informed position places the public sector in a stronger position when entering into development partnerships with developers (Adams, Croudace & Tiesdell, 2012).

Henneberry & Parris (2013) offer a view of how the public sector actor should see the developer: *"…socially embedded with distinct markets, composed of complex networks of actors with their own distinct habits and practices framed by prevailing rules and regulations of conduct."* (Henneberry & Parris, 2013: 230)

Lister (2007) states that public perception of developers has regressed to actors who are *"…greedy, voracious consumers of land*," (Lister, 2007: 9) and whose key consideration is that quality should not come at the price of potential profits. It is therefore no surprise that public

perception during development applications is plagued by *"…scepticism, cynicism and well-meaning but sometimes misinformed ideology."* (Lister, 2007: 9). This perception is partly the result of real estate products that are constructed for what the market currently wants/needs but are of no enduring value.

When it comes to successfully rolling out BRT TOD, Cervero & Dai (2014) found that planners around the world ranked seven other perceived barriers to implementing TOD stations and corridors ahead of "scepticism amongst developers" and "weak market demand". The higher order barriers can be generalised as institutional and funding issues which are largely within the ambit and control of the State. The results imply the importance of ensuring that there is institutional alignment and funding in place before developing strategies or policies to address market issues.

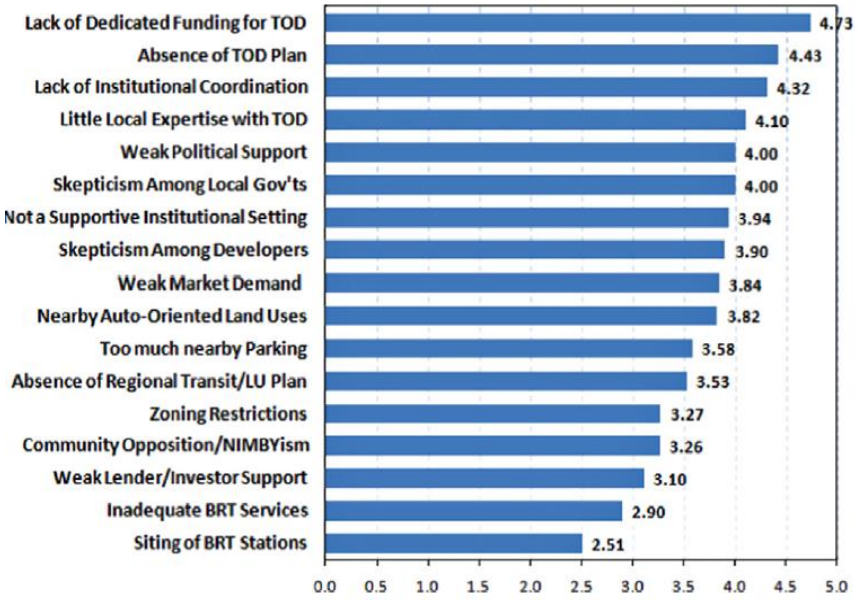


Figure 14: a ranking of perceived barriers to BRT TOD amongst planners (Cervero & Dai, 2014)

2.4.4 Policy, developers and the State

Adams, Croudace & Tiesdell (2012) state that public policy and its instruments are more than an approved regulatory agenda, they are the policymakers' understanding, interpretation and construction of the world in which they operate in and how it works. Policy also helps identify relevant stakeholders and influencers for policy implementation. The primary tool to change behaviour is using either penalties or incentives. The failure of current real estate literature to understand the developer cascades into policy construction. In Chapter 1, Fainstein (1994) described developers she studied in New York and London as having a perverse form of rational egoism (Etzioni, Piore & Streeck 2010:390). Rational egoism is the natural drive to pursue improvements to a human being's material wealth and is the dominant view of the human ego in economics. Etzioni, Piore & Streeck (2010) question the adoption of this view in light of the

"critical moments, people failed to respond the way one would have expected *homo oeconomicus* to respond to what economists believed were irresistible incentives" (Etzioni, Piore & Streeck, 2010:390). This section will briefly explore if prevailing policy construct of developers are also incorrectly viewed.

Taruvinga & Mooya (2016) suggest that if policy makers view the property development industry through an institutionalist paradigm, instead of a neo-classical view, then the State can appreciate the deep impact structure plays in shaping the developer outlook and how intended policy may impact on the development industry as an institution. Ball (2002) states that policy makers must have a holistic view of the developer's perspective in order not to produce reactive policies.

Therefore, it shouldn't surprise public officials that developers are perceived to be less innovative when it comes to achieving policy goals and need to be nudged into action. Where there is no encouragement (and in some cases coercion) poorly designed places manifest (Adams, Croudace & Tiesdell, 2012). Moreover, where the market perceives policy to be onerous, it will move to friendlier jurisdictions (Mohamed, 2009 and Jones, 2014).

There are two fundamental issues with the current state of TOD policy planning. The first is that it does not sufficiently 1) understand the developer as a human, a fallible actor making investment decisions under uncertainty, and 2) no matter how supportive policies are of TOD, it is formulated from a private automobile user's point of view. Preference for private automobile-orientated regulations or incentives, such as single-use zoning, planning approvals or infrastructure funding on the urban periphery, increases TOD complexity, planning approvals processes and costs. Cities that adopt TOD in order to spatially restructure their cities need to overcome hundreds of years of urban growth, regulations and travel behaviour that have been moulded and perpetuated by private transport. Thus, a coercive local government is required to promote TOD (Guthrie & Fan, 2016). South African metropolitan cities need also to address apartheid spatial planning.

Despite the existence of policies which set off price signals for an area, favours specific uses, decreases development risks, reduces regulatory risks and increases certainty (and therefore

maximises utility for the developer) in the development process, developers continue to make decisions that lead to inefficient land-uses (Mohamed, 2006 and 2009). Misguided policy-makers formulate policies that merely reinforced their behaviour. In a study conducted by Mohammed (2006), he found that satisficing developers latched onto habitual projects by developing low-density exurban residential plots with satisfactory profit targets. This despite the policy's intention to limit urban sprawl by offering enticements to densify target-areas. This is because policies did not address developers' underlying concerns of minimising upfront costs and tackling pre-existing heuristics, biases and inertia to adapt to new strategic policy directions.

The findings by Mohamed (2006 and 2009) focused on niche developers operating in a sub-market of the residential development market. He showed the shortcomings of policy intention and market reality: without first understanding who the policy is intended for and their (cognitive) behaviour pre- and post-policy implementation, policy-makers will continue to scratch their heads when, at best, policy-reality doesn't materialise as intended and at worst it creates negative externalities (Coiacetto, 2001; Morgan, 2010 and Adams, Croudace & Tiesdell, 2012).

Fainstein (1994) warns that in the wake of reduced national transfers, local government is left exposed to the whims of the private sector to mould the built environment in ways and places the public sector cannot afford. As demonstrated above, policy must be deeply cognisant of the actor, and must provide tools aimed at marrying developer behaviour to policy intentions. If this is not achieved, local governments will be forced to negotiate with developers with one arm tied behind its back. As explained earlier, the development industry is structured and created in its image, so it may continue to structure and perpetuate the issues that cities are trying to overcome.

Therefore, it is critical for municipalities to re-equip and re-envisage themselves if they want to successfully restructure the spatial and socio-economic landscape using TOD. The next section will explore possible roles for municipalities in this regard.

2.4.4.1 Property and politics

The political environment directly influences a developer's appetite and perception of development risk within a city. Developer enthusiasm for undertaking projects whether, private, public or a combination, is tempered by the political persuasion of those in power (Ball, 2002). Sometimes politicians make unequal trade-offs by encouraging development to attract certain types of jobs to certain areas, and values revenue over all else, at the expense of deinstitutionalising the economically vulnerable. The literature highlighted that when searching for new sources of revenue, lower national transfers weaken local government's bargaining position with developers and place local government at the mercy of developers, at the expense of society.

According to institutional economics, not all social groupings will be represented fairly at an institutional level, and are therefore not able to set the rules of property development, especially if such development threatens the existing vested interests or powers of developers (Keogh & D'Arcy, 1999). The power group will only act on change if it is in their interest or where greater society's interests are aligned with theirs. This limits property market possibilities in favour of those in power (Arvanitidis, 2006), thus requiring political/policy intervention if the property market is reticent to change or to respond to market demand, for example, for affordable housing.

Fainstein (2000) too warns that the CCT must not be deluded that developers will toe the line in pursuing TOD. There is the risk that developers will circumvent the objectives of TOD and 'merely' reshape suburbia without dismantling metropolitan segregation. The CCT should also not be lulled into thinking that bringing order to physical environs of people will bring about a commensurate behavioural change. The spatial restructuring required means that ideals will have to balance the economic expectations of private developers and investors which may lead to "slightly less exclusive suburbs than the ones they [new urbanists] dislike." (Fainstein, 2000: 12). Arvanitidis (2006) makes it clear that because the market can't be relied upon to provide or break municipal segregation (the current institutional arrangement), the State must intervene but, because the State will be reliant on private developers, the CCT may be hampered in providing a sufficient level of inclusion and may not be able to cater for diverse income groups in order to structurally change the spatial landscape.

2.5 What is the role of the public sector in property development?

"…without tension between restraint and entrepreneurship there is no balance." (Fainstein, 1994: 69)

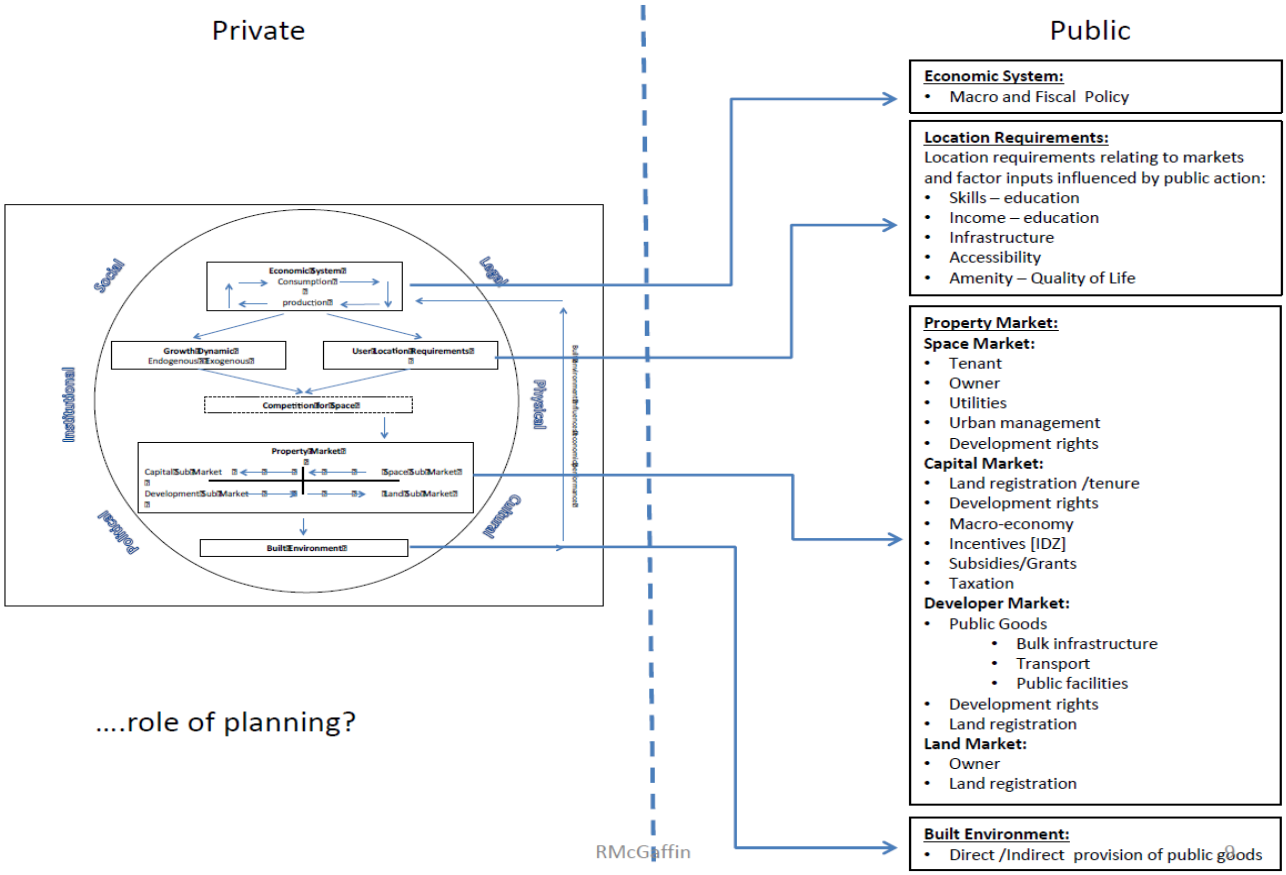


Figure 13: the many ways the public sector is involved the property market (McGaffin, 2014)

2.5.1 Traditional Roles

Figure 8 above illustrates the traditional role of the public sector in the property development industry. However further examination of its role shows that it can be a player (public property development), a referee (restricting and/or directing development) or a facilitator/initiator (land supplier or lead property-led regeneration projects). Its primary and traditional role is that of facilitator and referee by spurring or limiting development through planning policies and bylaws, as well as providing infrastructure for future developments (Fainstein, 1994; D'Arcy & Keogh, 2002 and Coiacetto, 2009).

In South Africa, the public sector is empowered by the Spatial Planning and Land Use Management Act (SPLUMA) to carry out the traditional role. SPLUMA is South Africa's overarching spatial planning and land use management legislation, implemented in 2015. It is

under the SPLUMA legislative regime that the CCT derives its legislative mandate to develop and implement its TOD Framework.

SPLUMA's core thrust is to shift spatial planning and land use management from a procedural compliance regime (Nel & Barnes, 2016) to placing the CCT at the centre of spatial planning and decision-making to redress apartheid spatial planning in the city ('substantive compliance' (Nel & Barnes, 2016)).

By devolving the responsibility to pursue spatial transformation and justice (Bickford, 2017) to metropolitan cities like Cape Town, the Act focusses on implementing principles rather than focussing on prescriptive procedures cities need to adhere to (Mponwana & Mpethi, 2019). The SPLUMA principles are:

- Spatial justice: town planning should be limited to inclusivity of all races but also redress past spatial discrimination and engineering
- Spatial resilience: the livelihood of low-income communities is more vulnerable to socio-economic and environmental shocks and spatial plans need to be cognisant of this.
- Spatial sustainability: legislated environmental protections must be applied to protect prime agricultural land. Urban sprawl, which is an unsustainable development pattern should be limited
- Spatial efficiency: The use of land for development should consider optimizing resource use and placement of infrastructure in an efficient way.
- Good administration: co-operative governance and transparency between all spheres of government. This principle is of vital importance as implementation of this framework requires good governance and co-ordination towards a collective vision (Mponwana & Mpethi, 2019)

No provision is made for a scenario where organs of State may or may not be developers themselves (Ramabodu, Kotze & Verster, 2007).

However, the public sector's impact on developers and the industry isn't defined by legislation and policy only, but by how developers perceive the public sector. Depending on the developer

archetype, some may see public intervention as stifling, whilst others may consider it facilitative (Coiacetto, 2001). Just as New Urbanism requires New Real Estate Financing alternatives (Lister,2007), the State also needs to reposition and repurpose its officials to operate in the new TOD paradigm. This section of the literature will explore what this may entail.

2.5.2 Direct market influence

In the UK, local governments have morphed into developers, taking the lead in catalysing the property-led regeneration programs and policies of the nineties. However, this also opened the local government to market volatility (D'Arcy & Keogh, 2002). Conventionally, local governments have only focused on stimulating property-led economic development, but this accentuates the boom-bust cycle where unrestricted and rapid approvals flood the market, thus leading to wild market swings as mentioned previously by Henneberry & Rowley (2002) and Adams, Croudace & Tiesdell (2012). Henneberry & Rowley (2002) add that it can also indirectly influence the construction sector because the lower the public-sector order book, the greater the proportion of orders generated by the private sector. This can add to the volatility because the public-sector acts as a stabilising force in the market during economic down turns.

Spaans, Trip & van der Wouden (2013) warn that any direct involvement of the State in property regeneration projects can lead to society being worse off. If government can't substantiate why it is getting involved in these projects in the first place, what its criteria for involvement are and how it will monitor and evaluate progress, then private actors will take advantage of government's imprecise policy stance by including projects that do not fit the public investment criteria or objectives and lead to a proliferation of superfluous projects and more cities competing for the same funding.

As stated earlier, the State can also influence the development industry structure and facilitate a diverse, competitive or oligopolistic/monopolistic industry. For example, the more facilitative the bureaucratic processes are, the greater the number of development entrants or the more onerous the development requirement, the more oligopolistic it becomes. While there are many factors that influence industry structure, regulation is an underrated one (Coiacetto, 2009).

2.5.3 Non-traditional roles

Adams & Tiesdell (2010) and Henneberry & Parris (2013) argue that planners should see themselves as inadvertent market actors who shape and stimulate property development; however Jones (2014) criticises this view as *"too simplistic and optimistic"* (Jones, 2014: 578) because it ignores the power of market forces. He agrees with Adams & Tiesdell (2010) and Goliath (2015)'s idea that planners need to be capacitated and further embedded within what Doak & Karadimitriou (2007) describe as the built environment's web of consumption and production. Adams & Tiesdell (2010) believe that planners may be embedded by:

- Making use of property market information (both internal and external) that allows planners to track property market performance or access market signals (Jones, 2014). This will also display how their actions influence the market.
- Expanding the planning curriculum to be multidisciplinary, practitioners should be well-versed in real-estate markets and where they fit in the wider property market institution. The way developers are viewed by planners depends on the school of economics referenced. Capacity and knowledge amongst local government employees are also crucial for the use of Land Value Capture tools and its applicability to TOD projects
- Accessing market-rooted networks. There has been a gradual dissolution of barriers between public and private sector development and as a result, both planners and developers will gain a better understanding of each other, and plan accordingly to trends that they pick up during networking sessions. Trevillion (2002) noted that one of the success factors of the City of Edinburgh's project to release public land to the commercial property market is that it regularly held network sessions with the private sector on the long-term and short-term plans regarding its commercial property roll-out.

Lord & O'Brien (2017) however propose that the 'market actor' roles proposed for planners (and by implication local government) should be superseded by that of a 'market maker', where the planner is seen as a *"first mover or catalyst"* (Lord & O'Brien, 2017: 2) in property developments. For this to happen, planners must re-tool and operate within new paradigms and forge new roles. He points out that this new role entails moving beyond the participative planning paradigm and upskilling in negotiations with the developer, which should be underpinned by game theory (a branch of behavioural economics). In employing game theory, planners tacitly agree that development is a social process. Game theory can be applied in the following ways by the State:

- **First-mover problems:** the launch of a major catalytic development may be beset with uncertainty and suspicion from the outset. Where multiple stakeholders are involved and where there is uncertainty, lack of trust, concerns over free-riding within a new partnership regime and inherent upfront risks, the State can be the first mover to "nudge the market into life" (Lord & O'Brien, 2017: 5) by a) being the common institution to engender trust, and b) formulate a regulatory framework to incentivise co-operation.
- **Coalition formulation:** this is the usual solution to the first-mover issue above, but its resolve will be tested throughout the development period. Planning acts as a frame of reference and stabiliser for divergent interests which may shift as the project ebbs and flows. Local government must set ground rules during its formation and include incentives or penalties to members such that they would be worse-off if they were to act outside of the coalition.
- **Distribution of risk:** the illiquidity of real estate and the long-term consequences of planners' decisions fosters risk-averse behaviour amongst planners and influences a developer's tolerance for risk. Therefore, developers will abide by the status quo even when contrarian interventions are required by them to respond to local markets. In mega developments where the local government has formed a coalition with private actors, authorities may play the first-mover to catalyse the development itself, but it must not undertake any action that will reduce liquidity of developable land, nor take on a marginal unit of risk that exceeds its marginal benefit within the coalition.

When it comes to TOD, developers have listed roles that it would like the State to play:

Land use regulation	Supportive land use regulations for mixed-use developments, but with up-zoning potential; relaxed parking ratios; density bonuses for mixed-income developments.
Better site planning and selection	Transit stations and routes on its own are not TOD. Transit investments must be close to jobs and 'TOD villages' with real walkability. Ideally, a pre-existing mixed-use culture must exist.
Supporting extra-infrastructure	Parking is a major non-transit concern because without a grant for parking provision (structured or underground) the development is less walkable. To ensure better co-ordination between developers and financiers and realism amongst public agencies, the private actors should be brought in at the planning stages.
Full Partnership or JV	A medium to long-term deal between public and private actors who agree to share a balance sheet for a defined project and term. Some TOD projects may require a joint-development partnership while

	other organs of State may be an investment partner. This should result in better co-ordination and a balance between private benefits and delivery of public goods. This structure signals to the market the public agencies commitment to TOD, but this will only be palatable to the market where there is strong demand already, where a city has an entrepreneurial spirit, and where there is strong inter-agency co-operation and the recognition of the non-revenue benefits of TOD.

Table 8: Common issues cited by developers and investors when participating in TOD projects (Belzer et al., 2009; Huxley, 2009; Goliath, 2015; Guthrie & Fan, 2016)

What is clear from the literature is that local government cannot continue to be content, nor to limit its roles to providing and administering effective legislation (Ebohon, Field & Mbuga, 2002) to support developers. They should morph into market actors, if not market makers. This requires a robust knowledge of the real estate markets, development process, the industry and networking. This will also reduce the risk of formulating misdirected spatial development policy and implementing myopic LVC policy and tools (Goliath, 2015).

Role of local government	**Risk to local government balance sheet**	**Market effects** / **Vulnerability to the market**
Passive (traditional role: giving effect to planning and building development management. More of the same)	Low	Indirect through approval of use rights and building development management control. Low
Active (burgeoning role: a developer of non-public uses, entering legal relationships with private companies around developing real estate; active negotiator and not just a planner)	High	Directly adds to market supply of developed space and vacancy rates. High

Figure 9: distinct roles and influence of local government on the property development market (Abdullah, 2019)

2.5.4 Shaping development and developers via policy

A developer's main medium of contact with local government is during the compliance processes in town planning and building development. Generally, developers and the political elite see planning as distorting or intervening in a market-driven undertaking, yet they don't appreciate the benefits planning brings to the social and environmental fabric of a city (Lord & O'Brien, 2017). Before entering the markets as either as a player or through planning intervention, government must analyse the institutional influence specific developer groups have within the sub-markets of the property market. Those with vested interests in these sub-markets will want to ensure that their interests are protected during any institutional change (Uppink, 2016 and Olver, 2019). For instance, Leffers (2018) argues that developer influences are not only limited to planning decisions and political elites, but can and do shape the very legal institution and planning frameworks within which planning decisions are made.

Adams, Croudace & Tiesdell (2012) propose that policy-makers distinguish policies/interventions by the four possible outcomes they intend to influence in the development industry. The classification below, implies that local government needs to move beyond just providing planning and building development regulatory frameworks and be an active market player/maker:

- **Market-shaping outcomes**: influencing developer decision-making at a macro level. This is done at a national level where attempts are made to directly alter the institutional context. For example, the introduction of new tax regime or the drafting of the Integrated Urban Development Framework.
- **Market regulation themes:** restrict developer's freedom of choice or manoeuvrability. Local governments see their primary method of influencing development through planning policy instruments that provide certainty and clarity (Adams, Croudace & Tiesdell (2012) and D'Arcy & Keogh (2002)). However, Jones (2014) warns that where the State tries to curtail fundamental market forces, it will merely lead to unsystematic development and the market will find profitable opportunities on its own terms (Mohamed, 2006).
- **Market-stimulus outcomes:** through impacting on the financial calculations of the developer. Here the State may offer financial incentives or density bonuses to stimulate development in target areas, such as the Urban Development Zone. In this case, a

national tax instrument was used by the municipal town and spatial planners to target ruined inner-city precincts and corridors.

- **Capacity-building outcomes:** enhancing capacity of developers to contribute to policy delivery or the capacity of officials to negotiate successfully with developers. Fora should be established so that local governments and developers can interact regularly in formal settings but beyond planning approval. There is ambiguity in government understanding of the rationale of public policy or the development industry.

2.5.5 TOD policy recommendations for promoting TOD amongst developers

"…without market momentum, planning tools are like sales with no wind." (Belzer et al., 2009: 9)

Below are some policy recommendations (over and above grounding policy in institutional and behavioural economics) that the CCT may implement in various forms in order to create market momentum:

Reduce developer costs and create developer incentives
Transit accessible sites may be prohibitively expensive for developers. Local government should assist by reducing costs, for example, through tax abatements, planning approval fee waivers, streamlining approvals, relaxing development controls within TOD zones (especially parking requirements), conferring rights within TOD zones to build appropriate developments and providing subsidies for affordable housing.
Take advantage of natural alliances
The CCT is encouraged to make alliances with entrepreneurial, small and innovative developers working in niche markets in local areas. TOD overlay zones should not just cater for large developers.
Refrain from determinist-planning and remodel the local government actor
Markets will only develop where there is market demand. Transit does not create markets but can be used to amplify and ease access to existing areas of high employment. Train and educate local government officials to have a sound understanding of real estate markets.
Aim for realistic, not ideal TOD
Implementing sustainable and equitable TOD to scale is proving to be hard in America. Only a few TOD rollouts have adhered to all the TOD principles while the rest have had to select which

TOD principles they can afford to implement. One of the main reasons that this happened is that public agencies had a poor understanding of the influence of market forces, thus TOD was a 'boutique' investment and was only successful where strong regional property markets existed.
Create a TOD land acquisition fund to counter land speculation
The fund can be capitalised by organs of State, specialist impact investors, and philanthropic organisations to buy land in and around stations and corridors to heed off land speculators. The fund can offer revolving low-interest loans to finance the sale of the land to affordable housing developers.
New real estate financing for New Urbanism
Other than LVC, public agencies should catalyse low-return-long-term funding sources ('patient capital') to support small-scale, high-density developments; value TOD developments using Real Options Analysis and derivatives.
Build TOD 3.0
Transit investments must be aligned with real estate development potential so that TOD can generate corridor-wide liveability benefits using corridor-wide financing tools.
Incremental development and diverse interests
TOD infrastructure must be planned to accommodate future incremental developments. Promulgate the use of non-profit entities to create alignment amongst small-scale property owners towards incremental development. The entity should mitigate against the 'prisoner's dilemma': where one owner invests but does not control investment/timing of other owners with the effect that nobody contributes towards development.
Reframe TOD to 'TOD Districts' (TODD) for financial sustainability
Manage a TODD as an extended precinct where infrastructure costs can be recouped using LVC at a district level. These funds should be ploughed back into the district, but only in respect of TOD-related investments. For example, by increasing liveability benefits (structured parking, amenities, etc.) or funding feeder bus servicing. Establish corridor-based governance.
Leverage the capital markets to stimulate the affordable housing sector
While beyond the competence of local governments, National Treasury should consider a program to purchase securitised affordable housing mortgage-backed securities to keep the

mortgage rate low within this sub-market. Alternatively, the mortgaged securities purchased by National Treasury can be for any development within TODDs only.
Seek out alternative alliances
To help mitigate against community resistance to TOD and or affordable housing, local governments must allow affordable housing advocacy groups to propagate the benefits and need for affordable housing in suburban communities. These groups are more adept at communicating, connecting and allaying community angst, whereas developers are being distrustful. Advocacy groups should team up with faith-based organisations which have strong social currency within suburban communities and are perceived as more trustworthy and credible than affordable housing advocates.
Specialised, purpose-built TOD laws
Government should not rely on current, automobile-based legislation that is retrospectively applied to a new urban growth paradigm.

Table 10: A list of policy recommendations to promote TOD delivery by private developers (Belzer et al., 2009; Fleissig & Carlton, 2011; Bross, 2014; Guthrie & Fan, 2016)

2.6 Conclusion

This literature review has highlighted that real estate generally is not well researched nor properly understood beyond a positivist approach. State-based policy approaches have taken its cue from these mainstream positions. Denzin & Lincoln (2013) warn that this type of approach to understanding the world caters for a certain type of science, one "…that silences too many views." (Denzin & Lincoln, 2011: 19). The literature review aimed to carry out a rich, detailed study of the developer. To this end, the literature review has positioned property development as a deeply social process embedded within the property market. It also offered an alternative view of the property market and the developer through the complex adaptive systems, institutional and behavioural economics frameworks respectively. In keeping with the need for a paradigm shift in how property development is perceived, new roles for local governments in the property development process were explored as the static and traditional roles are inadequate for a city looking to roll-out TOD. Lastly, this chapter laid out the experience of developers from the USA where TOD is implementation is more mature.

CHAPTER 3

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

Research of the built environment is strengthened when new and unique knowledge is added and accepted into or replaces the existing built environment body of knowledge. The discovery of such new and unique knowledge is achieved through appropriate and rigorous use of research methods, methodologies and the application thereof (Amaratunga et al., 2002). It is therefore important that the built environment researcher formulates a clear and academically sound research methodology. The methodology chosen for this dissertation was centred around the research objectives, requirements and research questions (Amaratunga et al., 2002; Creswell, 2018). It is for this reason that the qualitative research approach was selected.

"*Qualitative research is a situated activity that locates the observer in the world. Qualitative research consists of a set of interpretive, material practices that make the world visible. These practises transform the world. They turn the world into a series of representations, including… interviews, conversations… and memos to the self…this means that qualitative researchers study things in their natural settings, attempting to make sense of, or interpret phenomena in terms of the meanings people bring to them* (Denzin & Lincoln, 2011: 3).

A good qualitative research attempts to build a rich detailed picture of a complex landscape or situation. This means relying less on normative ("cause-and-effect" and "how the world ought to be") generalisations and instead probing complex interactions of relationships and the meaning of those relationships and concepts (Creswell, 2018).

3.1 Research Requirements

Over and above the merits of using the qualitative research methods, it is the research proposition, objectives, questions, and the researcher's world view that dictates the research methodology. Indeed, the structuring and framing of the research problem reflects a particular interpretation of how the world works (Silverman, 2013). Bell & Bell (2015) state that there are numerous approaches to gathering information and knowledge and that the epistemological foundation used to collect or observe information is critical.

Real estate research is currently skewed towards quantitative-based research and policy interventions that conveniently describe or account for phenomena in understandable units of measurement such as R/m², sale price, interest rates, vacancy rates, etc. (Guy & Hanneberry, 2002; Bell & Bell, 2015). This type of research does not provide and add depth and/or context (Moore, 2015) to property development literature, nor does it adequately examine the processes which drive urban growth nor the actors that enact such processes (Morgan, 2010). This research tendency also precludes other views of the same problem from being explored, ventilated and compared, such as the structuralism lens, or institutional and behavioural economic frameworks.

The research requirements for this dissertation must include a deep probing of world views, meanings and experiences, not the *"'black box' mathematical formalism*" (Morgan, 2010: 205) prevalent in current property development research. The research requirements for this paper must include a deep probing of world views, meanings and experiences, not the *"'black box' mathematical formalism*" (Morgan, 2010: 205) prevalent in current property development research.

The research requirements are aligned with DeLisle's (2010) and Bell & Bell's (2015) assertion that "…properties do not make deals with each other, people do." (Bell & Bell, 2015: 310) and thus calls for more attention to be paid to understanding the influence that social-spatial interaction and networking has on a local property market (Moore, 2015). This can only be achieved by using qualitative research methods.

In line with the behavioural economics theoretical framework, Mohamed (2006, 2009); DeLisle (2010); Morgan (2010); Bross (2014); Drane (2014) and Bell & Bell (2015) view property market participants as human actors who possess particular views, individual fears, desires, histories, and cultures, amongst others things. Each of these characteristics influence their investment decision-making process. These behavioural traits need to be studied and/or acknowledged when conducting real estate research because this is what drives quantitative results (Bell & Bell, 2015). Thus, the positivist and neo-classical economics approaches, which aim to "control and predict phenomena" (Frankel & Devers, 2000: 114), are not always relevant or appropriate when trying to understand an innately social actor (property developer) during a social exercise (property development) (Rapley, 2017).

The research proposition is stated as follows:

The current policy paradigm within which the CCT understands a property developer may not incentivise the developer sufficiently to act in accordance with TOD policy, resulting in the CCT's failure to achieve its TOD objectives.

3.1.1 Research Questions

The following research questions will be examined:

1. What is the depth of the City of Cape Town 's understanding of a developer?
2. What perceptions do developers have of the City of Cape Town and what has given rise to it?
3. What effects, if any, will the Transit-Orientated Development Strategic Framework and other related spatial policies potentially have on the developer's investment behaviour?
4. Are there opportunities for public officials to re-cast themselves?

The research questions have been partially answered by way of the literature review, which reveals that in the TOD context, a new paradigm is needed when it comes to how the State perceives and constructs the property development industry and its actors as an institution. Furthermore, the literature review also reveals that the perception of the future role of public officials and the municipality must be expanded when it comes to TOD.

However, to fully answer the research questions, the dissertation must also consider the developer's perception of the CCT, what informs this perception, the relationship between local government and developers, and their rules of engagement. Lastly, the dissertation will also explore if CCT officials need to be re-cast in a role that is conducive to TOD projects

The sub-sections that follow will set out how this Dissertation will answer the research questions and achieve the research objective using the qualitative research approach.

3.1.2 Research aim and objectives

Considering the research questions formulated above, the aim of this research is to present a more nuanced understanding of a notional property developer in Cape Town, thereby allowing

for the advancement of a developer policy construct and the formulation of tools and incentives predicated on behaviour rather than on policy itself.

In other words, this dissertation aims to use the TOD paradigm to explore whether the the CCT as an organ of State, understands the developer beyond "…what drives the development process or motivates individual developers…" (Adams, Croudace & Tiesdell, 2012: 2592) and as actors "…whose occasional inappropriate behaviour could be corrected …" (Adams, Croudace & Tiesdell, 2012: 2592) through policy tools and incentives. It also aims to mitigate the risk of TOD policy failure by understanding the private sector's perspective on TOD and what it means in the sector within the context of LVC.

Ultimately, it is envisaged that this research will contribute towards correcting the sub-optimal relationship the CCT has identified it has with the general private property market (CCT a, 2016) and will reduce uncertainty and risk for developers looking to participate (Thomas & Bertolini, 2015) in TOD. Moreover, it aims to make LVC more operational for future TOD projects (Goliath, 2015) at the CCT.

3.2 Research Paradigm and Interpretive Framework

A researcher's gender, upbringing, education, religion and ethnicity all influence his/her worldview. These innate and unseen characteristics dictate how and why research is undertaken in this Dissertation and why a research methodology was chosen. The table below lists the researcher's philosophical beliefs and assumptions of the world:

	Definition	Enquiry	Viewpoint
Ontological	Ideas and biases of how the researcher perceives the world and how it should function.	What is the nature of the researcher's reality?	The researcher's view of the world is based on 'relativism. Laws are created by people to fit their vision of reality. This leads to a world of many truths where the facts depend on the viewpoint of the observer. The paper will report on the multiple realities that exists between developers and the CCT.
Epistemological	A specific set of questions that the researcher wants to explore and have answered. Getting as close as possible to the participant's construction of their knowledge.	How does the researcher know this reality? What is the nature, origin and scope of knowledge?	Drawing from the 'social constructivist/ 'interpretivist': reality does not exist by itself, it is constituted and given meaning by people. The focus of this research is therefore on meanings, beliefs and thoughts of developers who are involved in development in Cape Town.
Methodology	How does the researcher go about answering the research question?	What is the process of the research?	The qualitative and idiographic methodology will be used to obtain data from participants' senses. The social (the Paper presents literature which justifies why property development is a complex social undertaking) world can only be understood by obtaining first-hand knowledge of the subject under investigation. The Paper will develop findings and ideas through induction.

Table 12: the philosophical assumptions made by this dissertation (Amaratunga et al., 2002; Groenewald, 2004; Denzin & Lincoln, 2011; Creswell, 2018).

The philosophical assumptions listed above underpin different world views and leads to interpretive framework(s) that are applied to understand this world. The frameworks used are a combination of the 'social constructivist' and 'transformative' frameworks:

- Social Constructivist Framework: aims to understand how the CCT understands the developer, and through the developer's perspective, how the development industry self-identifies. This framework also aims to understand what a developer and the industry mean for the CCT, what informs this view, and what are the implications of this view when it comes to developing the TOD Strategic Framework. Using this framework, the Dissertation also aims to understand what meaning the developer ascribes to TOD, and what the developers overall experience has been developing property in Cape Town. By forming these views of the local property development industry, a rich subjective picture is constructed. The aim is to construct the participants' world view, keeping in mind the researcher's own background and views on the research questions (Creswell, 2018).
- Transformative Framework: Creswell (2018) criticises the Social Constructivist Framework because it falls short of spurring individuals and institutions to improve upon the status quo. He states that knowledge is held and applied by those that hold societal power (in this case, the CCT and developers) and is contingent on the relationships which are built upon this power (developers funding political parties, think tanks and media campaigns, for example). To break the hold of societal knowledge (i.e. that developers know what is best for the urban real estate market), new knowledge must be constructed outside of the bounds of institutional arrangements to help role-players (CCT employees who deal, negotiate and interact with developers) and thus improve society (in this case, through the successful implementation and rollout of TOD through respective public and private developments). Research conducted using this framework usually includes developing an 'action agenda'; however, this beyond the scope of this Dissertation.

Below is a table of the broad research methodological goals devised according to the interpretive frameworks defined above:

Interpretive Frameworks	Researcher goals
Social Constructivist Framework	• To understand how the developer perceives the CCT and what gave raise to these perceptions. • To understand the relationship between developer and CCT from the developer's perspective. • To determine how and why developers make investment decisions, what are the key drivers of these decisions?
Transformative Framework	• To ensure that the CCT adopts a pragmatic, less obsequious and richer understanding and view of the development industry. • To ensure that TOD is successfully incorporated in the urban fabric of Cape Town without undue financial burden placed on CCT. • TO ensure that CCT officials are adequately equipped to deal with developers outside of the typical town planning and building development management context. This is particularly important when structuring deals in TOD catalytic projects.

Table 13: the broad research goals formulated under the adopted Interpretive Frameworks (Creswell, 2018)

3.3 Research Strategy & Design

Nine developers working on or involved with development projects within Cape Town were willing to be interviewed. Based on the philosophical paradigms discussed in the previous section, the interpretive frameworks adopted, and the research questions and objectives the research strategy most suited to this Dissertation is the phenomenological strategy. This strategy informed the research design, which entails:

- a field survey of developers using the localist semi-structured interview and memo technique for data collection (Guthrie & Fan, 2016)
- documentary analysis using the NVivo computerised content analysis technique as a tool of analysis.

The phenomenological strategy aims to understand a person's point of view and the lived experience of a phenomena in a context-specific setting, for example, property development in

Cape Town within a TOD context. The phenomenological data is provided by participants' senses which are empirically unpacked. The overarching question of this strategy is "what was your experience?". This strategy rejects the notion that generalisations can be made (Amaratunga et al., 2002; Groenewald, 2004; Bell & Bell, 2015).

This Dissertation will however only focus on the developer's version of the truth, their world-view and ideas of the truth to stitch a better understanding of what the phenomenon is that they have experienced.

	City of Cape Town	Developers
Truth	What truth does the City believe about developers and their willingness to participate in City-run TOD projects or private TOD projects. What informs their belief?	What truth do developers believe about developing property in Cape Town?

Table 14: Unpacking the truth and world view of the City of Cape Town and Developers (Abdullah, 2018)

3.3.1 Interview Protocol

The literature covered in Chapter 2 motivates that the property market and by implication property development is underpinned by social relationships, networks and roles, and that therefore property development should be studied as a social exercise. Pursuant to the research questions and objectives, research paradigm and strategy, the semi-structured interview was chosen as the data collection method to support the qualitative approach taken.

As stated earlier, a good qualitative research attempts to build a rich detailed picture of a complex landscape or situation. This means relying less on normative ("cause-and-effect" and "how the world ought to be") generalisations and instead probing complex interactions of relationships and the meaning of those relationships and concepts (Creswell, 2018).

The interview method allows for in-depth probing of social roles and real and perceived relations that are woven into the development context (Moore, 2015). Creswell (2018) describes an interview as an instrument used to "unfold the meaning of their (participants') experiences, to uncover their lived worlds" (Creswell, 2018: 3). For this Dissertation, the localist semi-structured interview method was used to recreate the interviewees situated reality through social

engagement, because it would be “naïve to assume that that relevant issues are always on the surface.” (Qu & Dumay, 2011: 251). This method also allowed for flexibility to the local context and for grounded, rich descriptions and explanations of processes and events. The primary purpose in this Dissertation was to unearth the research topic from the perspective of the developers operating in Cape Town (Amaratunga et al., 2002; Qu & Dumay, 2011).

When applied to this Dissertation’s research context, the interview method is appropriate because the construct of the development industry and the developer within the official strategic framework document describes the property developer in no more than three lines (City of Cape Town b, 2016) and the developer’s perception of the TOD Framework has not been studied.

Furthermore, there were nuances that were only discoverable when interviewing developers, where in an interview, being “an exercise in power and communication” (Moore, 2015: 402),the researcher holds the power (Qu & Dumay, 2011). A researcher must try to uncover insights about the developer by:

- Being mindful of what the participant said compared to how they answered, and by taking note of long silences or implied answers. “It is critical for the interviewer to read between the lines and pay attention to hidden messages or ambivalence.” (Qu & Dumay, 2011: 251). (Qu & Dumay, 2011; Moore, 2015).
- Being aware of impression management by the developer, which signals a need by the developer to conform and comply with dominant socials norms and the perceived preferences of others. Neutrality was emphasised when asking the developer what the researcher’s position is on the research topic/question (Moore,2015).
- Considering that the developer may well mirror and bring into the interview setting, the behaviour of the development industry’s power and influence on the built environment landscape.
- Ensuring that the interviewer steer the focus on the meaning of the interview results instead of trying to force the interviewee to be truthful.

Methodological impact on the research process and outcomes

Moore (2015) also cautions researchers that tend to assume role-playing either to extract answers from developers by: 1) mimicking being ‘one of them’ or 2) playing the naïve student or

layperson. This behaviour highlights the fixation on finding answers to dominant social questions without looking more closely at *what* informed the answers to these questions. This fixation leads to normative prescriptions so that the current conditions are improved upon. This mainstream approach would be adequate if the research goal was to ensure legal and policy compliance, but this approach won't uncover the dominant culture of the development industry. Without being made aware of the dominant culture and what drives it, policy-makers will continue to use a shoe-horned conceptualised developer archetypes (Moore, 2015).

Interviews were conducted individually so that each participant is comfortable in the interview setting and so that his/her opinion on the questions were not dominated/influenced by another participant. All participants were assured of privacy and confidentiality (please refer to approved ethics clearance Annexure C) so that answers could be as honest and forthright as possible, which is important when developers are being critical of CCT officials and vice-versa. A link to the nine interview transcripts is provided for in Annexure D.

3.4 Research data collection method and analysis

The decision was taken to interview one of the two protagonists in the property development process: namely, local developers. One party formulates polices and sets the rules of the game (CCT) and strives to change the urban fabric of the city, while the other delivers real estate products and operates within this institutional set-up (property developers). Interviews were conducted at the offices of developers.

To strengthen the case for a polythematic approach to constructing a 'notational Cape Town developer', each interview session was preceded and closed by a common behavioural economic question that indicates *loss-aversion* tendencies and *susceptibility* to framing (Ettinger & Ettinger, 2015). While certainly not a rigorous undertaking, it will show if developer participants are as susceptible to behavioural biases as the rest of us. As stated in Chapter 2, there are many cognitive flaws in how we make decisions under uncertainty and in the presence of risk.

The answers to the behavioural questions were only shared with the participant if he/she requested it. This saved time and protected any egos from being bruised, which may have jeopardised the actual interview session.

3.4.1 Local Developers – General profile of the developer's chosen

The nine developers interviewed were selected based on their embeddedness within the local economy. These types of developers are more likely to be amendable to participating in TOD projects, especially in partnering with the CCT (Guy & Henneberry, 2000; Coiacetto, 2009; Henneberry & Parris, 2013). One of the interview participants had been shortlisted as the preferred developer in the Foreshore Freeway project. It must also be noted that the chairperson of the Western Cape Property Development Forum was also selected as an interviewee as his views represent property developers as a lobby group in the Western Cape.

The general profile of the developers chosen were those that prefer high-density, mixed-use developments for the market and within the urban core. Prior experience with TOD or TOD-like projects was not a requirement. Developers that are registered as Social Housing Institutions under the Social Housing Act of 2008 were intentionally excluded as their products are not sold or rented on the open market. The four broad themes that were covered in the interview are:

- Professional background and personal background
- Understanding of the role and purpose of local government in property development
- Understanding of private property development and how it relates to policy
- Insight into the understanding and comprehension of the TOD Strategic Framework
- Redefining the role and skills of CCT officials

Annexure D has a link to the transcripts for all nine interviews.

3.5 Research data analysis method

The use of code in qualitative research is a bridge, or "transitional process" (Saldaña, 2013: 5), between data collection (interviews) and the interpretation or explanation of that data. Thus, coding for qualitative research is not a precise science, but an "interpretive act" (Saldaña, 2013: 5) based on a slice of someone's world.

Coding essentially looks for patterns in text by assigning a code that has a meaning to a string of text, categorising the same codes together along with the underlying string, thus linking what at first seemed like disparate interview responses under a single category. This is how emergent ideas and patterns occur. Saldaña (2013) stresses that interviewers must pay meticulous

attention to what participants say and reflect deeply on emergent patterns and the meanings of participants.

When constructing codes and categories, data (the lived experiences, world views, truths, beliefs and meanings and exposure to the complexity of the mind) cannot be neatly and discretely bounded by these codes and categories. Furthermore, language used by participants, their constructs and ideas of the world are housed in the responses. Therefore, a diligent researcher will keep codes and categories rooted in the participants language where it is practical to do so (Saldaña, 2013).

3.6 Limitations

There are however shortcomings to this phenomenological strategy and interview method which was mitigated as follows:

Shortcomings	Mitigation
Answers are limited to the questions asked.	Use the localist, semi-structured interview approach. Researched questions will act as a guide to conversation aimed at uncovering world views and meanings that are consistent with the Paper's research questions. Questions will start out as broad and general, but as the conversation on each theme evolves, it will become focused.
Semi-structured approach may lead the interview to veer away from the research topic and questions without either party realising it.	The interviewer must be readily adaptable to changing interview setting and conversations.
Involves abstraction by the researcher because they did not live through the experience.	The researcher is a CCT employee who interacts daily with colleagues who deal with developers, has worked in the development industry, and is in regular contact with developers.
The type of questions, tone of researcher and general social ambiance of the venue may negatively affect the interviewees disposition.	Interviews are to be conducted in a setting where interviewees are comfortable, at a convenient time for participants, and where parties are comfortable to voice criticisms of both sides should a participant from either side be offended by a question. It will be done in strict confidence and the interviewer will make it clear that they should answer the questions on their own terms.
Interviewer-interviewee relationship bound to be influenced the age, gender, biases, background, ethnicity of each participant.	Employ reflexivity: dissolve the personal motivations for undertaking this research. Strive for forthright conversation by preparing well for the interview. The interviewer must display a "respect for and curiosity about what people

	have to say and a systematic effort to really hear and understand what people tell you." (Rubin, 2005: 17)
Different world views may exist between researcher and participant, which opens room for ambiguity and different cultural meanings, even if the same words are used to describe the same event or process.	The researcher must have a deep understanding of the research topic and possible world views that may exists within the topic.

Table 14: shortcomings and mitigating tactics for the phenomenological research strategy using the localist semi-structured interview method. Adapted from (Qu & Dumay, 2011; Bell & Bell, 2015; Moore, 2015 and Creswell, 2018).

3.7 Ethical Considerations

Ethics clearance has been obtained, having addressed the Ethical Considerations satisfactorily.

3.8 Conclusion

This chapter has set out this researcher's world view and how the research questions will be handled and motivated what the most appropriate research methodology is. It is clear from both Chapter 2 and Chapter 3 that property development research is awash with quantitative-based works while this Dissertation has consistently highlighted and called for the use of more complex, qualitative-based methodologies. It must be stressed however that it is not in the built or property environment's interest for one methodology to have a research hegemony. The best outcome is where the built or property environment research regularly employs both methodologies (Amaratunga et al., 2002; Guy & Hanneberry, 2002).

The research methodology formed in Chapter 3 ensures that the research hypothesis and findings are valid and the research process and results are reliable and repeatable (Amaratunga et al., 2002).

CHAPTER 4

CHAPTER 4: RESEARCH FINDINGS & ANALYSIS

This dissertation focuses on the developer's world view and experiences with the City of Cape Town ("**CCT**"). This focus is not indicative of biases towards developers, but is to build a rich, nuanced understanding of a notional developer in Cape Town by conducting in-depth discussions with these actors. The aim is to build a foundational view of one side of the spatial development coin. Ideally, an equally in-depth research report should also be carried to build the world view and experiences of the CCT staff who deal and negotiate with developers daily. The semi-structured localist interview method was used to satisfy the research methodology. The use of double quotation marks in this discussion denotes the actual speech of participants.

4.1 Introduction

This chapter will analyse and discuss the transcripts from the interviews. This dissertation is premised on trying to gauge how the CCT has understood and defined a Cape Town property developer within a Transit-Orientated Development (**"TOD"**) context.

A critical input into such a definition of a Cape Town developer is also dependant on how and why developers perceive the CCT in a particular manner. This chapter will begin by giving a brief profile overview of developers interviewed and then examine key themes that are distilled from the interviews. This section will also analyse the overall perception of the CCT, using positive and negative perception labelling of an interviewee's transcript. The underlying rationale of Chapter 4 and 5 isn't that the CCT should adopt one model of a developer over the other, but to illustrate the richness and usefulness in deploying several economic frameworks to conceptualise a *richer* construct of a property developer, one that may respond readily to CCT edicts.

4.2 General profile of developers

A total of nine developers were interviewed for this dissertation. These are developers that can be considered entrenched in the development landscape of Cape Town and are likely, all things being equal, to participate in public-led catalytic projects, or are likely to pioneer private TOD-orientated real estate products. Interviewees have had at least 15 years' individual development experience in Cape Town, have built and operated mixed-use developments, have developed a real estate product that is valued at a minimum of R50

million, and/or hold a portion of what is developed for long-term portfolios (these portfolios are at least R100 million and some range up to over R1 billion). These developers generally have a core team of built environment professionals who focus on deal sourcing, land assembly and packaging, master planning, costing and project managing. External consultants are brought in to ensure that phases are completed or where deep specialist skills and knowledge are required.

One participant is a professional project manager who has been involved in numerous multi-billion Rand developments in Cape Town on behalf of developers and large institutional clients, while another participant is a professional development master planner and manager who also represents the Western Cape Property Developer's Forum. Seven of the developers interviewed specialise in the Cape Town/Western Cape regional market only, and two of the nine operate on a national scale. Of the seven local developers, one participant is a developer within a listed Real Estate Investment Trust (**"REIT"**)**,** focussing on the Western Cape, while another participant represents a mixed-use precinct whose shareholders consists of a listed REIT and a pension fund respectively.

Quotes from interviewees will be attributed to each developer with their assigned interview number e.g. Developer 1 is denoted as "D1".

4.3 Institutional approach to defining property developers

Developers are aware that wider institutions and players within the institutional arrangements play a leading role in influencing their behaviour. The following influential institutions were consistently mentioned:

1. **The centrality of the economy and property market institutions:** Interviewees were clear that Cape Town's property market cannot be dictated to by the CCT and its policies. It is the market that ultimately dictates the developer's *overall* sentiment. This sentiment comprises of *inter-alia* a developer's appetite for risk, a funder's appetite to lend, opportunities, perceptions of optimism and pessimism, and fellow developer actions. CCT policies and instruments play a supporting role in affecting the developer's sentiment and therefore his or her investment decisions. The TOD Strategic Framework **("the Framework"**) partly-acknowledges this centrality by

acknowledging that incentives will only be effective if the impediments to market-stimulation of well-located land are development-related and within its control. However, "if the area is poorly located, the use of incentives will result in development that distorts the market and will require long term support in order to remain viable" (City of Cape Town b, 2016: 64).

2. **Political & administrative institutions:** Developers understand that political ideology and a political climate of the administration sets the agenda and tolerance for property projects. Ideally, politicians and senior management must set the vision for where it wants the city to be and must then allow the private sector to navigate towards that vision.

The overall view of participants suggests that the constraints imposed by the 'rules of the game' mould developers into highly entrepreneurial mind-sets that find ways to create value "in spite of" (D7) the bureaucratic forces that they are subjected to. However, participants have not denigrated the constitutional role that the CCT plays in the development process (representing and facilitating the views and interests of society), but rather the way the CCT has been fulfilling this role.

4.4 Behavioural approach to defining property developers

The preceding section laid out the wider institutional influences the respondents may be exposed to. This section examines how the nine participants self-identified compared to how the CCT has defined the developer within a TOD context. While some agreed with the CCT's stated definition of what a developer is, others didn't. This highlights the nuances that exist within the local developer community regarding how developers behave and how they self-identify.

Chapter 2 introduced the reader to the behavioural economics theoretical framework and how it can be used to describe *the how and why* a developer makes investment decisions under uncertainty. One of the core concepts from this theoretical framework is in applying 'bounded rationality' (rationality is limited by the tractability of the decision point, the cognitive limitations of the mind, and the time available. Decision-makers thus seek a

satisfactory and sufficing solution instead of an optimal solution.) and the formulation of the 'satisficing developer' (decision-maker strives for adequate rather than perfect results, a pragmatic developer that chooses to rather save on costs (monetary, opportunity, mental) or expenditures). These two core concepts are woven into sections 4.4.2, 4.4.3 and 4.4.4 below.

Table 5 below draws out the main themes of the Framework as it relates to developers. The table format allows for easy comparison of how the CCT defines a developer according to the themes and how developers self-identify according to the themes. The questions in the first column are not the research questions but formed the basis for the conceptualisation of the property developer as contained in the literature. Column 2 contains direct quotes from the Framework, except for italicised remarks by this author. The direct quotes are used as the basis for conceptualising how the CCT views the property developer. Interview results will first be discussed in the following sections and the main findings of each section will be juxtaposed against the CCT conceptualisation of a property developer in Table 20.

Characteristic/behaviour explored in Chapter 2	Direct quote from the Framework	Framework reference page
1.1) Financial decision-making	A developer's principal goal is to derive the highest profit from an investment, which can be achieved through the acquisition (purchase) and disposal (sale) of property or financing the development/ redevelopment of new space. They do this by identifying the demand in the property market such as demand for space to work in, to operate businesses from, to live in and spaces for leisure or recreational activities (Isaac, et al. 2010), determining its financial feasibility and finally by embarking on a process of development. It is critical to note that no private sector led project will get built unless it yields a return on investment or receives a public subsidy to compensate for underperformance (Belzer and Autler,2002). Each developer is unique and will likely have his or her own profit benchmark, which is a function of cost and income and will ideally be projected through a developer's feasibility.	24

1.2)	**How does the developer perceive risk?**	*The Framework mentions that developers may perceive TOD as a financial risk in areas where there is low market demand.* The Framework also: • states that the goal of a developer "is to maximise profits (factors that increase income) and minimise risk (factors that reduce costs)." (24). • *acknowledges that uncertainty arises from public interventions, driven mainly by the statutory development processes.*	16 & 24
1.3)	**Differentiation**	Each developer is unique and will likely have its own profit benchmark, based on their cost and income projections. *This statement does not acknowledge that each unique developer will also have a concomitant risk profile to his or her profit benchmark.*	24
1.4)	**How does a developer make investment decisions?**	*The Framework lists normative factors that developers use to make investment decisions i.e.*: the "key informants". Market indicators include "vacancy rates, property values and rental returns, infrastructure availability, costs, certainty and timing". *It adds further that the CCT will employ incentives* "to change the behaviour of economic actors or influence their decisions to achieve specific outcomes," *but only in well-located areas with latent demand*. *These informants and indicators explain "what" is considered by a developer when making an investment decision.*	24, 50 and 64

1.5)	**How do developers perceive TOD?**	*Developers and investors may find it difficult to conceive that TOD can be profitable particularly in areas that lack market demand. There is a perception that TOD involves higher risks and costs than other types of development.*	16

Table 15: TOD Strategic Framework's conceptualisation of a Cape Town Property developer (City of Cape Town b, 2016)

The following sub-headings list and discuss the various characteristics of the conceptualised developer that were uncovered while interviewing developers.

4.4.1 Self-perception of participants

Developers self-identify as actors responding to the underlying invisible hand of the market (emergent trends) and legislation & policies (institutional signals) until it becomes unfeasible to do so. They navigate through these changes, building in anticipation of and according to the perceived signals of the economy and society. The real estate product which developers produce is an interpretive message that they relay back to society. If developers correctly interpreted these signals, their message will be well-received (a fully bought or let development).

Two participants who have actively engaged with the CCT in trying to improve relations between the development industry and the CCT have alluded that developers are unfairly targeted by society when wider macro & micro economic (market signals) forces converge with failing public policy and service delivery (the wider institutional changes). This sentiment can be summarised by a quote by Herriges (2018) that speaks to the misperception by the public and policy-makers that developers are the source of spatial discontent, albeit in the context of economic growth: *"'There are too many people here already. Just stop all this overdevelopment!' is looking at the building of homes as the root cause of growth, rather than as a result of the economic forces that drive growth and make it profitable. To them, developers are the ones visibly, obviously changing the landscape around them in a way they don't like*".

The quote and the message by Herriges (2018) above may contribute to what one participant averred about the CCT's definition in the above *Table* 5 – row 1.2. That definition is a subtle

acknowledgement of the low-scale tension between the two parties. The definition implies that "these guys (developers) are bastards" (D5) and that "they (developers) are just here to screw us (CCT)" (D5) and/or the end-user because developers are not necessarily in the business of providing long-term quality real estate products but as simply wanting "to make a quick buck and then they are out of here." (D3).

4.4.2 Centrality of risk

"Having an 'edge' and surviving are two different things: The first requires the second. As Warrant Buffet said: 'In order to succeed you must first survive.'" (Thorp, 2017, sec. Forward)

The 'golden relationship' i.e.: the risk/return relationship is mentioned in the Framework but downplayed when defining the developer as mentioned in Table 15 (rows 1.2 and 1.3). The Framework also excludes a definition of what risk is to the developer or what materialises should a risk-event occur. These aspects are addressed in Chapter 2 of this Dissertation. Certainly, from the conversations with participants, none of these developers will consider developing what may be a 'maximum profit' development if the risks outweigh the returns of the project. Many factors were mentioned in Chapter 2 ('How does the developer perceive risk?') that increases or decreases a developer's perception of risk (the risk temperament).

The session was pre and post-faced with behavioural ('warm-up' and 'warm-down') questions (adapted from Ettinger & Ettinger,2015) that relate to risk. Their answers suggest that the presence of risk plays a critical role when developers make decisions under uncertainty. Not all developers interviewed put profits ahead of risk, some place risk at the centre of their decision-making. The centrality of risk in their decision-making is underpinned by the definition of what materialises if a risk-event occurs; namely, the permeant loss of capital (refer to 2.4.2.1). It therefore makes sense that, before a developer can think about generating profits, they must first ensure that the probability of outcomes and the payoff it brings is in their favour. Instead, the CCT misdirects its attention of who a developer is by "…focussing on…the developer's eyes on profits" (D3) and that "nobody really respects the risks that the developer has got to take when he decides" (D3) to develop because "…for us, it is all about risk" (D6).

Considering the centrality of risk (a permanent loss of capital) in a developer's investing calculus, this Dissertation looks briefly at how a developer may make investment decisions under uncertainty. The warm-up and warm-down question results suggest that some interviewees may be prone to inconsistent investment decision-making when the prospect of losses loom.

Table 16 below shows that the investment parameters of both hypothetical property developments were the same, but investment outcomes or scenarios were merely *framed* differently, even though both developments would have the same net effect on their absolute wealth points. The outcomes were first framed as a loss before conducting the interview (warm-up question), and later framed as a gain to conclude the interview (warm-down question). The Scenarios for each warm-up and warm-down are labelled as Risky Scenario (Scenario A) or Safe Scenario (Scenario B).

Please refer to Annexure B, for the full list and structuring of the interview questions.

Hypothetical property development: *You are assessing a development which will have an all-inclusive cost of R4m that may bring in a* ***gross R2m profit*** *but, due to lack of other development opportunities, deal structuring, and unforeseen economic circumstances are forced to choose facing either of the following scenarios once the development is complete:*

Warm Up (outcomes framed as a loss)		**Warm Down (outcomes framed as a gain)**	
Risky scenario: Scenario A Investment outcome	50% chance of **losing** R1m and a 50% chance of **losing** nothing	**Risky scenario: Scenario A Investment outcome**	50% chance that you are **left** with R1m and a 50% chance that you are **left** with the R2m
Net change in absolute wealth point after project completion	R1.5m (-0.5 x R1m – (-0.5 x R2m)	Net change in absolute wealth point after project completion	R1.5m (0.5 x R1m + 0.5 x R2m)
Safe scenario: Scenario B Investment outcome	**lose** R500,000 with certainty	**Safe scenario: Scenario B Investment outcome**	you are **left** with R1.5m with certainty
Net change in absolute wealth point after project completion	R1.5m (R2m – R500,000)	Net change in absolute wealth point after project completion	R1.5m

Table 16: scenario parameters of both warm-up and warm-down questions from which developers had to choose

As Table 17 below shows, if developers were, as the Framework implies, perfect decision-makers that are only required to take into account the "key informants" (City of Cape Town b, 2016: 24) then they would have answered the warm-up and warm down questions consistently. Instead, five of the nine developers were willing to take on the 'risky scenario' when the investment outcome was *framed* as a loss (warm up), but only two of the nine were willing to take on the exact same 'risky scenario' when the investment outcome was *framed* (warm down) as a gain. This result is consistent with Prospect Theory which is discussed in Chapter 2.

This inconsistent investment-decision making is ascribed to loss-averse behaviour when making choices about future scenarios. As described in Chapter 2, loss-avoidance is the

tendency to strongly prefer choices that result in an avoidance of loss instead of a choice that may lead to a gain. A loss-averse tendency leads to a developer's risk temperament increasing in order to make the risky investment more palatable to prevent the possibility of a loss. The modulation of risk tolerance that changes on the perception of losses/gains suggests that 1) developers may also be susceptible to behavioural investment biases and 2) risk, not profit is the "lynchpin in the decision-making process" (French, 2001: 399).

Developer	**Warm Up (outcomes framed as a loss)**		**Warm Down (outcomes framed as a gain)**	
	Scenario A - chose the RISKY scenario with an uncertain outcome	**Scenario B** - chose the SAFE scenario with a certain outcome	**Scenario A** - chose the RISKY scenario with an uncertain outcome	**Scenario B** - chose the SAFE scenario with a certain outcome
1		B		B
2		B		B
3	A			B
4	A			B
5		B		B
6	A		A	
7	A			B
8		B		B
9	A		A	
	5	**4**	**2**	**7**

Table 17: Certain developers exhbit loss-avoidance tendancies (Abdullah, 2019)

The 'warm-up' and 'warm-down' questions in itself are not in any way an empirical method for constructing a notional Cape Town developer, but the behavioural answers certainly make the case that behavioural economics should be (albeit not exclusively) used when developing a 'notional Cape Town property developer'.

Loss-aversion and framing 'misbehaviours' are one of many misbehaviours that humans are susceptible to, but are two that play an important role in affecting investment decision making under uncertainty. Descak (2017) and Hallsworth (et al., 2018) list many others that are relevant to the property market and government policy formulation respectively.

4.4.3 The Satisficing Developer

"So, ja, I don't agree on the highest profit, certainly for a profit" (D7) – responding to the CCT's definition of a developer pursuing maximum profits

The concept of the 'Satisficing Developer' (Mohamed, 2006 & 2009; Morgan, 2010 and Bross, 2014) was introduced in Chapter 2. Interview results show that *some* developers self-perceive to be satisficers and not maximisers who pursue "reasonable profit" (D5) and not "stupid (maximal) profit" (D5).

When assessing which developments to pursue, developers will assess each opportunity according to key metrics, some of which are defined as "market indicators" in the TOD Framework (City of Cape Town b, 2016: 24). These metrics measure *inter-alia*, probabilities, payoffs, duration, cash flow projections, implied and explicit opportunity costs and the risk profile of the development itself.

This points to certain developers seeking satisficing profits, not maximum profits, because if they blindly pursue a project that is projected to produce maximum profits, then the risk associated with such project would be inconsequential. Developers also possess the ability to apply second-order thinking when appraising a project. That is, the developer doesn't look at the projected profits in isolation from the institutional surroundings.

4.4.4 Regulatory-induced uncertainty and complexity tightens their Bounded Rationality

When asked if they would prefer a shortened development timeline (time incentive) compared to a profit-maximising incentive (e.g.: zoning overlay or density bonus), all developers interviewed chose the time incentive. The delays and uncertainties brought upon by the current approvals system is perceived as so financially punitive that any profit-maximising incentive won't necessarily catalyse development within spatially targeted areas. An example of a profit-maximising incentive proposed in the Framework are zoning overlays.

These uncertainties and complexities also influence a developer's rational projection of the future through Bounded Rationality. Bounded Rationality manifests where the world is complex and uncertain and thus our ability to be rational is constrained or 'bounded' by overwhelming data and the decisions that we need to make for the future are based on this data. In order to overcome the avalanche of information and decisions, we develop heuristics to find the optimal decisions based on limited brain processing power and time (Keogh & D'Arcy, 1999; Mohamed, 2006, 2009; Barros, 2010; Chang, 2014). Contrary to what mainstream economists think, we do not possess unbounded rationality, unbounded willpower and unbounded selfishness (Kahneman, 2011; Chang, 2014). We are not an "omniscient economic man" (Lewis, 2001).

As confirmed by the Framework, regulation has hindered' ability to make rational investment decisions due to the increased complex regulatory regime and the uncertainty (such as delays during the approvals process) that this regulatory regime produces.

This either deters them from developing in Cape Town (City of Cape Town b, 2016) or they choose to undertake a project that presents the least mental burden and uncertainty (provided profit thresholds are met). Such a project is one that a developer is used familiar with, one that continues to perpetuate the status quo, and one that would become burdensome if TOD principles and expectations are applied to it. Alternatively, a developer will expect a higher return from the increased risk.

Throughout a project's duration, the developer arrives at countless decision-making points where each decision is made in anticipation of what the future holds. To assist the developer in making sound decisions, they require certainty and simplicity from the CCT so that their bounded decision-making process can be focussed on the conceptualisation, construction & marketing of processes and the development pipeline. The more confident they are in understanding the future, the lower their risk premium and thus their demand for a higher return.

4.4.5 Potential developer archetypes

The Framework states that *"Each developer is unique and will likely have its own profit benchmark."* (City of Cape Town b, 2016: 24). Each developer may be unique, but they can be classified into certain broad archetypes, similar to what Morgan (2010) has done in differentiating between a large and small developer's behaviour (See Annexure A), or to McGaffin, Spiropoulous & Boyle's (2018) differentiation between two fundamental micro-developer archetypes. As shown in Annexure A, there are many criteria that can be used differentiate developer archetypes based on upon certain characteristics. Below are a few characteristics that separate developers from each other, and which will result in different sociological and financial developer expectations.

4.4.5.1 Investment Horizon

The Framework doesn't differentiate between a developer who will hold the asset beyond the end of the construction project and one that will on-sell immediately (or 'flip') on the market. This will have profound policy implications as a developer who intentionally holds will have a greater incentive to participate in nodal, local or precinct management plans, have a longer-term outlook and lower immediate profit expectations. The difference between the holder and on-seller developer archetype is said to breed "two different cultures" (D5) of investment expectations.

A developer who intends to hold a portfolio or participates in large-scale place-making is more likely to view themselves as creating lifestyles. This type of developer creates large-scale environments that contribute towards a certain lifestyle. However, this lifestyle needs to be cultivated over the long-term and is facilitated by the developer. This cultivation requires long-term commitment by the developer who has the temerity and financial resources to ride out market cycles and exit the development when the lifestyle has been entrenched. Whereas a developer who looks to on-sell would want to recoup all his or her costs and take profits or 'exit' the development as soon as possible before the market demand changes or the unsold units starts draining his or her financial resources.

4.4.5.2 Developer size, financial and intellectual capital

The Framework does not differentiate between a small/micro developer, the type of large-scale developer that was interviewed, and those that fall in the middle of this spectrum. A

small/micro developer will have a different depth of intellectual and industry knowledge and type of industry network. Morgan (2010) provides an-depth differentiation in key behaviours between a small/micro- developer and a large one (See Annexure A). The differences in risk temperament manifests in the type of developments they are willing to undertake.

4.5 Perceptions of the City of Cape Town

This section will discuss the results of how interviewees viewed the administration of property development in Cape Town. This theme comprises of two sub-sections: 1) perceptions of the approvals system and 2) perceptions of TOD-related policy.

Coding analysis using Nvivo 12 was carried out to gauge the overall perceptions interviewees have of the CCT. The coding was split between positive and negative perceptions respectively. Below is the cumulative total of coding the perceptions of all the developers interviewed:

Perception	Count
Negative	126
Positive	23

Table 18: results of coding perceptions of interview participants

The table above reflects the cumulative count of perceptions per developer.

It is assumed that the informants of the 126 negative perceptions have come about due to their negative experiences of interacting with the CCT during and after projects. The Western Cape Property Development Forum (WCPDF) has already engaged with the CCT since about 2016 in trying to iron out these negative experiences and to remediate issues listed in the 'Car Park' list of issues shown below, in conjunction with senior leadership of the Planning & Building Development Department. It is believed that momentum for this programme has stalled due to current upheaval at the political leadership level. This illustrates the institutional influences exerted on the development industry. It must be stressed that the Car Park issues arose in isolation of a TOD context.

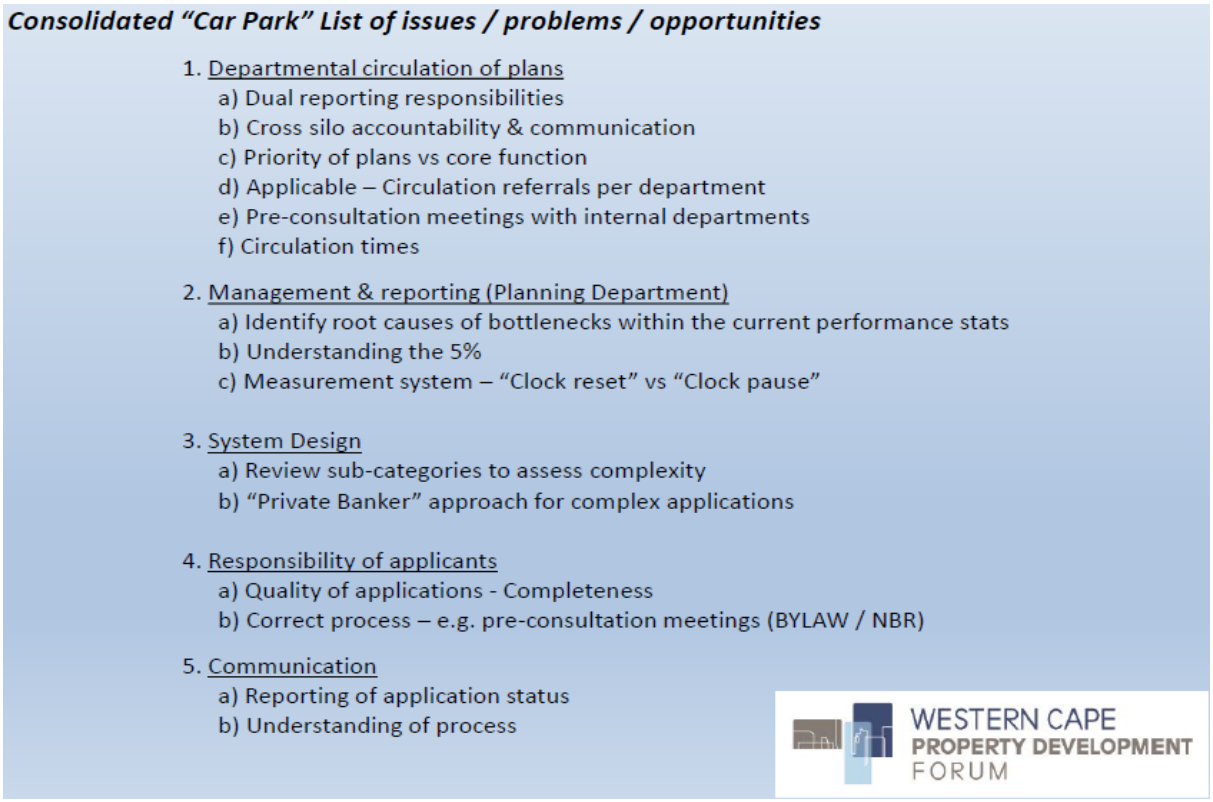


Figure 14: List of issues, problems and opportunities identified by stakeholders in 2016 and reflected in responses of this dissertation's interview session (Western Cape Property Development Forum, 2016). This list is consistent with the findings of the CCT's TOD Strategic Frameowrk's Key Challenges (City of Cape Town b, 0216)

Yet despite the negative perceptions of the CCT, developers see ample development opportunities within Cape Town. Using the JSE as a proxy, it is found that while there are a many international regionally-focussed listed property companies (REITS and non-REITS), there are only a handful of domestic regionally-focussed listed property companies, each either focusing on the Western Cape or Cape Town.

4.5.1 Perceptions of the approvals system

The findings of this Dissertation have, in addition to the issues listed under the Car Park, identified other concerns of developers as indicated by the red rectangles Table 17, that may derail the successful implementation of TOD in the Cape Town. These additional TOD-related issues were raised consistently throughout the interviews. These are policy consistency, local and national political stability, multidisciplinary implementation terms, public acceptance, certainty for developers and willingness to experiment.

Table 1. Critical success factors in the implementation of transit-oriented development (TOD).

	Critical success factor	Increases success	Decreases success
Plans and policies			
1	Policy consistency	Very consistent over time in planning policy supporting TOD, e.g., specific station areas, transit corridors, and other transit-supportive and non-motorized-supportive land-use planning	Very inconsistent planning policy supporting TOD, major changes over time
2	Vision stability	Very stable vision, e.g., city-regional vision for land use-transportation planning or urban sustainability	Very unstable vision, major changes over time
3	Government support	Very good support of higher levels of government, e.g., provincial tax on petrol/gasoline to support public transit, national station location or regeneration policy, provincial funding for cycling infrastructure	No support of higher levels of government, no policies or funding
4	Political stability (national)	Very stable national political agenda supporting TOD	Very unstable national political agenda supporting TOD, major changes over time
5	Political stability (local)	Very stable local (municipal or regional) political agenda supporting TOD	Very unstable local (municipal or regional) political agenda supporting TOD, major changes over time
Actors			
6	Actor relationships	Very good relationships between municipal actors at a regional scale, e.g., communication, overlap in goals and vision, roles	Poor or no relationships between municipal actors at a regional scale
7	Regional land use-transportation body	Presence of a regulatory regional land use-transportation planning body	No regional land use-transportation-planning body (advisory or regulatory)
8	Intermunicipal competition	No competition among municipalities for new developments/funding	Very intense competition among municipalities for new developments/funding
9	Multidisciplinary implementation teams	Widespread presence of multidisciplinary teams implementing TOD	Sector-specific teams (e.g., solely planners or engineers) implementing TOD
10	Public participation	Very high public participation in land use-transportation planning processes	No public participation, public not engaged or interested
11	Public acceptance	Very high public acceptance of high densities and public transit	No public acceptance of high densities and public transit
12	Key visionaries	Many influential key visionaries over time, e.g., elected, citizen or business leaders	No key visionaries over time
Implementation			
13	Site-specific planning tools	Widespread use of site-specific planning tools, e.g., floor area ratio (FAR) bonuses, leasing of air rights, density targets	No use of site-specific tools
14	Regional-level TOD planning	Corridor-level planning, e.g., coordination of land use and transport in widespread transit corridors	No corridor-level or station-area planning
15	Certainty for developers	High degree of certainty for developers, e.g., plans and policies supporting higher densities, tools to enable mixed uses at station areas, and designation of areas for development/transit corridors	Uncertainty; developers are unaware of policies, tools and sites encouraging TOD
16	Willingness to experiment	Actors are very willing to experiment with new policies, practices and tools	Actors are unwilling to experiment with new policies, practices, and tools

Figure 15: Critical success factors identified by Thomas (et al., 2018) that interviewees have expressed the CCT has fallen short in

The TOD paradigm is yet to be implemented throughout the city, thus making it impossible to extract developer perceptions of the approvals system within a TOD context. The perceptions of the current approvals system paint a picture of what developers may experience in a TOD context should the current system be left unchanged. The systemic issues found during the data collection phase are relevant in both a TOD and conventional spatial development framework.

The built environment industry and the construction industry has changed “dramatically” (D3) since 1994. Today developers have access to hyper-mobile capital, contend with frequent changes in end-user trends, and use a range of specialists fixated on specific building components. This has placed greater importance on the role of a project manager who must co-ordinate and lead a group of professionals towards a single objective. The question then arises as to whether the local government system has kept up with these dramatic changes in the industry.

Local government officials have been described as “creatures of statute” (D5) which denotes that their existence and purpose is firmly rooted in legislation, their rigid approach to property development, and that officials reflect the legislative regime of society. Developers understand that officials exist to counter-balance the developer’s interest with “matters for the common good and the community’s interests in being protected from any adverse impact” (City of Cape Town d, 2018: 4) during a development application. Developers also see CCT officials’ roles as that of providing guidance on the future spatial growth of Cape Town and to create a predictable environment for them. Below are the common positive and negative perceptions of CCT officials that were given during interviews:

Positive perceptions of officials	Negative perceptions of approvals system
Chose to make a difference	Lack of knowledge and basic understanding of property and land economics
Technically competent and knowledgeable within their domains	Under-skilled when dealing/negotiating with developers
Readily available for consultations and input	Overstretched, under resourced and always in demand
	Work in stressful and pressured environments
	Stifling and aloof attitude. Heritage officials especially (Heritage Western Cape) are described as overzealous.

	Lack a sense of customer service. Too focussed on ensuring compliance
	Operate in silos
	Poor appointments at senior level, highly knowledgeable but not skilled to manage and lead people.

Table 19: common positive and negative perceptions of the City of Cape Town (Abdullah, 2019)

The lasting impression that developers have of the approvals system can be summarised by "I don't think it is over-regulated. I think it is poorly regulated" (D6). The perception of a poorly regulated and poorly applied system has resulted in the following perceived systemic issues. The numbers in brackets link back to the Critical Success Factors listed in Figure 15 above that is required for the successful implementation of TOD:

- The mind-set of officials is largely the product of the bureaucratic system and processes. There is no apparent training or effort to understand property market dynamics, leading to a narrow focus when dealing with applications (9, 15 and 16);
- Lack of upfront parameters (other than zoning schemes) which dictate what can and cannot be built, particularly about heritage and road schemes (1 & 15);
- Inconsistent, vague, ambiguous, arbitrary and sometimes personality and discretion-driven interpretation of policies and legislation (1 & 15);
- Built environment officials are not properly empowered "by the system" to make decisions. This breeds differential and risk-averse decision-making (16);
- The land production process is an open opportunity to "exploit" (D7) the public participation processes and object for the sake of objecting (11);
- A fragile system powered by politics. Instability at the political level cascades and disrupts an already uncertain, lengthy and exhaustive approvals process, particularly for major CCT-led property projects (1, 4 and 5).

Three of the critical systemic issues listed above will be elaborated on in further detail below. These are the (4.5.1.1) narrow focus on compliance and the rigidity with which policy and legislation is applied, (4.5.1.2) ambiguous policy parameters and inconsistent application (4.5.1.3) the public participation process.

4.5.1.1 *The narrow focus and rigidity*

According to developers, the CCT and its officials are rigid in how they view a development application and narrowly focus on compliance issues only. This makes officials ill-equipped to deal with major development proposals or proposals that imbue creativity. A participant who submitted a proposal for the Foreshore Freeway project described the lack of skills (beyond town and transport planning) amongst officials as a "fundamental problem" (D3). In fact, so fundamental is the problem perceived that their proposal recommended that the CCT form a special task team with whom they can liaise. This signals a lack of faith in the wider human resource base of CCT's built environment officials to deal with what was supposed to be a TOD catalytic project.

Interestingly, most developers interviewed all seem to agree that *other* developers don't have the skills to negotiate or interact with CCT officials, although one developer added that if developers cannot adequately negotiate or interact with officials "…they (developers) go out of business" (D6), thus signalling the critical dependence of developers on the CCT.

Developers are of the view that policy-makers should approve plans that include development flexibility where the developer needs to "plan for cars now, but we need to be able to convert that (parking) to an alternative use" (D7). This will be an important feature of initial TOD proposals.

4.5.1.2 *Ambiguous policy parameters & inconsistent application*

The interpretation and application of policies by officials is described as ranging from inconsistent, lacking confidence, unsure and incoherent, to ambiguous, arbitrary and sometimes personality and discretion-driven. This adds to the developer's risk premium because there is no consistent prescribed framework that they can base their conceptual plans on.

This is perceived to arise from instable and even incompetent leadership at head office level that cascades down to the district planning offices where, depending on the leadership and culture (being either pro-development or anti-development), policies, frameworks and legislation may be interpreted differently where “a conforming and a non-conforming application is a breadth hair apart and it depends on the individual behind the counter and that is not good enough” (D5).

To compound matters, developers view policies as being drafted and left open to interpretation by both developers and officials alike, where each diametrically opposed actor “has an ideal of the world” (D5). There is greater clarity from officials who operate in the engineering services (hard sciences) than from the ‘softer’ disciplines such as urban designers and heritage practitioners. When there is clarity, the developer is less likely to have a differing opinion if officials can base decisions and inputs on ‘hard’ policy. Some participants also raised concerns over the perceived influence of politicians in the either the statutory applications process itself or rushing to release high-profile CCT land without first consulting the private sector.

4.5.1.3 Public Participation process

The general perception of officials is that of being stifling or aloof and this is compounded when 1) the public participation process becomes a publicised event. Officials then tend to err on the side of the public who, ironically, may not share or understand the long-term vision set by the TOD Strategic Framework and the Municipal Spatial Development Framework; and 2) officials seem to frown upon flexible, market-contingent approvals because they themselves cannot comprehend the long-term behavioural or market changes occurring within a local area that a developer foresees.

4.5.2 Perceptions of TOD-related policy

The general sense from developers is that policy-making is done in a void "without (market) context" (D3) and "due consideration" (D3) of market actors when it should be informed (but not influenced) by market realities (including the views of the developer) and that policy must have the ability to adapt with such market realities.

Developers expect the CCT to set the high-level vision and then create an enabling environment for a developer to build towards this vision with absolute clarity and consistency in the application of policy and by-laws. Participants understand the role the CCT must play in the industry and why the industry is subjected to prescribed regulatory frameworks.

Developers cautioned the CCT against the misinformed view that incentives will automatically lead to development. This is a view shared by Taruvinga & Mooya (2016) and discussed in Chapter 2; namely, that a simple carrot-and-stick approach will not work if policy-makers adopt, which the CCT has, the neo-classical economics interpretation of economic actors. The TOD Framework lists the Urban Development Zone (UDZ) as one of many available incentives (carrots) that it presumes will influence developers' decisions to achieve TOD spatial outcomes.

The Urban Development Zone (UDZ) offered tax rebate incentives to the developer within a designated UDZ. This incentive was proclaimed by national government in 2004 and targeted secondary property markets or down-town areas that were identified as in need of redevelopment and regeneration. Allemeier (n.d.) states that a CCT study showed that "less than 7% of development applications between 2004 and 2009 took advantage of the UDZ incentive – regarded as a low take-up" (Allemeier, n.d.). Here the market signal was clear that developers "…will still go where the market tells me to go." (D5), or "…where the demand is…" (D9). It can be inferred that during that study period, the market signalled that it was not feasible to develop in those designated areas, despite the UDZ incentive.

If TOD projects don't make any commercial sense or are perceived as too risky, then developers will not undertake developments. Ultimately, incentives to catalyse do not

catalyse development in and of itself, they catalyse the *latent demand* of an area. Where no demand exists, no development will occur.

4.5.2.1 Transit-Orientated Development

Developers unequivocally support the TOD concept however they did not seem to possess an in-depth understanding of what it represents for the city. Many who acknowledged having heard of it and knowing of it, have a simplified understanding. Most understand it as encouraging development and intensifying and densifying of uses along transit corridors.

The CCT will face an uphill battle in attaining buy-in from the development industry if certain "building blocks" (D3) are not in place. These building blocks will be discussed in further detail in Chapter 5. Those that had a more in-depth understanding of the TOD Strategic Framework acknowledged that partnering with the CCT is a key success factor because of the prohibitive costs for developing TOD-type assets.

A few participants have raised their scepticism about the longevity of TOD in the city. Its perceived by some to be aligned and driven by individuals and not embedded within the CCT itself. This opens the notion of TOD as being at risk of collapse should these champions leave. This scenario has led to TOD being reduced to a "bureaucratic" (D5) or "political throwaway" (D8) term used by the CCT to attempt to manage spatial growth rather "than an actual philosophy of what needs to be implemented." (D8).

When asked if there has been talk amongst their peers of TOD, many responded that there hasn't been much talk; however, one developer (D6) quipped that the reason could be because if they have identified opportunities within a TOD context, they would rather keep it to themselves.

4.5.2.2 Catalytic Projects

One developer suggested that for large-scale TOD 'mixed-use mixed-income' projects to be successfully undertaken up by the developer, the CCT will have to focus on a city block or precinct basis and not a land parcel basis. It is at this scale where private developers are more likely to be interested because it affords 1) the correct location that allows developers to take advantage of its proximity to other uses 2) flexibility that allows the scheme to be profitable

for the developer today, while ensuring that it can conform to future behavioural changes in society and 3) size in order to take advantage of economies of scale when adding infrastructure that supports the live-work-play scheme.

The three factors above are not in and of themselves, enough criteria for project success, as the Foreshore Freeway Project shows. In the Foreshore Freeway Project, while it was in a node with enough (especially residential) demand, only one interviewee was involved in tendering. The over-arching reason is that developers lacked faith in the CCT to deliver on its requirements. A secondary reason is that the project was driven by officials that seemed to lack an in-depth knowledge of the property market, resulting in a project scope that was too vague. This secondary issue is particularly important where the developer is expected to take on most of the project risk.

4.6 Potential effects of the statutory system

It will be shown here that CCT actions and the existing culture may lead to property market outcomes that run counter to some SPLUMA principles and threaten the successful implementation of TOD. The SPLUMA principles are listed as:

- The principle of spatial justice;
- The principle of spatial sustainability;
- The principle of efficiency;
- The principle of spatial resilience; and
- The principle of good administration.

The CCT has already acknowledged most if not all of the concerns and issues raised by participants in the Framework under 'Key Challenges', but what is not explored is the direct and indirect effects the CCT has on the property market. The following section will highlight some of the second-order effects that were raised and implied during the interviews and which may spill-over into TOD projects.

4.6.1 Increased risk-premium, lower housing affordability levels

"…this is the part that the politicians and the officials don't seem to appreciate, the developer doesn't pay, the end user pays." (D5)

According to developers interviewed, the main driver of financial and opportunity costs when readying the land for development lies in interacting and negotiating with the CCT. Figure 18 below confirms this experience where it clearly illustrates that may take on average 2 years to conclude negotiations with the CCT in the land production process (McGaffin, 2018). It is for this reason that a participant stated that "time is the killer" (D7). It stands to reason that the more uncertain and lengthier this aspect of the land production process is, the higher the risk premium a developer will command and with that, a commensurate expectation of return which will be passed onto the end-user. This in effect reduces housing affordability levels in Cape Town (McGaffin, 2018).

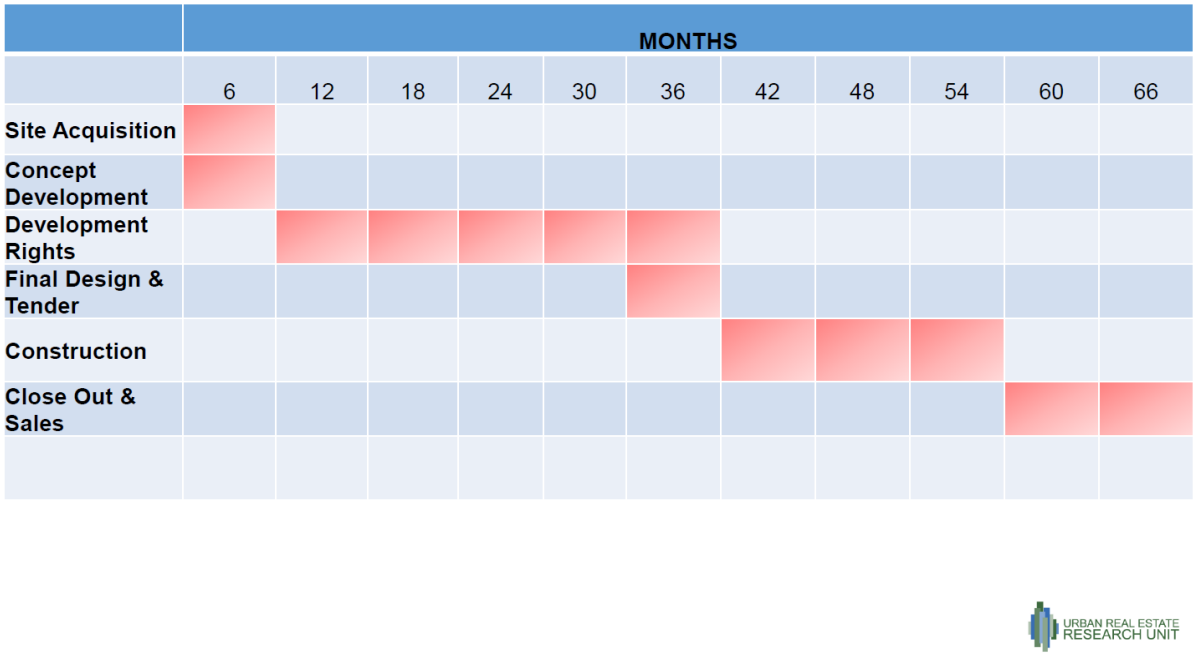


Figure 16: Average development timeline in Cape Town (McGaffin, 2018)

This is consistent with the findings of Nhiwatiwa (2018) where it is reported that when local governments releases its own surplus land for commercial development, respondents preferred that the land be 'de-risked' (for developers) i.e.: appropriate rights are already put in place, before it is released to the market.

4.6.2 Limits the efficacy of Land Value Capture (LVC)

Land Value Capture is an approach in terms of which a public authority can 'capture' private land value increases, arising from public or government investments/interventions. This captured value can be used to offset the costs of the government investment/intervention or be used to fund the general fiscus.

Some of the views of developers interviewed are also reflected in research conducted by Hogarth (2015) which examined what the City-scale impediments are to spurring affordable housing development along transit-orientated corridors. The consistent impediments include limited availability of well-located land at affordable prices, excessive parking ratio requirements, delays in the development process, and a lack of nuanced market demand information. These impediments not only hinder affordable (and therefore dense) housing development in well-located areas, but when read together with Beukes (2016), also preclude the CCT from employing Land Value Capture to fund public investments. Beukes (2016) concluded that certain property submarkets will react differently to public transit investments and therefore *"it may be more fruitful to select (LVC) mechanisms that target high density rental developments… since these are more likely to display positive price responses to the introduction of high quality public transport services"* (Beukes, 2016:57).

Where there is a delay or hindrance in the provision of high-density rental accommodation in transit-orientated corridors, the feasibility and provision of high-quality public transport infrastructure is also negatively affected. Diligent precinct, property and financial management of these developments along with state-led, high-quality public transport infrastructure increases the desirability of such developments which will lead to an increase in property values because occupants are dependent on public transport to go about their daily routines and would want to *live* in developments that can provide other amenities.

Therefore regulatory delays, not only reduce housing affordability levels (McGaffin, 2018) and affordable housing development (Hogarth, 2015), but in some instances, as outlined by Beukes (2016), may also preclude the use of LVC to recoup public funds.

4.6.3 Leasehold becomes less feasible

Unplanned delays during the land production process results in rental property development being less feasible for developers. The developer needs to service the debt and development costs as soon as possible, but higher upfront costs that arise from unplanned delays result in higher levels of liabilities that need to be paid down as soon as possible. Selling on the market allows for the paying down of debt at a faster rate than monthly cash flows generated from rental portfolios.

4.6.4 Affects strategic decision-making

Managing sources and exposure to risk is a key attribute of a prudent developer. So, when a developer faces frequent uncertainty from the CCT, his or her investment decision-making behaviour adapts. One developer (D9) made a strategic decision not to develop on greenfield sites as a direct result of the Car Park issues and now consciously acquires property that generates existing cash flow while formulating and planning for its redevelopment. The existing cash flow allows the developer to focus on land production which will be subjected to the lengthy and vague approvals process while being able to service the acquisition costs of the site.

4.6.5 Risk-averse designs

The approvals system produces risk-averse officials which in turn produces risk-averse development plans. A developer's creativity and entrepreneurial flair is curtailed when they know the system, they are subjected to will penalise them for trying to 'think out of the box'.

4.7 Towards a definition of a notional TOD property developer in Cape Town

This section distils the salient findings of chapter 4 and juxtaposes it against the Framework's conceptualisation of a developer, highlighting some of the shortcomings of this conceptualisation. It also includes potential TOD Policy implications based on the research findings. Please refer to table 20 below.

Characteristic/behaviour explored in Chapter 2	Direct quote from the Framework (page)	Research findings – shortcomings of the Framework's conceptualisation of the developer	Dissertation section reference	Potential TOD policy implications
1.1) Financial decision-making	A developer's principal goal is to derive the highest profit from an investment, which can be achieved through the acquisition (purchase) and disposal (sale) of property or financing the development/ redevelopment of new space. They do this by identifying the demand in the property market such as demand for space to work in, to operate businesses from, to live in and spaces for leisure or recreational activities (Isaac, et al. 2010), determining its financial feasibility and finally by embarking on a process of development. It is critical to note that no private sector led project will get built unless it yields a return on investment or receives a public subsidy to compensate for underperformance (Belzer and Autler,2002).	**Overlooks the Satisficing Developer with Bounded Rationality:** The Framework focusses on a developer that maximises profit. **Overlooks the long-term holder:** The Framework ignores developers that prefer to build a portfolio of income-producing assets to hold for the long-term	4.4.1 4.4.3 4.4.4	1) Satisficing developers are likely to follow the path of least resistance and pursue projects that offer satisfactory & sufficing profits (in lieu of 'highest profit') if they are deterred by complex and time-consuming TOD/development regulations. This also implies that developers are more likely to undertake projects that are replicable/familiar (risk-averse designs) to officials so that the approvals process delays are minimised. 2)These developers may elect to build within the existing rights of the land if it meets its satisficing profit threshold and may prefer time-reduction incentives over profit-maximising ones. This may result in developers choosing to forgo additional bulk applications if inclusionary housing is perceived as risky/complex.

Characteristic/behaviour explored in Chapter 2	Direct quote from the Framework (page)	Research findings – shortcomings of the Framework's conceptualisation of the developer	Dissertation section reference	Potential TOD Policy implications
1.1) (continued) Financial decision-making				3)Developers with a long-term investment horizon have lower immediate profit expectations. Some participants have indicated that, with sufficient scale and collaboration with the CCT, they would be interested in developing their own long-term, middle-income residential portfolios through large-scale, mixed-use, high-density housing. Here again it must be elaborated that "viable/feasible" does not equate to maximum profits as it would generally be more profitable to sell off upper-end housing units to high-income earners (Nurick et al., 2018)

Characteristic/behaviour explored in Chapter 2	Direct quote from the Framework (page)	Research findings – shortcomings of the Framework's conceptualisation of the developer	Dissertation section reference	Potential TOD Policy implications
1.2) How does the developer perceive risk?	*The Framework mentions that developers may perceive TOD as a financial risk in areas where there is low market demand. The Framework also states that the goal of a developer* is to maximise profits (factors that increase income) and minimise risk (factors that reduce costs)." (24*). It also acknowledges that uncertainty arises from public interventions, driven mainly by the statutory development processes.*	**Doesn't acknowledge the centrality of risk-reduction:** Developers interviewed place risk reduction at the centre of their investment decision-making. Developers first interrogate the riskiness of a project before settling on a profit threshold. **Overlooks factors that influence tolerance for degrees of risk:** Perception of risk and risk appetite is partly determined by: a) how a financial scenario is *framed.* If it is framed such that there is a prospect of a loss, a developer may become more tolerant of risks (see 1.4 below).	4.4.2	To reduce their risk exposure in TOD-type developments or where there is low real estate demand, developers may prefer incentives that reduce project risks (particularly project timelines) over profit-maximising incentives such as density bonuses or tax breaks. Figure 10 in Chapter 2 illustrates the potential effect that policy wording has on economic actors and may nudge certain developers into action.

Characteristic/behaviour explored in Chapter 2	Direct quote from the Framework (page)	Research findings – shortcomings of the Framework's conceptualisation of the developer	Dissertation section reference	Potential TOD Policy implications
1.2) (continued) How does he perceive risk?		b) another determining factor may also stem from the source of funding. Examples of sources of funding are banks, insurance companies, family wealth offices, private equity, pension funds, and real-estate focus lenders. **Doesn't define the risk event:** The Framework does not define the outcome of the risk *to a developer* and how this affects the developer's investment decision-making.		Developers that have access to pension funding are likely to be more risk-averse than a developer with bank funding, but a pension fund-backed developer will also be amendable to long-term multi-phase place-making projects.

Characteristic/behaviour explored in Chapter 2	Direct quote from the Framework (page)	Research findings – shortcomings of the Framework's conceptualisation of the developer	Dissertation section reference	Potential TOD Policy implications
1.3) Differentiation	Each developer is unique and will likely have its own profit benchmark, based on their cost and income projections. *This statement does not acknowledge that each unique developer will also have a concomitant risk profile to his or her profit benchmark.*	**Doesn't differentiate/delineate developer archetypes:** Section 4.4.5.1 (Investment Horizon) & Section 4.4.5.2 (size, financial and intellectual capital) are some defining characteristics that determine how certain developers will respond to a TOD paradigm. Certain developers will be more interested in corridor TOD projects, while at the other end, micro-developers may only focus on single erven found within Transit-Accessible Precincts.	4.4.5	1) There is a need to draft a developer archetype matrix for the City. 2) A developer funded with 'patient capital' and who intentionally holds property for the long-term will be more amenable to develop large-scale and area management plans. Developer size is a key informant of a developer's risk temperament (Morgan, 2010)

Characteristic/Behaviour explored in Chapter 2	Direct quote from the Framework (page)	Shortcomings of the Framework's conceptualisation of the developer	Dissertation section reference	Potential TOD Policy implications
1.4) How does a developer make investment decisions?	*The Framework lists normative factors that developers use to make investment decisions i.e.*: the "key informants". Market indicators include" vacancy rates, property values and rental returns, infrastructure availability, costs, certainty and timing". *It adds further that the CCT will employ incentives* "to change the behaviour of economic actors or influence their decisions to achieve specific outcomes," *but only in well-located areas with latent demand*. *These informants and indicators explain "what" is considered by a developer when making an investment decision.*	**Overlooks the 'how and why' of investment decision-making:** The Framework ignores the behavioural informants of investment decision-making and thus implies that developers make perfect investment decisions under uncertainty and that by deploying incentives, developer behaviour will change. However, this research has shown that some developers may: **a) may be prone to loss-avoidance behaviour**: They are willing to forgo risk-aversion to stave off the prospect of a loss (loss-aversion) by taking on more risk in a project or undertaking a risky project.	4.4.2	a) Loss-avoidance tendencies may result in developers initiating or continuing with projects or holding onto loss-making properties that they would not ordinarily undertake nor hold.

Characteristic/ behaviour explored in Chapter 2	Direct quote from the Framework (page)	Research findings – shortcomings of the Framework's conceptualisation of the developer	Dissertation section reference	Potential TOD Policy implications
1.4) (continued) How does a developer make investment decisions?		**b) possess Bounded Rationality** when conducting investment decision-making under uncertainty. The world is complex and uncertain and thus our ability to be rational is constrained or 'bounded' by overwhelming, but limited information, an uncertain future and the decisions that we need to make based on this information.	4.4.4	b) Most developers will follow the path of least resistance when choosing between projects that are familiar/unfamiliar, that offer the least (financial and mental) burden even if it produces a *satisficing* (satisfactory and sufficing) and not maximum profit. In other words, developers may choose not to develop in TOD-designated areas that are layered with incentives if it is deemed too burdensome.

Characteristic/behaviour explored in Chapter 2	Direct quote from the Framework (page)	Research findings – shortcomings of the Framework's conceptualisation of the developer	Dissertation section reference	Potential TOD Policy implications
1.5) How do developers perceive TOD?	Developers and investors may find it difficult to conceive that TOD can be profitable, particularly in areas that lack market demand. There is a perception that TOD involves higher risks and costs than other types of development (16).	This cohort of developers unequivocally supports the TOD concept, however they did not seem to possess an in-depth understanding of what it represents for the CCT. It would seem however that it is not just TOD that is perceived as having higher risk or higher costs thresholds, but the entire approvals system poses a greater risk. Developers prefer that building blocks first be put in place that are properly facilitative of TOD.	4.5	**All** developers interviewed placed a higher preference for an approvals process that is simple, streamlined and predictable instead of revenue-generating incentives such as density bonuses. This suggests that without intervening in the approvals system itself, TOD may not be pursued by the private sector even with profit-maximising incentives such as extra bulk or a relaxation of set-backs. Profit-maximising incentives may increase profitability but may lead to the usual ambiguity, confusion and delays when projects are subjected to the current approvals system.

Table 20: TOD Strategic Framework's conceptualisation of a Cape Town property developer juxtaposed against the main research findings and potential TOD policy implications (Abdullah, 2019 and City of Cape Town b, 2016)

4.8 Conclusion

This section presented, analysed and discussed the interview data. The central aim of the section was to contrast what is defined as a developer in the Framework with what the results suggests. The literature reviewed in Chapter 2 was used to enrich this process. The discussion pivoted on applying alternative economics theoretical frameworks to define a developer, what are developer perceptions of the City of Cape Town and what second-order effects City of Cape Town behaviour has on developer sentiment. Lastly, this section directly contrasted interview results against the Framework's definition of a developer according to five over-arching themes i.e.: financial decision-making, perception of risk, differentiation, investment decision-making process and perception of TOD as tabled in Table 20.

Ultimately, the table presents gaps in the CCT's conceptualisation of what a notional property developer in Cape Town is. In highlighting these gaps, and potential policy implications, this Dissertation has addressed what it set out to do in Chapter 1 and that is to *"to present a more nuanced understanding of a notional property developer in Cape Town, thereby allowing for the advancement of a developer policy construct and the formulation of tools and incentives predicated on behaviour rather than on policy itself."*.

CHAPTER 5

CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

This chapter serves to summarise the salient points that can be concluded from the literature review and interview analysis and interpretation and presents an evaluation of the research proposition articulated in Chapter 1 against the main findings of this dissertation. Recommendations for further areas of study in this field, which were beyond the scope of this dissertation, are also listed.

5.1 Introduction

Chapter 2 opened by stating what this dissertation's "analytical ambition" (Guy & Hanneberry, 2002: 286) will be. That is, to showcase a richer view of the notional property developer in Cape Town within a Transit-Orientated Development ("**TOD**") context. If TOD is a paradigm shift in how the City of Cape Town ("**CCT**") will manage the spatial growth and demographic distribution of Cape Town and expect developers to follow suit, then surely it must view the developer and its relations with the built environment within an equally radical paradigm.

To achieve this ambition, this dissertation set out to explore to what extent the CCT understands the property developer within a TOD context. This was explored by juxtaposing the perspective of the CCT (through the Framework) with the developer's (interview participant's) self-perception of developing in Cape Town (Table 20). The interviews also explored if there is a need and/or opportunity for CCT officials working in the built environment to re-cast themselves. These are important considerations for the successful rollout of TOD.

The research method consisted of rich qualitative interviews where the negative and positive perceptions of the CCT were coded. Deeper analysis of these perceptions and what gave rise to them where presented in Chapter 4, where the results of the interviews were presented and analysed.

This chapter presents an overview of the key findings, presents conclusions, and recommendations drawn from the analysis, and how the study has addressed the research proposition and research questions.

5.2 Conclusion

Below is a summary analysis of the main findings of this dissertation. This dissertation has found that the CCT has a limited understanding of a developer in Cape Town. This limited understanding runs the risk that the CCT's TOD levers may become ineffective for the purposes for which they are deployed and may even impede the CCT from achieving stated policy objectives.

A broader paradigm of understanding has instead found that developers require 'building blocks' or pre-requisite elements to "shift their current business as usual approach to one aligned to the principles and objectives of TOD" (City of Cape Town b, 2016: 46) before any levers can be deployed. These building blocks should be complimented with what the CCT calls 'strategic levers' (City of Cape Town b, 2016: 50) to leverage a change in developer behaviour.

The CCT TOD levers are:

- Better engagement (a shift from control to collaboration);
- Incentives to stimulate development consistent with TOD development guidelines;
- Disincentives to curb development in undesirable locations;
- Streamlined and transparent planning approvals; and
- Intervention or the use of the property cycle as a forecasting tool for planning.

The building blocks are illustrated in Figure 17 below and are discussed in more detail.

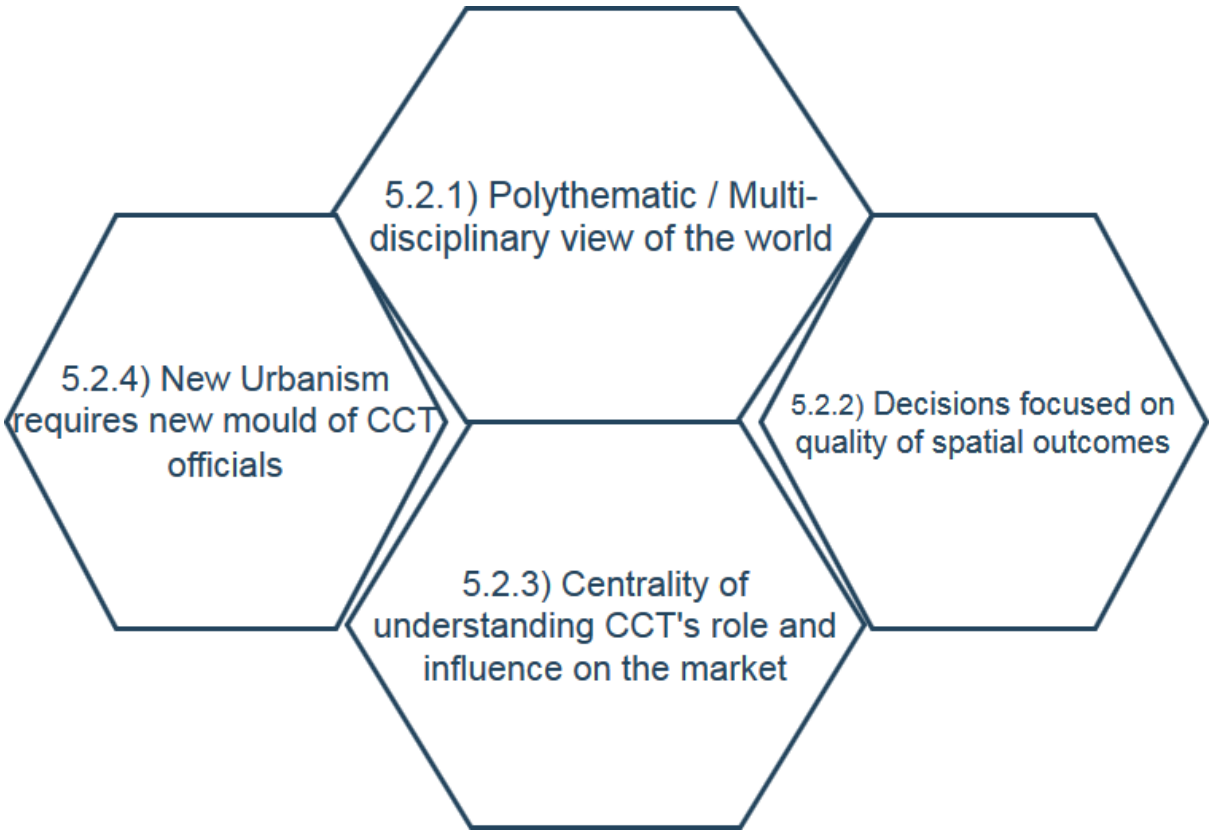


Figure 17: Four building blocks this dissertation recommends be put in place to shift developer behaviour within a TOD paradigm (Abdullah, 2019)

5.2.1 Narrow conceptualisation of a TOD developer

Adams, Croudace & Tiesdell (2012) state that public policy and its instruments are more than an approved regulatory agenda, they are a declaration by the policy-makers of their understanding, interpretation and construction of the world they operate in and how it works. The policy also indicates who the relevant stakeholders are, and which policy or framework is technically sound and politically palatable.

The model of the developer used in the TOD Strategic Framework seems to have very strong neo-classical economics undertones. This view of economic actors is prescriptive in how they *should* react based on the concept of the perfect rational actor. This actor can make perfect and rational choices all the time, operating in the ideal world. Policy makers presume that policy instruments and incentives are a one-size-fits-all solution and developers will react according to policy prescripts.

This may not happen because, as this dissertation has shown, there are other sources of influence that subconsciously guide the investment-decision-making process. This dissertation has shown that institutional arrangements and behavioural biases also affect developer decision-making, especially as it relates to risk. These oft-ignored 'influencers' on investment decision-making dictate the developer's inclination or disinclination towards TOD-type projects and the developer's willingness to collaborate with the CCT within a TOD context.

This is consistent with the critique by Morgan (2010) and Moore (2015) whereby inaccurate framing of real estate research (using normative, prescriptive research) leads to inaccurate policy constructs.

The dissertation has found key traits that may exists amongst certain types of developers. The two central findings are found within the institutional and behavioural context. The institutional context will be discussed in further detail in sub-section 5.2.3.

The behavioural context has found that developers may not necessarily be responsive to TOD tools and incentives that focus on profit maximisation. It was found that some developers possess one or all the following traits, based on key concepts from behavioural economics, read together with potential TOD policy implications found in Table 20:

Key behavioural traits uncovered	Potential TOD policy implications
The Satisficing Developer and his or her Bounded Rationality	1) Satisficing developers are likely to follow the path of least resistance and pursue projects that offer satisfactory and sufficing profits if they are deterred by complex and time-consuming TOD/development regulations. This also implies that developers are more likely to undertake projects that are replicable/familiar (risk-averse designs) to officials so that the approvals process delays are minimised. 2) These developers may elect to build within the existing rights of the land if he or she meets their satisficing profit threshold and may prefer time-reduction incentives over profit-

	maximising ones. This may result in developers choosing to forgo additional bulk applications if inclusionary housing is perceived as risky/complex.
The centrality of risk-reduction, not profit-maximisation	To reduce their risk exposure in TOD-type developments or where there is low real estate demand, developers may prefer incentives that reduce project risks (particularly project timelines) over profit-maximising incentives such as density bonuses or tax breaks. Figure 9 in Chapter 2 demonstrates the potential effect of policy wording on economic actors that may nudge certain developers into action. Developers that have access to pension funding are likely to be more risk-averse than a developer with bank funding, but a pension fund-backed developer will also be amendable to long-term multi-phase place-making projects.
May be prone to behavioural biases	Loss-avoidance tendencies may result in developers initiating or continuing with projects or holding onto loss-making properties that they would not ordinarily undertake or hold.
Willingness to develop long-term residential property portfolios	Developers with a long-term investment horizon have lower immediate profit expectations. Some participants have indicated that with enough scale and collaboration with the CCT, they would be interested in developing their own long-term middle-income residential portfolios through large-scale, mixed-use, high-density housing. Here again it must be elaborated that such developments are not maximum profit-generating as it would generally be more profitable to sell off upper-end housing units to high-income earners (Nurick et al., 2018).

Table 21: Key developer traits uncovered through this research but not found in the TOD Framework (Abdullah, 2019)

5.2.2 Decisions not focused on quality of spatial outcomes

More important than making a decision with beneficial consequences is making a decision that is easy to explain and defend, especially should the consequences turn out badly - Sutherland (undefined/ed: 5)

The entire local government approvals system is perceived as an overwhelmingly negative experience for developers. Officials are perceived to be risk-averse in their application of policy and decision-making. The key drivers behind this are political pressure, under-resourced staff compliment, existing culture within the approvals system and unwillingness to think creatively or collaboratively. Public participation, which is intertwined with political pressure, was routinely identified by developers as a major contributor to their risk premium. Officials in turn are guided primarily by public pressure to first think how easily a decision can be explained or defended, and then on the outcomes of that decision.

In other words, it is easier for politicians and officials to make a decision within the current spatial paradigm, which is informed by the apartheid spatial planning and existing imbalances in the distribution of different types of residential development (City of Cape Town c, 2017: executive summary), than to defend a planning decision that runs counter to the vested interests of, for example, home owners that are used to living in spaces designed around a private transport centric, low-density suburb.

5.2.3 Centrality of understanding City of Cape Town's role and influence on the property market

Before the CCT attempts to understand the property developer and the property market, it must first understand its role and influence as a property market institution on the developer's investment behaviour. The CCT already acknowledges in the TOD Framework that the approvals system is fraught with delays and uncertainties, but it does not take the next step in understanding: a) how the property market functions; b) how each actor within the property market operates and makes decisions that affect the broader market; and c) where the CCT as an institution fits within the wider market.

By understanding the social and market dynamics of property and the CCT impacts of these dynamics, the CCT may, for example be able to understand its role in the following ways:

a) **Social dynamics:** according to developers, the public participation process (often cited by developers as a main cause of delay) is debilitative and skewed in favour of those who object and have a vested interest in seeing a development fail. The wider implication for the CCT and TOD's intention to promote mixed-income housing and urban-infill developments is that those that are already represented within the institutional arrangements (fellow developers and existing home owners) may express greater opposition to housing development (across all income bands), in order to protect their assets' value from declining (e.g.: an increase in supply of housing will lower the price of housing in a local area). TOD-type applications may be vulnerable to political pressure and short-term group thinking amongst home-owners (Coelho, Dellepiane-Avellaneda & Ratnoo, 2017).
b) **Market dynamics:** If CCT understands the market and the players operating within it, it may, for example, use a sub-set of private developers, such as the micro developer, as a key agent for the provision of affordable formal housing (McGaffin, Spiropoulous & Boyle, 2018).

5.2.4 New spatial paradigm requires a new approvals system and City of Cape Town official

Developers have made it clear that before the CCT rolls out TOD Strategic Levers to shift developer behaviour, the CCT should first focus on getting the basics rights within the approvals system if it cannot overhaul it. It needs to instil a customer-centric culture and reduce the mental burden (as per the Bounded Rationality concept) when navigating the approvals systems such that it is easily understandable, simplified and predictable, but not open to abuse.

In doing so, CCT will start to rebuild confidence and trust in the system, without which, new spatial agendas, incentives and creativity will be looked upon with scepticism and reticence. Where CCT requires the active partnering of private developers, it must first instil trust and confidence by ensuring a proof-of-concept is developed and that officials are adequately

equipped and skilled before it undertakes major catalytic TOD property regeneration projects (Lord & O'Brien, 2017 and Thomas et al., 2018).

A new mould of official needs to be cast that will be able to package, manage and negotiate on major CCT-led property projects. The job requirement focus at senior levels should be on aptitude and personality, and then on experience and knowledge.

5.3 Recommendations

Based on the research results and findings, the TOD Strategic Framework does not sufficiently conceptualise and understand the developer to effectively change his/her investment behaviour.

The incentive structure should *shift from profit-maximising incentives to that of risk-reduction.* This will be a critical prerequisite, although not exclusively, where there are perceived high upfront risks, particularly for catalytic public-led property development (Lord & O'Brien (2017).

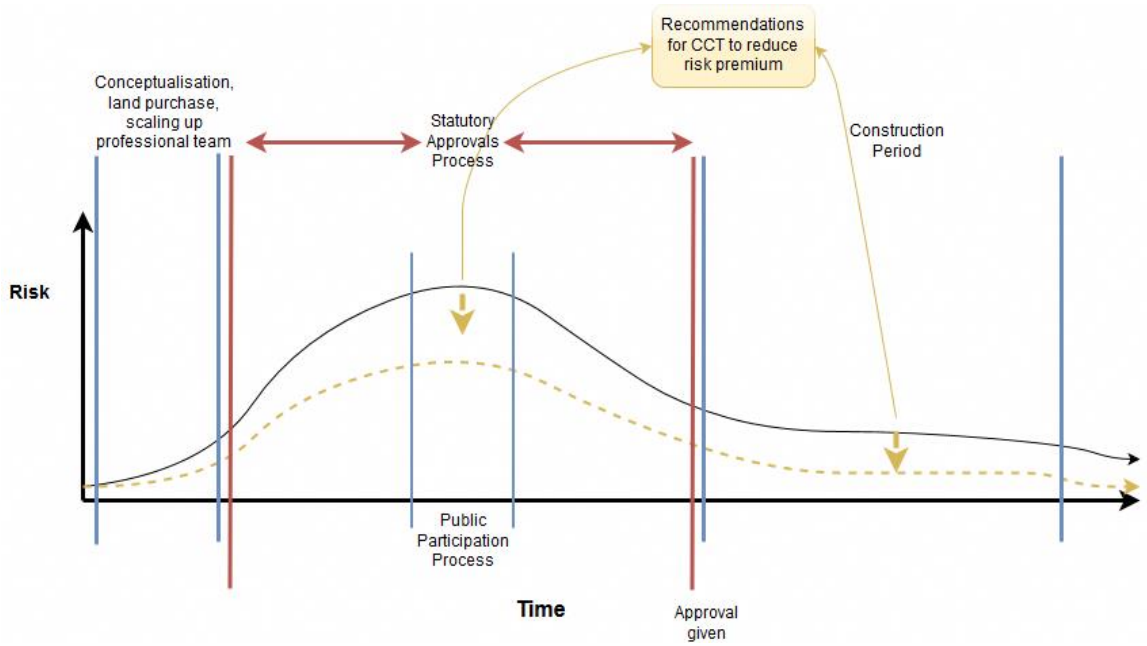


Figure 18: Reducing the risk premium for developers (Abdullah, 2019)

In reducing the upfront risks, the CCT automatically, all things equal, places the developer in a position where *"the upside potential exceeds the downside risk"* (Marks, 2014: 4). However, there are three recommendations which the CCT must first explore:

5.3.1 Understand the development actor holistically

There is more to a developer's investment behaviour than the implied perception that they are profit-maximiser first, then risk mitigators that will readily respond to levels of enticements.

The TOD Strategic Framework has failed to conceptualise a developer that may be influenced by wider societal undercurrents and institutional arrangements. Secondly, and as stated in the preceding section, this cohort of developer interviewed focusses on risk-reduction and not profit-maximisation. Other important characterisations unearthed during interviews include traces of preferring satisfactory and sufficing ('satisficing') profits instead of maximal profits, bounded rationality, behavioural biases, and a willingness to develop and hold a long-term portfolio of properties.

The proposed levers found in the TOD Strategic Framework apply a blanket treatment to developers that act in isolation, make understandable and rational investment decisions and readily respond to a set of tools and incentives for designated spatial areas.

A developer with some or all the behavioural traits mentioned above will respond very differently, and possibly contrary to objectives, tools and incentives that were formulated for a normative developer.

5.3.2 City of Cape Town must understand its role and influence on the property market

The CCT must understand that it is not apart from the property market, but a component of it.

Both developer and the CCT are in constant competition to decide what is in Cape Town's best spatial interest. The CCT's primary role from a policy perspective is to counter-balance "the owner's interest in developing the land with the City of Cape Town's interest in matters for the common good and the community's interests in being protected from any adverse impacts that such a development might generate."(City of Cape Town d, 2018: 4)

Its stated role definition above highlights the CCT's narrow self-perception. This dissertation has found that not only do the actions of the CCT have a direct effect on the local property market, and by extension, the rules of the game, but that its own actions hinder it from achieving its own spatial objectives. Perhaps because it views the property market though its narrow and self-perceived paradigm that it cannot see the second-order effects that its actions have.

Developers have expressed the view that if the CCT wants to spatially restructure Cape Town, it must see itself as being part of the property market and not just a creator, administrator and enforcer of rules. It must "have one eye on the rule book, and one eye on (market) reality" (D5). This doesn't require that officials become market experts, but that they have a semblance of industry and market knowledge. This will allow CCT to be flexible and responsive to TOD applications.

It was suggested by participants that implementing a redefined role at personnel level should start at the recruitment phase for senior positions. Recruitment should focus first on the personality type and then the competencies and experience. It is important to ensure that officials who step into a redefined role have the appropriate attitude and mind-set. In other words, the personality profile or description should lead the job profile or description at senior management level.

Furthermore, higher value projects such as the CCT-led TOD catalytic projects should be differentiated from simpler applications. This differentiation can be delineated by the "The McDonalds way" (D3) (simple, high volume applications) and "the private banking way" (D3) (complex, high value applications) where an official with a multi-disciplinary hat is assigned to complex, high value applications (Thomas et al., 2018).

5.3.3 Bounded Rationality may determine degree of participation in TOD projects, profits

The CCT must first reduce the high levels of uncertainty and unpredictably in the approvals system before it is offering levers of enticements.

The level and magnitude of uncertainty and unpredictability that exists within the approvals system is so great, that developers "don't know what they (the CCT) are going to come up with next" (D5) and would "…rather not have any of those incentives, and just have a simple, clear, process of engagement." (D5). This means they cannot price nor plan for the approvals system in its feasibility studies with confidence. This cohort of developer places a higher premium on an approvals process that is simple, predictable and has a clear process of engagement, *than* it does on a revenue-generating incentive such as density bonuses or other mechanisms.

As shown in Chapter 2, despite the potential that developers see in TOD projects, developers may be dissuaded due to the following concerns:

Increased development complexity	Restrictive building envelopes along transit ways and within dense urban areas; intense co-ordination amongst stakeholders; community objections to intensification and densification; sophisticated use of public and private finance.
Extra-costs	Speculation leading to increasing land costs; compulsory TOD infrastructure; alternative sources of financing required such as LVC.

Table 22: TOD-specific characteristics that developers must grapple with (Lister, 2007; Belzer et al., 2009; Guthrie & Fan, 2016)

When applying the concept of Bounded Rationality to the table above, developers in Cape Town may be reluctant to pursue such projects even if the CCT focusses on reducing the 'extra costs' or by providing incentives such as various discounts, rebates and payment holidays as mentioned in the Framework. Furthermore, if developers must choose between pursuing a TOD development with 'increased development complexity' while the approvals system remains as is, developers will choose the path of least mental and financial 'resistance' and choose a conventional development.

By simplifying, streamlining and making the approvals system predictable, the developer's bounded rationality expands, thereby making him or her more amenable to deploy his or her mental functions to new types of developments, such as TOD that comes with new forms of financing such as Land Value Capture.

Lastly, the popularity of incentives is largely dependent on the state of the current property market. However, an initiative to simplifying, streamlining and making the approvals system predictable, is not dependant on property market activity and is largely within the control of the CCT.

5.4 The Achievement of Research Aims & Objectives

5.4.1 Research Aim

This research aims to present a more nuanced understanding of a notional property developer in Cape Town within a TOD context, thereby allowing for the advancement of a developer policy construct and the formulation of tools and incentives (levers) predicated on behaviour, rather than on policy.

It is not meant to draw a distinction between a right or wrong model of a local property developer, but to investigate what a less inaccurate model would look like using alternative economic perspectives that capture the multiplicity of realities.

5.5 Evaluation of research questions and research proposition

This dissertation addressed the following research questions:

1. **What is the depth of the City of Cape Town 's understanding of a developer?**

   The CCT seems to be over-reliant on a narrow normative, neo-classical economics construct of a property developer. This TOD policy construct has led to TOD tools and incentives (levers) focused on a developer that operates free of institutional influences and implied perfect decision-making, and free and unencumbered of behavioural biases.

2. **What perceptions do developers have of the City of Cape Town and what has given rise to it?**

   The overriding perception is negative, fuelled primarily by a perceived lack of knowledge and a basic grasp of property market dynamics, reliance on defendable decisions to the public and politicians, lack of clear policy parameters and inconsistent application thereof, and a lack of a customer-centric culture. It seems that the CCT's own narrow self-perception as merely an administrator and enforcer of planning and building development policies is the primary cause. By seeing itself so narrowly it precludes the municipality of thinking of itself as part of and influencing the property market beyond its administrative and enforcement role.

3. **What effects, if any, will the Transit-Orientated Development Strategic Framework and other related spatial policies potentially have on the developer's investment behaviour?**

   The CCT, as a component of the property market, is already an unconscious property market 'influencer'. The findings of this dissertation suggest that the current administration of policies by CCT officials has been found to contribute towards increasing the developer's risk premium, distorting housing affordability, potentially limiting the efficacy of using Land Value Capture, reducing the feasibility of developing leasehold real estate products, actively affecting strategic decision-making of the developer, and contributing to the submission of risk-averse designs.

4. **Are there opportunities for public officials to re-cast themselves?**

   An opportunity exists for public officials to re-cast and reskill themselves in a TOD context. Developers are of the view that there is too much focus on making easily understood and defendable decisions to the public and politicians while not focussing on the low-quality spatial outcomes such decisions have on the built environment. Furthermore, this re-cast official must be market and institutionally-cognisant, while senior personnel should be strong in aptitude and have the personality to lead and provide clear direction to subordinates.

5.6 Evaluation of research proposition

As articulated in Chapter 1, the research proposition is stated as:

The current policy paradigm within which the CCT understands a property developer may not incentivise the developer sufficiently to act in accordance with TOD policy, resulting in the CCT's failure to achieve its TOD objectives.

The dissertation has shown that the CCT's TOD Strategic Framework has a limited understanding of a property developer. This limited understanding in turn has led to the formulation of TOD policy levers that the CCT intends to use to incentivise developers to participate in TOD-type developments.

This blanket understanding of developers may lead to limited success in TOD projects particularly in nodes with weak property markets. This dissertation has shown that there are pivotal institutional influences and behavioural traits missing from the CCT's understanding of a developer and may lead to policy failure. In summary, the CCT has downplayed its influence on the property market when in fact it plays a key role in influencing the 'rules of the game'. Furthermore, it has also formulated the developer and an incentive structure based upon profit-maximisation whereas this dissertation has found that, the developers interviewed tended to, *inter-alia*, focus on risk reduction and then profits, exhibit satisficing behaviour and loss-aversion (not to be confused with *risk-aversion*) tendencies. There are also some which preferred to build and hold a portfolio of rental properties. This type of developer possesses a different outlook and investment behaviour than the one defined in the Framework.

This cohort of developers (which can be ranked as large and highly experienced) places risk, or the probability of a permanent loss of capital, at the centre of its calculations, followed only then by profits. To ensure developers with these tendencies assist the CCT in achieving TOD objectives, the incentive structure must shift to one that reduces risk. Without addressing this 'definition-gap', these developers will be bounded to (non-TOD) projects that they are familiar with or move to jurisdictions where there is less risk.

Without understanding these distinctions, developers may not necessarily, predictably and readily respond to any TOD tools and incentives to spur TOD-type developments, thereby perpetuating the very unequal spatial *status quo* the City of Cape Town aims to redress.

5.7 Areas for further research

The following areas of further research are suggested that will complement and develop ideas raised in, but which fall outside the scope of this dissertation:

- What is the CCT's view of the developer, based on the perceptions of town planners, engineers, spatial planners, transport planners and property management officials?
- What is the legislated social housing developer's perceptions of the CCT and what effects does the CCT have on his or her behaviour?
- How will the TOD affect the middle and lower-income housing markets in Cape Town and what should be done to ensure that existing housing development patterns are not replicated under TOD?
- A behavioural economics approach to defining a property developer within a public-led regeneration/catalytic project.
- Developing a Complex Adaptive Systems approach to the property development process and the property market in South Africa.
- Developing a Complex Adaptive Systems approach to the local approvals system in Cape Town.
- What are the underlying causes of failure to implement Land Value Capture in cities in emerging countries; how did the underlying causes arise and what can be done to mitigate against these?
- What are the underlying causes of failure to implement Transit-Orientated Development in developing countries; how did the underlying causes arise and what can be done to mitigate against these?
- What are the key differentiating characteristics between a micro or part-time developer and a large precinct developer in South Africa?

5.8 Chapter Conclusion

This Chapter presented the high-level summary of the main findings, recommendations, and conclusions of this research, conducted an evaluation of whether the dissertation has achieved the research aims, answered the research questions and whether it has supported the research proposition.

This dissertation concludes that the Framework has not accurately conceptualised the property developer. This is because the CCT has not considered the wider institutional influences that may affect developers and where such influences occur, *how* this influence may affect a developer making an investment decision within a TOD context.

By employing both the behavioural and institutional economics theoretical frameworks, it was shown that a developer's behaviour, and the CCT's role in the property market is not as framed in the Framework. Lastly, what this dissertation has shown is that just as TOD is a new way of thinking of spatial growth strategies, it follows that new "*conversations premised on the idea that there may be more to behaviour than the narrow pursuit of economic self-interest…"* (Sutherland, 2018: 6) must be had within local government.

BIBLIOGRAPHY

- Adams, D. & Tiesdell, S. 2010. Planners as Market Actors: Rethinking State–Market Relations in Land and Property. *Planning Theory & Practice*. 11(2):187–207. DOI: 10/cghqw3.
- Adams, D., Croudace, R. & Tiesdell, S. 2012. Exploring the 'Notional Property Developer' as a Policy Construct. *Urban Studies*. 49(12):2577–2596. DOI: 10/fzdrcz.
- Alexander, E.R. 2014. Land-property markets and planning: A special case. *Land Use Policy*. 41:533–540. DOI: 10/f6g92f.
- Allemeier, J. 2018. *Urban Development Zones 2020*. Available: http://www.wecanchange.co.za/Editors/Articles/tabid/55/itemid/1374/amid/376/urban-development-zones-2020.aspx [2018, September 21].
- Amaratunga, D., Baldry, D., Sarshar, M. & Newton, R. 2002. Quantitative and qualitative research in the built environment: application of "mixed" research approach. *Work Study*. 51(1):17–31. DOI: 10/dv3c7w.
- Arvanitidis, P. 2006. Property Market Purpose Efficiency: An Exploratory Analysis From an Institutional Economics Perspective. Louvain-la-Neuve: European Regional Science Association (ERSA). Available: https://www.econstor.eu/handle/10419/118439 [2017, May 18].
- Arvanitidis, P.A. 2015. *The economics of urban property markets: an institutional economics analysis*. (Routledge studies in the European economy). London ; New York: Routledge, Taylor & Francis Group.
- Ball, R. 2002. Developers in Local Property Markets: Assessing the Implications of Developer Experiences and Attitudes in the Re-use of Vacant Industrial Buildings in an Old Industrial Area. In *Development and Developers: Perspectives on Property*. S. Guy & J. Hanneberry, Eds. Blackwell Science Ltd. 158–180. DOI: 10.1002/9780470757192.ch9.
- Baptista, R., Farmer, D.J., Hinterschweiger, M., Low, K., Tang, D. & Uluc, A. 2016. *Macroprudential policy in an agent-based model of the UK housing market*. (Working Paper 619). London: Bank of England. Available: https://www.bankofengland.co.uk/-/media/boe/files/working-paper/2016/macroprudential-policy-in-an-agent-based-model-of-the-uk-housing-market.pdf?la=en&hash=6650F0B0D76CEA2F2A05DC25FCAB1B43B504C119.

- Barros, G. 2010. Herbert A. Simon and the concept of rationality: boundaries and procedures. *Revista de Economia Política*. 30(3):455–472. DOI: 10/bw9hkf.
- Battiston, S., Farmer, J.D., Flache, A., Garlaschelli, D., Haldane, A.G., Heesterbeek, H., Hommes, C., Jaeger, C., et al. 2016. Complexity theory and financial regulation. *Science*. 351(6275):818–819. DOI: 10/cbtt.
- Bell, R. & Bell, M.P. 2015. Real estate research methods. *Appraisal Journal*. 83(4):310.
- Belzer, D. & Autler, G. 2002. *Transit-Orientated Development: Moving from rhetoric to reality*. Washington, D.C. 20001: National Academies of Science, Engineering and Medicine. Available: https://trid.trb.org/view/723965 [2018, October 31].
- Belzer, D., Poticha, S., Wood, D., Brooks, A., Blair, C.C., Fleissig, W.K., Carlton, I.R. & Pease, K. 2009. *Fostering Equitable and Sustainable Transit-Oriented Development*. Boston, MA: Center for Transit Oriented Development. Available: http://iri.hks.harvard.edu/files/iri/files/fostering-equitable-and-sustainable-transit-oriented-development.pdf [2017, October 12].
- Beukes, Edward. 2016. The impact of Bus Rapid Transport on property values in Cape Town. UCT.
- Bickford, G. Ed. 2017. Available: https://www.saferspaces.org.za/uploads/files/The-Urban-Land-Paper-Series-Vol.2_.pdf.
- Bickford, G. 2016. Transit oriented development in the South African context: an analytical review of Johannesburg's recent urban policy and strategy. Available: http://hdl.handle.net/11427/20406.
- Bickford, G. & Behrens, R. 2015. What does transit oriented development mean in a South African context? A multiple stakeholder perspective from Johannesburg. Pretoria: University of Pretoria. Available: http://hdl.handle.net/2263/57751.
- Black, R., Brown, G., Diaz, J., Gibler, K. & Grissom, T. 2003. Behavioral research in real estate: a search for the boundaries. *Journal of Real Estate Practice and Education*. 6(1):85–112. Available: http://www.aresjournals.org/doi/abs/10.5555/repe.6.1.r1800212j3885h0g [2017, September 27].
- Bosch, D. 2018. Available: http://www.compcom.co.za/wp-content/uploads/2018/06/City-of-Cape-Town-presentation.pdf [2018, October 21].

- Bross, L.A. 2014. Transit oriented development and affordable housing: Analyzing the effects of economic, regulatory and advocacy factors on a developer's decision to include affordable housing in TODs in the Denver, Colorado region. Ph.D. University of Colorado at Denver. Available: http://www.newcitydevelopment.org/documents/Bross_Dissertation-Final_Published_Version.docx.
- Camerer, C., Loewenstein, G. & Rabin, M. Eds. 2004. *Advances in behavioral economics*. (The roundtable series in behavioral economics). New York, New York: Russell Sage Foundation.
- Carlton, I.R. 2007. Available: http://iurd.berkeley.edu/wp/2009-02.pdf.
- Cartwright, A. 2018. Available: https://www.gtac.gov.za/Eventdocs/Macro-economic%20implications%20of%20the%20housing%20programme%20Anton%20Cartwright.pdf.
- Cervero, R. & Dai, D. 2014. BRT TOD: Leveraging transit oriented development with bus rapid transit investments. *Transport Policy*. 36:127–138. DOI: 10/f6scc9.
- Chang, H. 2014a. *Economics: the user's guide: a Pelican introduction*. London: Pelican Books.
- Chang, H.-J. 2014b. *Economics: the user's guide*. First U.S. edition ed. New York, NY London New Delhi Sydney: Bloomsbury Press.
- City of Cape Town b. 2016. *City of Cape Town Transit Oriented Development Strategic Framework*. (1). Cape Town: City of Cape Town. Available: https://tdacontenthubfunctions.azurewebsites.net/Document/907.
- City of Cape Town c. 2017. Available: https://tdacontenthubfunctions.azurewebsites.net/Document/393 [2017, December 12].
- City of Cape Town d. 2018. Available: http://resource.capetown.gov.za/documentcentre/Documents/Procedures%2c%20guidelines%20and%20regulations/CoCT%20Model%20Land%20Use%20Planning%20and%20Development%20Conditions%20Handbook%20-%20Dec%202015%20v2.pdf [2018, October 03].

- Coelho, M., Dellepiane-Avellaneda, S. & Ratnoo, V. 2017. The political economy of housing in England. *New Political Economy*. 22(1):31–60. DOI: 10/gfb5v2.
- Coiacetto, E. 2001. Diversity in real estate developer behaviour: A case for research. *Urban Policy and Research*. 19(1):43–59. DOI: 10/b92sf8.
- Coiacetto, E. 2009. Industry Structure in Real Estate Development: Is City Building Competitive? *Urban Policy and Research*. 27(2):117–135. DOI: 10/dt263s.
- Colander, D. & Kupers, R. 2014. *Complexity and the art of public policy: Solving society's problems from the bottom up*. Princeton University Press.
- Creswell, J.W. 2018. *Qualitative inquiry and research design : choosing among five approaches*. 4th ed. International Student edition. ed. (Qualitative inquiry & research design). Los Angeles: SAGE Publications.
- Crosby, N., Devaney, S. & Wyatt, P. 2018. The implied internal rate of return in conventional residual valuations of development sites. *Journal of Property Research*. 35(3):234–251. DOI: 10/gfdcr7.
- D'Arcy, É. & Keogh, G. 2002. The Market Context of Property Development Activity. In *Development and Developers: Perspectives on Property*. S. Guy & J. Hanneberry, Eds. Blackwell Science Ltd. 19–34. DOI: 10.1002/9780470757192.ch2.
- DeLisle, J.R. 2010. *Fundamentals of Real Estate: A Behavioral Approach*. V. 2. (Fundamentals of Real Estate: A Behavioral Approach). Online. Available: http://jrdelisle.com/jrd_text/.
- Denzin, N.K. & Lincoln, Y.S. 2011. *Strategies of qualitative inquiry*. Fourth edition. ed. Los Angeles: SAGE.
- Descak, I. 2017. The role of behavioral economics in the real estate market: Example of Croatia. Modul University of Vienna. Available: https://www.modul.ac.at/index.php?eID=dumpFile&t=f&f=9383&token=8a26e07bc3dadcf3b7d72271952757aa5fc255c6 [2018, February 13].
- Diaz, J. & Hansz, A. 2007. Understanding the Behavioural Paradigm in Property Research. *Pacific Rim Property Research Journal*. 13(1):16–34. DOI: 10/gc6x9w.
- Diaz III, J. 2010. Disrobing beautiful people: an introduction to the special issue of behavioural real estate research. *Journal of Property Research*. 27(3):203–206. DOI: 10/dqsqrq.

- Doak, J. & Karadimitriou, N. 2007. (Re) development, complexity and networks: a framework for research. *Urban Studies*. 44(2):209–229. Available: http://usj.sagepub.com/content/44/2/209.abstract [2017, May 09].
- Drane, J. 2012. A view from the ground : implications for the literature on the 'models of the development process' based on a model of praxis and an associated mapping study. *Planning to Achieve/Planning to Avoid: The Need for New Discourses and Practices in Spatial Development and Planning, AESOP 26th Annual Congress, 11-15 Ju ly 2012, METU, Ankara*. 1–40. Available: http://researchdirect.westernsydney.edu.au/islandora/object/uws%3A36975/ [2017, August 27].
- Drane, J. 2013. The state of contemporary property development theory. In *19th Annual Pacific-Rim Real Estate Society Conference, Melbourne, Australia*. 13–16. Available: http://www.prres.net/papers/Drane_The_State_Of_Contemporary_Property_Development_Theory.pdf [2017, August 28].
- Drane, J., Built Environment, Faculty of Built Environment, UNSW. 2014. The seed in the cityscape: the property development mechanism and its influence on the growth of cities.
- Ebohon, O.J., Field, B.G. & Mbuga, R.R. 2002. A conceptual analysis of the problems associated with real property development in sub-Saharan Africa. *Property Management*. 20(1):7–22. DOI: 10/d388bs.
- Ettinger, J.R. & Ettinger. 2015. Applications of Behavioral Economics in Philanthropy: Understanding Loss Aversion and Risk Tolerance in Grantmaking. Available: https://www.issuelab.org/resource/applications-of-behavioral-economics-in-philanthropy-understanding-loss-aversion-and-risk-tolerance-in-grantmaking.html [2018, April 03].
- Etzioni, A., Piore, M.J. & Streeck, W. 2010. Behavioural economics. *Socio-Economic Review*. 8(2):377–397. DOI: 10/dz3g89.
- Fainstein, S.S. 1990. Economics, politics and development policy: the convergence of New York and London. *International Journal of Urban & Regional Research*. 14(4):553. Available:

http://search.ebscohost.com/login.aspx?direct=true&db=sih&AN=10136369&site=ehost-live [2017, September 13].

- Fainstein, S.S. 1994. *The city builders: property, politics, and planning in London and New York*. (Studies in urban and social change). Oxford, UK ; Cambridge, Mass: Blackwell.
- Fainstein, S.S. 2000. New directions in planning theory. *Urban affairs review*. 35(4):451–478. Available: http://journals.sagepub.com/doi/abs/10.1177/107808740003500401 [2017, September 11].
- Fleissig, W.K. & Carlton, I.R. 2009. *Aligning Transit & Real Estate: An intergrated financial strategy*. Boston, MA: Center for Transit Oriented Development. Available: https://todresources.org/app/uploads/sites/2/2016/06/aligning-transit-re.pdf [2017, August 06].
- Frankel, R. & Devers, K. 2000. Qualitative research: A consumer's guide. *Education for Health*. 13(1):113. DOI: 10/bv7bhh.
- French, N. 2001. Decision theory and real estate investment: an analysis of the decision-making processes of real estate investment fund managers. *Managerial and Decision Economics*. 22(7):399–410. DOI: 10/dhrdkc.
- Gallimore, P. & Gray, A. 2002. The role of investor sentiment in property investment decisions. *Journal of Property Research*. 19(2):111–120. DOI: 10/c9s92j.
- Gleick, J. 2008. *Chaos: making a new science*. 20th anniversary ed ed. New York, N.Y: Penguin Books.
- Goliath, G. 2015. The application of value capture tools in South African municipalities: The Bridge City Precinct Development. MPhil edn. UCT.
- Groenewald, T. 2004. A Phenomenological Research Design Illustrated. *International Journal of Qualitative Methods*. 3(1):42–55. DOI: 10/gcdzwm.
- Guthrie, A. & Fan, Y. 2016. Developers' perspectives on transit-oriented development. *Transport Policy*. 51:103–114. DOI: 10/f86qh5.
- Guy, S. & Hanneberry, J. 2002. *Development and Developers: Perspectives on Property*. John Wiley & Sons.

- Guy, S. & Henneberry, J. 2000. Understanding Urban Development Processes: Integrating the Economic and the Social in Property Research. *Urban Studies*. 37(13):2399–2416. DOI: 10/dg7653.
- Hallsworth, M., Egan, M., Rutter, J. & McCrae, J. 2018. Available: https://38r8om2xjhhl25mw24492dir-wpengine.netdna-ssl.com/wp-content/uploads/2018/08/BIT-Behavioural-Government-Report-2018.pdf [2018, September 19].
- He, E. 2017. Britain's Housing Crunch. *Bloomberg Gadfly*. 4 October. Available: https://www.bloomberg.com/gadfly/articles/2017-10-04/in-charts-britain-s-housing-shortfall [2017, October 11].
- Henneberry, J. & Parris, S. 2013. The embedded developer: using project ecologies to analyse local property development networks. *TPR: Town Planning Review*. 84(2):227–250. Available: http://search.ebscohost.com/login.aspx?direct=true&db=hlh&AN=85932500&site=ehost-live.
- Henneberry, J. & Rowley, S. 2002. Developers' Decisions and Property Market Behaviour. In *Development and Developers: Perspectives on Property*. S. Guy & J. Hanneberry, Eds. Blackwell Science Ltd. 96–114. DOI: 10.1002/9780470757192.ch6.
- Herriges, D. 2018. *The Whole Elephant*. Available: https://www.strongtowns.org/journal/2018/6/27/the-whole-elephant [2018, September 19].
- Hogarth, K. 2015. Leveraging the private sector to enable the delivery of well-located affordable housing in Cape Town. University of Cape Town. Available: https://open.uct.ac.za/handle/11427/18178 [2017, May 09].
- Holland, J.H. 2014. *Complexity: A very short introduction*. OUP Oxford.
- Huxley, J. 2009. Available: http://uli.org/wp-content/uploads/ULI-Documents/Value-Capture-Finance-Report.pdf [2017, April 04].
- Jones, C. 2014. Land use planning policies and market forces: Utopian aspirations thwarted? *Land Use Policy*. 38:573–579. DOI: 10/f5246t.
- Kahneman, D. 2011. *Thinking, fast and slow*. 1st ed ed. New York: Farrar, Straus and Giroux.

- Kaisler, S. & Madey, G. 2008. Available: https://www3.nd.edu/~gmadey/Activities/CAS-Briefing.pdf [2017, September 29].
- Keogh, G. & D'Arcy, E. 1999. Property Market Efficiency: An Institutional Economics Perspective. *Urban Studies (Routledge)*. 36(13):2401–2414. DOI: 10/cdjxg8.
- Knight, T. 2011. *The Perceptions of Property Developers: Approaches to the Process of Development*. Birmingham City University, Centre for Environment and Society Research, Faculty of Technology, Engineering and the Environment.
- Koskela, L. 2008. Is a theory of the built environment needed? *Building Research & Information*. 36(3):211–215. DOI: 10/fh7xq9.
- Leffers, D. 2018. Real estate developers' influence of land use legislation in the Toronto region: An institutionalist investigation of developers, land conflict and property law. *Urban Studies*. 55(14):3059–3075. DOI: 10/gfdbj3.
- Leigh, A. 2015. How behavioural economics does and can shape public policy. *The Economic and Labour Relations Review*. 26(2):339–346. DOI: 10/gf9dhh.
- Lewis, P. 2001. Herbert A. Simon Dies at 84; Won a Nobel for Economics. *New York Times* (New York, NY). 10 February. Available: http://www.nytimes.com/2001/02/10/business/herbert-a-simon-dies-at-84-won-a-nobel-for-economics.html.
- Lister, M. 2007. Towards a new real estate : innovative financing for a better built environment. MIT: Department of Architecture. Available: https://dspace.mit.edu/handle/1721.1/42031 [2017, August 10].
- Long, C. 2018. The World Needs More Systemic Thinkers. Available: https://caitlin-long.com/2018/10/23/the-world-needs-more-systemic-thinkers/ [2018, October 31].
- Lord, A. & O'Brien, P. 2017. What price planning? Reimagining planning as "market maker". *Planning Theory & Practice*. 18(2):217–232. DOI: 10/gc6x9x.
- Lowies, B. & Hall, J.H. 2016. Government Influences, Emotions, and the Investment Decisions of South African Property Fund Managers. *Journal of Real Estate Literature*. 24(2):359–376. Available: http://search.ebscohost.com/login.aspx?direct=true&db=buh&AN=122176626&site=ehost-live.

- Marks, H. 2007. Available: www.oaktreecapital.com/docs/default-source/memos/2007-12-17-no-different-this-time-the-lessons-of-07.pdf%3Fsfvrsn%3D2&type=web [2018, September 29].
- Marks, H. 2014. Available: https://www.oaktreecapital.com/docs/default-source/memos/2014-09-03-risk-revisited.pdf?sfvrsn=2 [2018, October 04].
- Mauboussin, M.J. 1997. Shift Happens - On a New Paradigm of the Markets as a Complex Adaptive System. *Frontiers of Finance*. (October, 24):28. Available: http://people.stern.nyu.edu/adamodar/pdfiles/eqnotes/shift.pdf [2018, August 23].
- McGaffin, R. 2014.
- McGaffin, R. 2018. Available: http://www.wcpdf.co.za/2018_conference/3.%20Rob%20McGaffin.pdf.
- McGaffin, P.R., Kirova, M., Viruly, F. & Michell, K. 2016. *Value Capture in South Africa – A way to overcome urban management challenges and unlock development opportunities?* Cape Town: UCT-Nedbank Urban Real Estate Research Unit. Available: http://www.ureru.uct.ac.za/sites/default/files/image_tool/images/383/Value%20Capture%20in%20South%20Africa%20%282016%29%20URERU%20Report.pdf.
- McGaffin, R., Napier, M. & Gavera, L. 2014. Value Capture in South Africa—Conditions for their Successful Use in the Current Legal Context. *Urban Forum*. 25(3):375–387. DOI: 10/gfgpbb.
- McGaffin, R., Spiropoulous, J. & Boyle, L. 2018. Micro-developers in South Africa: a Case Study of Micro-property Developers in Delft South and Ilitha Park, Cape Town. *Urban Forum*. (October, 20). DOI: 10/gfgpkp.
- McIntosh, J.R., Newman, P., Trubka, R. & Kenworthy, J. 2015. Framework for land value capture from investments in transit in car-dependent cities. *Journal of Transport and Land Use*. 10(1). DOI: 10/gfgpck.
- Mirowski, P. 1992. Do economists suffer from physics envy? *Finnish Economic Association*. 5(1):61–68. Available: http://www.taloustieteellinenyhdistys.fi/images/stories/fep/f1992_1f.pdf [2018, March 29].
- Mitchell, M. 2011. *Complexity: a guided tour*. 1. paperback ed ed. Oxford: Oxford Univ. Press.

- Mohamed, R. 2006. The Psychology of Residential Developers: Lessons from Behavioral Economics and Additional Explanations for Satisficing. *Journal of Planning Education and Research*. 26(1):28–37. DOI: 10/bwjm77.
- Mohamed, R. 2009. Why do residential developers prefer large exurban lots? Infrastructure costs and exurban development. *Environment and Planning B: Planning and Design*. 36(1):12–29. DOI: 10/fnm5jm.
- Moore, S. 2015. Researching Local Development Cultures: Using the Qualitative Interview as an Interpretive Lens. *International Planning Studies*. 20(4):390–406. DOI: 10/gc6x93.
- Morgan, F. 2010. Residential property developers in urban agent-based models: Competition, behaviour and the resulting spatial landscape. Thesis. ResearchSpace@Auckland. Available: https://researchspace.auckland.ac.nz/handle/2292/6375 [2017, June 01].
- Mponwana, W. & Mpethi, P. 2019. Available: http://award.org.za/wp/wp-content/uploads/2020/02/AWARD-Guideline-Spatial-Planning-and-Land-Use-Management-Act-2019-v1.pdf.
- National Treasury. 2014. *Non-retirement savings: Tax free Savings Accounts*. Pretoria: National Treasury. Available: http://www.treasury.gov.za/publications/RetirementReform/20140314%20-%20Tax%20free%20savings%20accounts.pdf [2017, October 10].
- Nel, V. & Barnes, A. 2016. Available: https://www.researchgate.net/profile/Verna_Nel/publication/318277388_De-complexifying_the_SPLUMA_Principles_Focus_on_Socio-ecological_Systems/links/5a82d5440f7e9bda869fb3a1/De-complexifying-the-SPLUMA-Principles-Focus-on-Socio-ecological-Systems.pdf?origin=publication_detail.
- Nhiwatiwa, S. 2018. Leveraging public land ownership in the urban land market for commercial property development to achieve socio-economic outcomes in South Africa. Research. University of Cape Town. Available: http://hdl.handle.net/11427/28053 [2018, April 23].

- Nurick, S., Boyle, L., Morris, G., Potgieter, J. & Allen, O. 2018. An Investigation into the Relatively Low Uptake of Residential Stock within South African Real Estate Investment Trusts. *Journal of African Real Estate Research*. 3(1):61–80. DOI: 10/gfgn97.
- Olver, C. 2019. *HOUSE DIVIDED: the feud that took cape town to the brink.* S.l.: JONATHAN BALL PUBLISHERS.
- Pirounakis, N.G. 2013. *Real estate economics: a point to point handbook*. (Routledge advanced texts in economics and finance no. 20). London ; New York: Routledge.
- Productivity Commission of New Zealand. 2017. *Better urban planning*. New Zealand Productivity Commission. Available: https://www.productivity.govt.nz/inquiry-content/2682?stage=4 [2017, October 21].
- Qu, S.Q. & Dumay, J. 2011. The qualitative research interview. *Qualitative Research in Accounting & Management*. 8(3):238–264. DOI: 10/bqtfvc.
- Ramabodu, M.S., Kotze, B.G. & Verster, J.J.P. 2007. Diversity and value in Africa's real estate: Challenges facing property development in South Africa. *Journal of Property Investment & Finance*. 25(1):7–22. DOI: 10/bxvjnk.
- Rapley, J. 2017. *Twilight of the Money Gods: Economics as a Religion and How it all Went Wrong*. Simon and Schuster.
- Rodriguez, D.A., Vergel-Tovar, E. & Camargo, W.F. 2016. Land development impacts of BRT in a sample of stops in Quito and Bogotá. *Transport Policy*. 51:4–14. DOI: 10.1016/j.tranpol.2015.10.002.
- Rubin, H.J. 2005. *Qualitative interviewing : the art of hearing data*. 2nd ed. ed. Thousand Oaks: Sage.
- Saldaña, Johnny. 2013. *The coding manual for qualitative researchers*. 2nd ed. ed. Los Angeles: SAGE.
- Santos, V., Alorro, R. & Goliath, G. 2016. *Land based financing tools to support urban development in South Africa*. World Bank. Available: unpublished.
- SAPOA. 2016. Available: https://www.sacities.net/wp-content/uploads/2020/03/TOD-Report-2016-web-version.pdf.
- Scorcia, H. & Munoz-Raskin, R. 2017. *WHY SOUTH AFRICAN CITIES ARE DIFFERENT? COMPARING JOHANNESBURG REA VAYA BUS RAPID TRANSIT SYSTEM WITH ITS LATIN AMERICAN SIBLINGS*. World Bank. Available:

http://pubdocs.worldbank.org/en/900101490196071185/Draft-Manuscript-Why-South-African-BRTs-are-different-ForConnectNote-Feb.pdf.

- Silverman, D. 2013. *Doing qualitative research*. 4th ed. ed. Los Angeles: SAGE Publications.
- Simon, H.A. 1997. *Administrative behavior: a study of decision-making processes in administrative organizations*. 4th ed ed. New York: Free Press.
- Smith, J.J. & Gihring, T.A. 2006. Financing Transit Systems Through Value Capture. *American Journal of Economics and Sociology*. 65(3):751–786. DOI: 10/drkr49.
- Smith, J., Gihring, T.A. & Litman, T. 2018. Available: http://www.vtpi.org/smith.pdf.
- Solé, R.V. & Elena, S.F. 2019. *Viruses as complex adaptive systems*. (Primers in complex systems). Princeton: Princeton University Press.
- Spaans, M., Trip, J.J. & van der Wouden, R. 2013. Evaluating the impact of national government involvement in local redevelopment projects in the Netherlands. *Cities*. 31(Supplement C):29–36. DOI: 10.1016/j.cities.2012.10.014.
- Sutherland, R. 2018. Policy-making under uncertainty. *Behavioural Public Policy*. 1–6. DOI: 10/gfc382.
- Suzuki, H., Murakami, J., Hong, Y.-H. & Tamayose, B. 2015. *Financing Transit-Oriented Development with Land Values : Adapting Land Value Capture in Developing Countries*. Washington, DC: World Bank. DOI: 10.1596/978-1-4648-0149-5.
- Taleb, N.N. 2016. The Most Intolerant Wins: The Dictatorship of the Small Minority. Available: https://medium.com/incerto/the-most-intolerant-wins-the-dictatorship-of-the-small-minority-3f1f83ce4e15 [2017, October 02].
- Taruvinga, B.G. & Mooya, M.M. 2016. THEORIZING SPECULATIVE LOW-INCOME HOUSING DEVELOPMENT IN DEVELOPING COUNTRIES. *9th cidb*. 34. Available: https://www.researchgate.net/profile/Laila_Khodeir/publication/301682568_Risk_Management_For_Multinational_Collaborations_Application_On_The_Case_Study_Of_Grand_Egyptian_Museum/links/5721c97d08ae82260fab4c79/Risk-Management-For-Multinational-Collaborations-Application-On-The-Case-Study-Of-Grand-Egyptian-Museum.pdf#page=51 [2017, May 09].

- Thaler, R. & Mullainathan, S. n.d. *Behavioral Economics: The Concise Encyclopedia of Economics | Library of Economics and Liberty*. Available: http://www.econlib.org/library/Enc/BehavioralEconomics.html [2017, June 11].
- Thomas, R. & Bertolini, L. 2015. Defining critical success factors in TOD implementation using rough set analysis. *Journal of Transport and Land Use*. (July, 20). DOI: 10/gc6zbd.
- Thomas, R., Pojani, D., Lenferink, S., Bertolini, L., Stead, D. & van der Krabben, E. 2018. Is transit-oriented development (TOD) an internationally transferable policy concept? *Regional Studies*. 52(9):1201–1213. DOI: 10/gd55p2.
- Thorp, E.O. 2017. *A Man for All Markets: Beating the Odds, from Las Vegas to Wall Street*. Oneworld Publications.
- Transportation Research Board & National Academies of Sciences, Engineering, and Medicine. 2004. *Transit-Oriented Development in the United States: Experiences, Challenges, and Prospects*. Washington, D.C.: Transportation Research Board. DOI: 10.17226/23360.
- Trevillion, E. 2002. Systems Theory and the Commercial Development Process—Towards an Understanding of Complex Behaviour and Change. In *Development and Developers: Perspectives on Property*. S. Guy & J. Hanneberry, Eds. Oxford, UK: Blackwell Science Ltd. 181–203. DOI: 10.1002/9780470757192.ch10.
- UK Parliament. 2015. *Housing supply in 2015-2020: Key issues for the 2015 Parliament*. Available: https://www.parliament.uk/business/publications/research/key-issues-parliament-2015/social-protection/housing-supply/ [2017, October 11].
- Uppink, L.K. 2016. Rescuing urban regeneration from urban patronage: towards inclusive development in the Voortrekker Road Corridor. Thesis. University of Cape Town. Available: https://open.uct.ac.za/handle/11427/22802 [2018, November 02].
- Waights, S. 2014. Essays on the urban economics of housing and land markets. phd. The London School of Economics and Political Science (LSE). Available: http://etheses.lse.ac.uk/1023/ [2017, May 10].
- Wilkinson, P. 2006. 'Transit Oriented Development': A Strategic Instrument for Spatial Restructuring and Public Transport System Enhancement in South African Cities? Pretoria: University of Pretoria. Available: http://hdl.handle.net/2263/6099.

ANNEXURES

Annexure A: classification of small vs large developer

SMALL DEVELOPER APPROACH	BEHAVIOUR	LARGE DEVELOPER APPROACH
Inaccurate, focused on local area rather than wider property market. Lack of financial resources also makes their assessment inaccurate.	**Market Knowledge**	The financial resources available usually mean forecasting and or other techniques are used to increase accuracy of market assessment.
Knowledge of local attributes of the parcel offsets less detailed approach to the residual value calculation.	**Parcel Knowledge**	As above. The financial resources put into the residual value calculation usually means assessment of parcel profit is more accurate.
'Gut' instinct type approach to managing risk. More successful based on experience level of developers.	**Risk**	Usually measured and planned approach to development. Will not shy away from risk, but dependent on the reward.
Less prevalent, because amount of capital tied up in future development restricts level of current development.	**Landbanking**	Commonly used to ensure a steady stream of development projects and ability to purchase large parcels with high expected returns.
Mimics previous successful developments and moves away from previous unsuccessful development opportunities.	**Habit Persistence**	Choice and type of development based on best choice at time of development.
Critically important, often a 'make or break' type of scenario. Commonly requires development soon after purchase.	**Timing**	Able to handle a mistimed development because of increased financial resources. Might hold back development until better time.
Small in size and local to developer's home, Development operations are predominantly focused within territory.	**Territoriality**	Large area of interest to the point of no real territory. Developments are chosen based on factors other than territory.

Table A: a summary of key developer behaviour, differentiated by developer size (Morgan, 2010)

Annexure B: list of interview questions

Warm-up question: You are assessing a development that may bring in gross R2m profit but, due to lack of development opportunities, debt servicing commitments, deal structuring and unforeseen economic circumstances are forced to choose facing either of the following scenarios once the development is complete:

Development A: 50% chance of losing R1m and a 50% chance of losing nothing

Development B: lose R500,000 with certainty

Professional and personal background	• What does your work at the company entail? For how long have you been developing property in CT? No. of employees and consultants under your supervision? • Value of portfolio? Proportion (based on R value) of portfolio based in CT? What is the value of your development pipeline in CT? How many projects are currently live in CT? • What is your target market and what type of developments do you specialise in?
Understanding of the role and purpose of local government in property development	• Describe how you see the state of the CT property market • What are the CT property market's key attractions and risks? • Describe what property development means to you • What is the most crucial point or stage of a property development project for a developer? • What has your experience as a developer been with and of CCT (primary exposure through which department?) been like? • What do you think is the biggest driver of developer behaviour when it decides to develop within the City? Can you give a City-controlled (e.g.: development contributions) example and one which the City has no control over (e.g.: lending rates)?

	• What is more appealing to you? A non-cash incentive or reduced (City-administered) development costs and time?
Understanding of private property development and how it relates to policy	• Do you feel that the industry is over-regulated in so far as local government administration and enforcement is concerned? How so? What in your opinion is the ideal role of the City in the property development industry? • Do you actively keep abreast of City policies, has City policy ever played a leading role in affecting investment decision-making? Do you make a point of adhering to any spatial framework? • What has your experience been in accessing City policies, processes, forms and personnel for development-related issues? • When do you feel City officials are at their most obstructionist (e.g.: refusing upzoning, departures of setbacks, payment arrangement on municipal arrears- be specific) and are not willing to negotiate and when do you feel they are at their most helpful? When this scenario arises, and the official processes has now been exhausted, how readily do you appeal using informal channels to their superiors and even political heads? Are the political heads more receptive to your appeals? • Should policy and policy instruments reflect the property market or vice-versa. Justify your answer • Where do you see the development industry and the property market headed in terms of City and TOD objectives? Are City objectives and private property development products diverging or converging? Justify your answer? • What are your thoughts on the following phrase: *Without understanding developers (market-driven actors), the City's (welfare-driven actors) TOD projects will only unlock financially feasible, viable and sustainable property values where local property markets are strong.*

Insight into an understanding and comprehension of the TOD Strategic Framework	• What does TOD in the City mean for you? How do you see it impacting on the Cape Town property market and property development in particular? • What do you consider to be the most important aspect for spurring private TOD-type projects in CT? • What do you think of the City's definition of a developer as described below? *A developer's principle goal is to derive the highest profit from an investment, which can be achieved through the acquisition (purchase) and disposal (sale) of property or financing the development/redevelopment of new space. They do this by identifying the demand in the property market such as demand for space to work in, to operate businesses from, to live in and spaces for leisure or recreational activities (Isaac, et al. 2010), determining its financial feasibility and finally by embarking on a process of development. It is critical to note that no private sector led project will get built unless it yields a return on investment or receives a public subsidy to compensate for underperformance (Belzer and Autler, 2002). Each developer is unique and will likely have its own profit benchmark, which is a function of cost and income and will ideally be projected through a developer's feasibility* (City of Cape Town b, 2016: 24). Justify your answer? • It categorically proclaims that it has a "sub-optimal relationship with the private sector" (City of Cape Town b, 2016: 16), do you think this is an accurate reflection? If so, what would you like to see being done to improve it? • Has there been talk amongst your peers about TOD? What is the zeitgeist like? • How has the TOD Strategic Framework influenced your company's modus operandi and projects thus far? Have you considered a TOD project yet? Motivate your answer to the last question • What are your thoughts on the concept of using Land Value Capture to partly fund catalytic TOD projects?

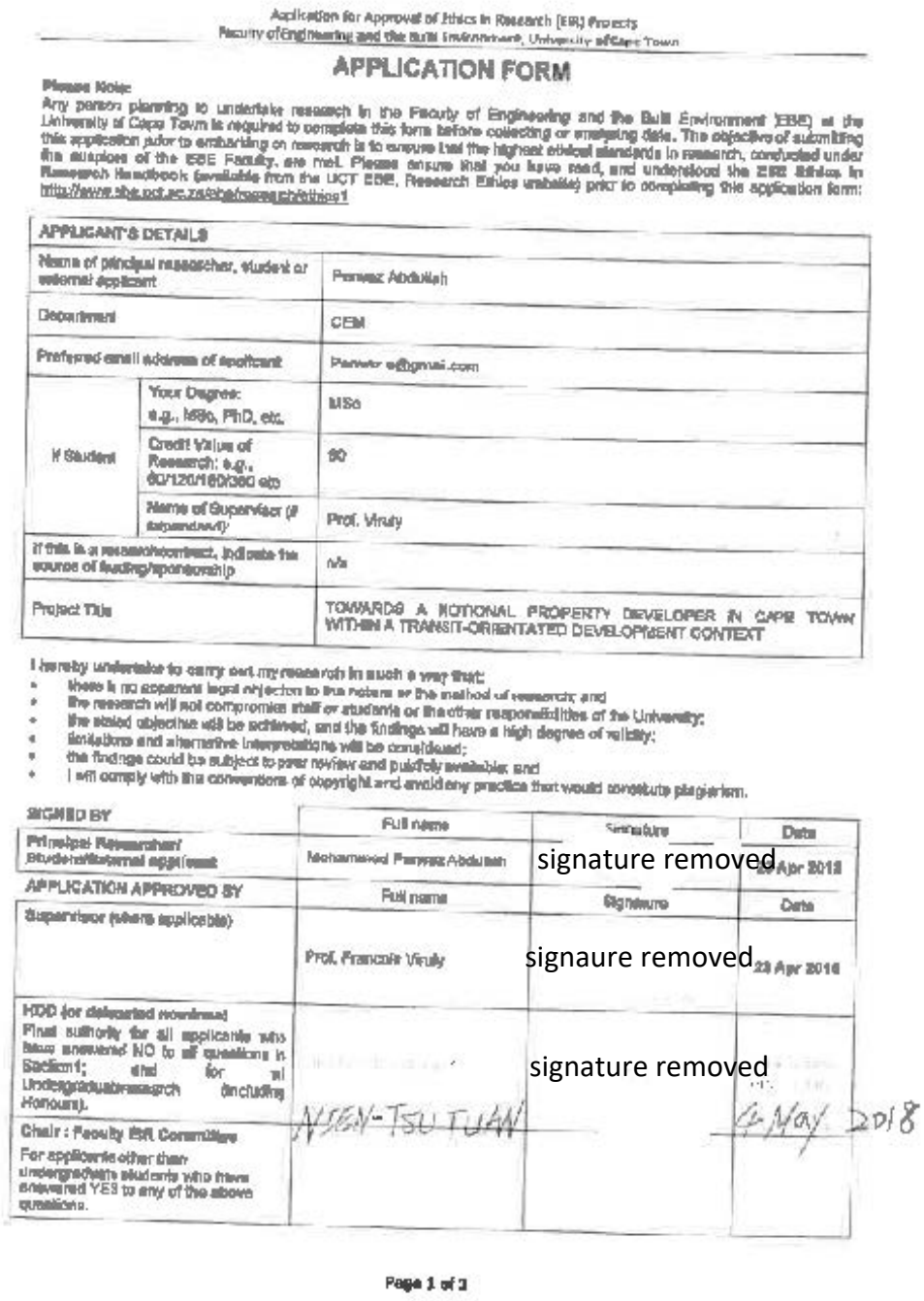
Redefining the role and skills of City officials	• The City wants to pivot towards being a facilitator of TOD property development projects within Transit-Accessible Precincts and Integration Zones. In what specific way do you want/see the City to be a facilitator of property development in general and TOD projects in particular? • Is the City adequately skilled to deal with developers in general and specifically within a TOD paradigm especially when it comes to catalytic projects? Justify your answer • What type of professional background/skill set/ training do you think officials are lacking, if any, in dealing with developers in general • What type of professional background/skill set/ training do you think officials are strong in, if any, in dealing with developers in general • What training/educational interventions would you like to see, if any, from the City and/or tertiary education curriculums? • What sort of interventions can the private sector play in this regard? What can be done to enhance its role in upskilling/educating officials? • Do you think developers have the necessary skills and understanding to interact with City officials?

Closing question: You are assessing a development that may bring in gross R2m profit but, due to lack of development opportunities, debt servicing commitments, deal structuring and unforeseen economic circumstances are forced to choose facing either of the following scenarios once the development is complete:

Scenario A: 50% chance that you are left with R1m and a 50% chance that you are left with the R2m

Scenario B: you are left with R1.5m with certainty

Annexure C: Ethics Clearance approvals



Application for Approval of Ethics in Research (ER) Projects
Faculty of Engineering and the Built Environment, University of Cape Town

APPLICATION FORM

Please Note:
Any person planning to undertake research in the Faculty of Engineering and the Built Environment (EBE) at the University of Cape Town is required to complete this form before collecting or analysing data. The objective of submitting this application prior to embarking on research is to ensure that the highest ethical standards in research, conducted under the auspices of the EBE Faculty, are met. Please ensure that you have read, and understood the EBE Ethics in Research Handbook (available from the UCT EBE, Research Ethics website) prior to completing the application form: http://www.ebe.uct.ac.za/ebe/researchethics1

APPLICANT'S DETAILS		
Name of principal researcher, student or external applicant		Parwaz Abdullah
Department		CEM
Preferred email address of applicant		Parwaz a@gmail.com
If Student	Your Degree: e.g., MSc, PhD, etc.	MSc
	Credit Value of Research: e.g., 60/120/180/360 etc	90
	Name of Supervisor (if applicable)	Prof. Virufy
If this is a research contract, indicate the source of funding/sponsorship		n/a
Project Title		TOWARDS A NOTIONAL PROPERTY DEVELOPER IN CAPE TOWN WITHIN A TRANSIT-ORIENTATED DEVELOPMENT CONTEXT

I hereby undertake to carry out my research in such a way that:
- there is no apparent legal objection to the nature or the method of research; and
- the research will not compromise staff or students or the other responsibilities of the University;
- the stated objective will be achieved, and the findings will have a high degree of validity;
- limitations and alternative interpretations will be considered;
- the findings could be subject to peer review and publicly available; and
- I will comply with the conventions of copyright and avoid any practice that would constitute plagiarism.

SIGNED BY	Full name	Signature	Date
Principal Researcher Student/external applicant	Mohammed Parwaz Abdullah	signature removed	23 Apr 2018
APPLICATION APPROVED BY	**Full name**	**Signature**	**Date**
Supervisor (where applicable)	Prof. Francois Viruly	signaure removed	23 Apr 2018
HOD (or delegated nominee) Final authority for all applicants who have answered NO to all questions in Section 1; and for all Undergraduate research (including Honours).		signature removed	
Chair: Faculty EIR Committee For applicants other than undergraduate students who have answered YES to any of the above questions.	JASEN-TSU TUAN		4 May 2018

Page 1 of 3

Annexure D: link to full set of interview transcripts

Google Drive

https://drive.google.com/drive/folders/1owqMyy1-18qpJig6gJsvRvrpnR-fmwEo?usp=sharing