

**Urban Lives and Urban Legends:
Re-examining the Slum in Dar es Salaam, Tanzania**

Thesis submitted in partial fulfilment of the requirements
for the Degree of Doctor of Philosophy

By

Alexandra Panman
St John's College



DECLARATION OF AUTHORSHIP

Name (in capitals):
ALEXANDRA PANMAN

Supervisor(s):
Professor Diego Sanchez-Ancochea
Professor Douglas Gollin

College (in capitals):
ST JOHN'S COLLEGE

Title of thesis (in capitals): URBAN LIVES AND URBAN LEGENDS: RE-EXAMINING THE SLUM IN DAR ES SALAAM, TANZANIA

Word count: 87169

Please tick to confirm the following:

I have read and understood the University's disciplinary regulations concerning conduct in examinations and, in particular, the regulations on plagiarism (*The University Student Handbook* Section 8.8; available at <https://www.ox.ac.uk/students/academic/student-handbook>).

I have read and understood the Education Committee's information and guidance on academic good practice and plagiarism at <https://www.ox.ac.uk/students/academic/guidance/skills>

The thesis I am submitting is entirely my own work except where otherwise indicated.

It has not been submitted, either partially or in full, either for this Honour School or qualification or for another Honour School or qualification of this University (except where the Special Regulations for the subject permit this), or for a qualification at any other institution.

I have clearly indicated the presence of all material I have quoted from other sources, including any diagrams, charts, tables or graphs.

I have clearly indicated the presence of all paraphrased material with appropriate references.

I have acknowledged appropriately any assistance I have received in addition to that provided by my supervisor.

I have not copied from the work of any other candidate.

I have not used the services of any agency providing specimen, model or ghostwritten work in the preparation of this thesis. (See also section 2.4 of Statute XI on University Discipline under which members of the University are prohibited from providing material of this nature for candidates in examinations at this University or elsewhere: <http://www.admin.ox.ac.uk/statutes/352-051a.shtml>) .

I agree to retain an electronic copy of this work until the publication of my final examination result, except where submission in hand-written format is permitted.

I agree to make any such electronic copy available to the examiners should it be necessary to confirm my word count or to check for plagiarism.

Candidate's signature:
.....

Date:

Acknowledgements

I wish to express profound thanks to the many people who have helped shape this work through their support and feedback. To my supervisors, Diego Sanchez-Ancochea and Douglas Gollin: thank you for your conscientious guidance, criticism, and encouragement throughout the process of the DPhil. It has been a privilege to have this time to discuss ideas with you, both individually and as a team.

This work has also benefited from valuable discussions and comments from a number of people, most notably Nancy Lozano-Gracia before the DPhil even started and Jean-Benoît Falisse in the last stretches. I would also like to thank Joshua Chipman at IGC Tanzania for support during fieldwork, as well as participants of seminars where I presented chapters, including the QEH quantitative methods seminar in Oxford, Cities that Work initiative workshop at LSE, and the GLD conference of the University of Gothenburg. I gratefully acknowledge funding from St. John's College Lamb and Flag scholarship and an ESRC Studentship.

To friends and family: thank you for your support throughout the DPhil. I would particularly like to thank Edward and Veruschka for hospitality in Dar es Salaam, and my uncle Frits for many restorative lunches during the writing-up period. Above all, I am so grateful to Ian: this adventure has been twice as interesting and so much more fun because I got to share it with you.

I dedicate this work to my parents, Jan and Caryl, who have been a constant source of inspiration and confidence. Thank you.

Abstract

This thesis brings together literature on slums in urban economics and institutions in political science with new empirical data. In doing so, it contributes knowledge to both bodies of research while also advancing the multidisciplinary discourse on cities in international development. It uses a mix of research methods to examine theories about the emergence and persistence of slum deprivation. It takes a case study approach, drawing on large-scale household survey data to measure patterns in characteristics of slum households and their housing as well as semi-structured interviews and focus groups to understand the processes that underpin these observations. This analysis reveals that most slum households in Dar es Salaam are not poor, and that there is no clear relationship between informality and housing quality. Institutions play a key role in explaining these results: strong informal land ownership and transfer arrangements eliminate differences in transaction risks across formal and informal owners, while weak land coordination institutions trap well-located middle-income housing at slum standards. The analysis shows that slum theories which rely on expectations about market behaviour will have limited explanatory power unless they can better account for the mediating influence of informal market institutions on this behaviour. Improved understanding of informal institutions is needed to refine these theories and to improve their predictive power. The thesis concludes by drawing insights from the analysis of informal institutions in Dar es Salaam into potential foundations of a more complete market theory of slum deprivation.

Table of Contents

ACRONYMS, FIGURES AND TABLES	7
CHAPTER 1. INTRODUCTION	9
WHY RE-EXAMINE THE SLUM?	9
SECTION I: DISAGGREGATING POVERTY, INFORMALITY, AND HOUSING QUALITY	16
SECTION II: RECONSTRUCTING THE SLUM? MARKET INSTITUTIONS IN FOCUS	21
CHAPTER 2. NUMBERS AND NARRATIVES	26
INTRODUCTION.....	26
SECTION I: OVERVIEW OF THE RESEARCH DESIGN	27
SECTION II: INSTITUTIONAL ANALYSIS AND DEVELOPMENT FRAMEWORK	32
SECTION III: OVERVIEW OF THE CASE STUDY AND SELECTION CRITERIA	35
SECTION IV: OVERVIEW OF DATA	43
4.1. <i>Quantitative data</i>	43
4.2. <i>Qualitative data</i>	70
ANNEX 1: TERMS OF USE OF DATA AGREEMENT	77
CHAPTER 3. WORKING TITLE? PROPERTY RIGHTS, INFORMAL MARKET INSTITUTIONS, AND HOUSING QUALITY IN DAR ES SALAAM, TANZANIA	78
INTRODUCTION.....	78
SECTION I: PROPERTY RIGHTS AND HOUSING QUALITY	81
SECTION II: INFORMALITY AND HOUSING QUALITY IN DAR ES SALAAM.....	89
2.1 <i>Overview of formal and informal property transactions in Dar es Salaam</i>	89
2.2 <i>Formal and Informal Property Compared</i>	95
2.3. <i>Is there a price premium for formal title?</i>	100
2.3. <i>This Land is My Land, This Land is Your Land: Dispute Resolution in Focus</i>	107
SECTION III: LAND USE RIGHTS AND HOUSING QUALITY	118
3.1. <i>Beyond Dichotomies: Land Use Planning in Practice</i>	119
3.2. <i>Informal land use restrictions in focus</i>	122
3.3. <i>How do land use rights relate to housing quality and slum deprivation?</i>	131
CONCLUSIONS AND IMPLICATIONS	135
ANNEX 1. LOGISTIC REGRESSION – PROBABILITY OF BEING FORMAL	140
ANNEX 2. ADDITIONAL QUANTITATIVE DATA ANALYSIS.....	143
CHAPTER 4. MAKING ROOM FOR RENTERS: HOW DOES INFORMALITY SHAPE RENTAL HOUSING QUALITY? EVIDENCE FROM DAR ES SALAAM, TANZANIA.....	149
INTRODUCTION.....	149
SECTION I: OVERVIEW OF THE LITERATURE ON REGULATION, INFORMALITY, AND QUALITY OF RENTAL HOUSING	152
SECTION II: OVERVIEW OF THE RENTAL MARKET IN DAR ES SALAAM.....	159
2.1. <i>Policy and Legal Framework for Renting</i>	160
2.2. <i>Snapshot of the Rental Market</i>	162
SECTION III: INFORMAL INSTITUTIONAL FRAMEWORK OF THE RENTAL MARKET	171
3.1. <i>Context, Actors and Action Situation</i>	171
3.2. <i>Dispute Resolution in Focus</i>	177
SECTION IV: IMPLICATIONS FOR HOUSING QUALITY	185
CONCLUSION: RAISING THE ROOF ON RENTING	195
ANNEX 1. ADDITIONAL DETAILS ON RENTERS AND ROBUSTNESS CHECKS.....	199
ANNEX 2. ESTIMATES FOR CONSTRUCTION COSTS FOR AN ADDITIONAL ROOM.....	201
CHAPTER 5. THE CHALLENGE OF SLUMS: POOR PEOPLE, POOR HOUSING, OR POOR POLICY? INSIGHT FROM DAR ES SALAAM, TANZANIA.....	204
INTRODUCTION.....	204
SECTION I: OVERVIEW OF THE THEORETICAL LINKS BETWEEN SLUMS AND POVERTY	207

1.1. <i>Poverty as a Cause of Slum Deprivation</i>	208
1.2. <i>Slum Deprivation as a Cause of Poverty</i>	210
1.3. <i>Agnostic theories about Slums and Poverty</i>	215
1.4. <i>Poverty and Slum Deprivation: Competing or Complementary Claims?</i>	217
SECTION II: SLUM AND POVERTY IN PRACTICE	223
2.1. <i>Are Slum Households Poor?</i>	224
2.2. <i>Are Slum Dwellers Trapped?</i>	234
SECTION III: RECONCILING RHETORIC, THEORY, AND POLICY	246
CONCLUSIONS AND IMPLICATIONS	250
ANNEX 1. ADDITIONAL INSIGHT ON POVERTY AND ODDS OF LIVING IN SLUM CONDITIONS	252
ANNEX 2. PAST RESIDENTIAL MOBILITY ACROSS SLUM AND NON-SLUM HOUSEHOLDS	257
CHAPTER 6. CONCLUSIONS AND POLICY IMPLICATIONS.....	261
INTRODUCTION.....	261
SECTION I: MAKING SENSE OF SLUMS	262
1.1. <i>Towards Coherence: An Institutional Analysis of Slums</i>	265
1.2. <i>New Frontiers: What Can the Slum Tell us About Institutions?</i>	274
SECTION II: POLICY IMPLICATIONS	279
2.1. <i>Slum Policy: Simple Solutions to Vague Problems</i>	279
2.2. <i>Towards a New Approach: Problems before Solutions</i>	284
REFERENCES.....	291

Acronyms, Figures and Tables

List of Acronyms

CDA	Capital Development Authorities
CUREC	Central University Research Ethics Committee
CRO	Certificate of Right of Occupancy
CCM	<i>Chama Cha Mapinduzi</i> , ruling political party in Tanzania
CBOs	Community Based Organizations
CAPI	Computer Assisted Paperless Interviewing
DAWASCO	Dar es Salaam Water and Sewerage Corporation
EAs	Enumeration Areas
IAD	Institutional Analysis Development framework
IGC	International Growth Commission
LSMS	Living Standards Measurement Survey
MLSC	Measuring Living Standards in Cities survey
MDGs	Millennium Development Goals
NORAD	Norwegian Agency for Development cooperation
RCT	Randomized Control Trial
SDGs	Sustainable Development Goals
NBS	Tanzania National Bureau of Statistics
Tsh	Tanzanian Shillings
USD	United States Dollars
USAID	United States Agency for International Development

List of Figures

Figure 1: The Slum is an Ambiguous Figure - Three Visual Metaphors	13
Figure 2: Simplified IAD Framework	35
Figure 3: Municipal Map of Dar es Salaam.....	37
Figure 4: Geographical Depiction of Sample Strata.....	45
Figure 5: Building Height, Distance to CBD, and Informality of Tenure	69
Figure 6: Organogram of local land governance appointments and responsibilities.....	76
Figure 7: Estimated Sale and Rental Prices by Distance to City Centre	101
Figure 8: Informal and Formal Land Dispute Resolution Process	116
Figure 9: Histogram of Rent per Room, Per month, by Geographical Stratum	165
Figure 10: Distribution of poverty and slum households across the city.....	226
Figure 11: Migrant Tenure and Slum Deprivation over Time.....	230
Figure 12: Household Head Distance to Work (mean KM)	232
Figure 13: Slum Deprivation and Disease between Slum Areas and Non-Slum Areas	237
Figure 14: Mean Proportion of Children per Household in School by School Age.....	239
Figure 15: Slum Areas by Per Capita Consumption and Asset Value Quintiles.....	241
Figure 16: How Likely Are You to Move Out in the Next 3 Years?	258
Figure 17: Reasons for Moving, by Present and Past Housing Characteristics.....	260
Figure 18: Simplified Payoffs to Urban Land uses in a Two-player Game	267
Figure 19: Game with Land Use Restrictions and Subsidised Connection Costs	270

List of Tables

Table 1: Summary of Sampling, Listing and Fielding of Survey.....	48
Table 2: Summary of Steps to Prepare Data and Construct the Consumption Aggregate .	51
Table 3: Distribution of Households Classified as Poor and Asset Poor.....	54
Table 4: Extent of Slum Deprivation across Survey Strata	58
Table 5: List of Documents of Ownership in Dar es Salaam	61
Table 6: Summary of Recorded Responses to Housing Values	64
Table 7: Summary of Residential History data.....	66
Table 8: Mean Years in Current House, by Stratum.....	66
Table 9: Distances to Work by Strata	67
Table 10: Roof Size by Stratum.....	68
Table 11: List of Interviews Completed in February and March 2017	71
Table 12: List of Documents of Ownership in Dar es Salaam	92
Table 13: Formal and Informal Owner-Occupied Housing Compared	98
Table 14: Definition of Variables	102
Table 15: Hedonic Estimates for Sale Price of Housing (log).....	105
Table 16: Hedonic Price Analysis with Mains Interaction	133
Table 17: Definition of Variables	141
Table 18: Logistic Regression – Odds Ratio for Formal Tenure Documents	141
Table 25: Variance Inflation Factors	144
Table 26: Hedonic Price Model Adjusted for Potential Multicollinearity Concerns	145
Table 27: Characteristics of Secure Insecure Households and Properties Compared	148
Table 19: Most Renters have Written Contracts.....	161
Table 20: Breakdown of Slum Deprivation by Rental Tenure	164
Table 21: Median Rent for a Single Room by Location.....	168
Table 22: Monthly Rent and Slum Deprivations by Total Household Consumption Expenditure Quintiles	170
Table 23: Live-in Landlords, Tenants and Owner-Occupiers Compared.....	174
Table 24: Description of Variables.....	193
Table 25: Hedonic Estimates for Rental Value (Log)	194
Table 35: Variance Inflation Factor for Ln(Rent) Hedonic Regression	199
Table 36: Hedonic Price Estimates.....	200
Table 26: Estimates for Construction Costs Compared.....	202
Table 27: Simplified Taxonomy of the Role of Poverty in Market-Orientated Slum Theories and Policy	222
Table 28: Migration and Slum Deprivation.....	227
Table 29: Rent as a Proportion of Household Consumption	231
Table 15: Description of Variables.....	252
Table 16: Odds Ratios of Living in Slum Conditions	255
Table 17: Profile of Households in the Bottom Consumption Quintile	256
Table 30: Summary of Slum Policies and the Problems they Aim to Solve	284

Chapter 1. Introduction

Why Re-examine the Slum?

“Why do a majority of people in Africa’s cities live in slums? The immediate explanation is that the urbanization of people has not been accompanied by the urbanization of capital.”
(Lall, Henderson, and Venables 2017, 38)

“Urbanization, we may conclude, has played a crucial role in the absorption of capital surpluses, at ever increasing geographical scales, but at the price of burgeoning processes of creative destruction that have dispossessed the masses... The planet as building site collides with the ‘planet of slums’.” (Harvey 2008)

More than one billion people live in slums. In Sub-Saharan Africa, over half of the urban population live in slum conditions, and the total number of slum households is expected to expand dramatically in the coming decades (Beall and Fox 2009; Talukdar 2018). From a public policy perspective, this spells crises: slums are widely associated with poverty, environmental degradation, reduced economic productivity, violence, and even political instability. Indeed, *The Economist* recently argued that “[f]inding ways to improve slums will be one of the most pressing problems of the 21st century for African governments” (*The Economist* 2017).

Yet what is the slum? Although it is a central theme in a wide and diverse body of literature on developing countries, the slum often escapes interrogation as a concept itself (Rao 2003). Researchers and policy makers alike can rely on the emotive nature of the term to conjure vivid mental images; and whether you picture the *favelas* of Rio de Janeiro or the floating slums of Lagos, this image can then be understood as a local manifestation of a broader trend

or process. As the quotes above indicate, the slum can thus be both geographic evidence of the destructive forces of neoliberal capitalism and a sign that further investment is needed to promote additional market development and structural transformation.

Trying to compare across competing accounts of the slum can be disorientating. Since the slum itself is left largely undefined, it is given solid form by the broader theory around it. The slum of critical theory is thus populated by the poor who have been expelled from the city centre by rising land values. The slum of modernisation theory is a stepping stone for recent migrants towards integration into urban labour and land markets, and towards a better life. The slum is thus like the Kanizsa Triangle pictured in Figure 1 (A): it has no contours of its own. The illusion of the form of the triangle is created by the arrangement of solid figures around it. Yet if you look at it the triangle directly, the contours disappear and the figure dissolves. If we remove the shapes of theory around it, what is left of the slum to compare?

The UN Habitat slum index provides a partial solution to this problem. This measure was developed to track progress towards Target 11 of the Millennium Development Goals, which aimed to improve the lives of at least 100 million slum dwellers by 2015. The index defines the slum based on four key standards: building materials, access to water and sanitation services, and overcrowding. These criteria are sufficiently broad and well aligned with descriptions of slums found throughout the academic literature that data based on this classification has come to be widely used by researchers across all disciplines.

Yet ambiguity over the slum persists. Even with this agreement over the outline of the slum, there is still plenty of room for disagreement over its form. An appropriate analogy can be found in a second famous ambiguous figure: the Necker cube. As indicated in Figure 1 (B), this is a straightforward drawing of a three-dimensional box. Our understanding of this figure, however, is nonetheless dependent on contextual factors. Indeed, when looking at the cube, most people will experience the disorientating effect of the image rearranging itself in front of their eyes depending on whether they are told that point 1 or point 2 is closer to them.

A similar effect occurs with the slum. The UN Habitat index provides a widely accepted definition of the contours of the slum. This definition does not, however, include either poverty or informality. These are concepts that are so closely connected to the idea of the slum that they are used as though they were synonyms. They are key contextual factors that have an important impact on our interpretation of the figure of the slum itself: the literature seamlessly shifts between accounts of slum dwellers that are poor because they are informal, informal because they are poor, live in slums because they are informal, and/ or live in slums because they are poor. In other words, our understanding of the slum rearranges itself in front of our eyes depending on whether we give greater contextual weight to poverty or informality.

The implications of this rearrangement are far reaching. Take, for example, debates about slum upgrading. This is a common policy intervention that aims to improve the quality of housing and neighbourhood amenities in slums.¹ For critics such as Alan Gilbert, the very

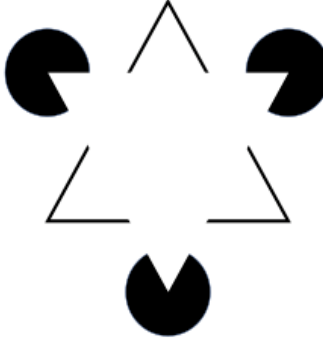
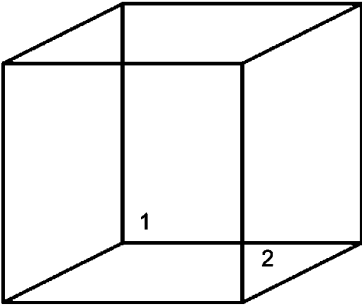
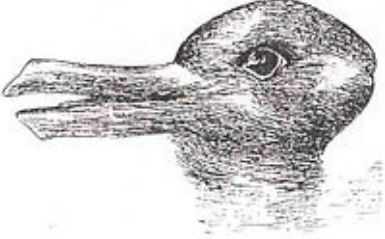
¹ Slum upgrading is a spatially focused intervention to provide “physical, social, economic, organizational and environmental improvements within neighbourhoods” (Field and Kremer 2006).

objective of the policy is flawed because it can result in gentrification.² Others, in direct contrast, claim that “gentrification in upgrading is evidence not that it has not worked – but that it has” (Gulyani and Bassett 2007, 504). How can this be? I argue that this divergence results from a subtle shift in perspective. The authors share a common understanding of the slum, and both anticipate that many slum households are both poor and informal. Yet Gilbert gives primacy to poverty as the cause of slum deprivation – and as such, any policy that makes slum housing more expensive is self-defeating. Gulyani and Bassett, in turn, focus on informality and therefore see integration of these areas into the land and housing market as key to overcoming marginalisation and poverty.

In short, these researchers are looking at the same picture, broadly agree on the contours of its shape, and yet see completely different images requiring directly opposing policy responses. Like the image in Figure 1 (C), a small change in perspective results in a completely different impression. Their disagreement can be reduced to a fundamental question: is the slum a duck or a rabbit?

² Real estate value appreciation is a common indicator of project benefits (Field and Kremer 2006; Desai and Loftus 2013). Alan Gilbert argues that “[t]here is a conflict between improving the physical quality of housing and improving the housing conditions of poor people” (Gilbert 2007, 709).

Figure 1: The Slum is an Ambiguous Figure - Three Visual Metaphors

(A) Kanizsa Triangle	(B) Necker cube	(C) Duck/ Rabbit
		
<p>The ambiguity of these figures arises as a result of the cognitive processes we apply to make sense of the data. In the case of the Kanizsa Triangle, our minds are prompted to complete the triangle by the arrangement of other (separate) solid forms. In figures (B) and (C) the ambiguity arises because the data has two equally likely interpretations. The slum is an ambiguous figure because it is either left undefined (like the Kanizsa triangle), or because existing data and competing theories mean that the basic shape can be interpreted in radically different ways.</p>		

As with debate over the slum, the ambiguity of the duck/rabbit image can be resolved in two main ways: with more data and/or better theory.³ That is to say, the ambiguity arises as a result of the cognitive steps we take to identify recognisable patterns in limited data. Our understanding of these images is shaped both by the data points we see and by the organising principles we use to interpret them. Ambiguity can therefore be resolved either through the introduction of more points of data on the image itself – for example, something that gives us an idea of the shape of the animal below the neck – or through the guidance of theory in setting expectations about how we should interpret the data we see.

³ In research on cognitive effects of visual ambiguous figures, these are termed ‘bottom up’ and ‘top-down’ processes respectively (Kornmeier and Bach 2005).

Doubts over the nature of the slum are generally treated as a data problem. It is widely acknowledged that existing data on slum households is inadequate: most survey data is not representative at the city level – let alone within cities – and probably systematically fail to capture slum populations (World Bank 2016).⁴ Furthermore, although there is a rich body of in-depth case studies and ethnographic research on slums, it is challenging to generalise findings from this research to shed light on broader questions about slum deprivation.⁵ As such, many authors call for new research and data collection efforts to help create a better picture of the causes of slums and the nature of life in slums across the world (Sanyal 2016; B. Marx, Stoker, and Suri 2013; Jha, Rao, and Woolcock 2007; Talukdar 2018).

Yet perception of ambiguous figures is also shaped by theory. Urban planners, geographers, and even economists increasingly highlight that research on cities has been strongly shaped by theories of urban development that originate in the experience of OECD countries and may not be appropriate for understanding cities in the global south (Nijman 2010; Roy 2005; Glaeser and Henderson 2017). In urban planning and geography, there has been a profound movement towards ‘decolonising’ urban theory and building new understanding of developing world cities. This literature, however, emphasises the unique to the extent that generalization in itself becomes suspect; indeed, it arguably risks being a “celebration of empirical complexity for its own sake” (Storper and Scott 2016, 1124).

⁴ Household surveys frequently rely on census population frames for sampling. These frames may not always capture the full extent of the urban population for both technical and political reasons (Mitlin and Satterthwaite, 2013; Carr-Hill, 2013). Slum areas may be more dangerous or difficult to survey, or they may be deliberately excluded as a result of reluctance to officially acknowledge informal and illegal settlements or the presence of illegal foreign national migrants.

⁵ As Jha et al. put it, ethnographic accounts have provided rich insight on specific aspects of life in specific slums, but there remains considerable uncertainty about more general dynamics (Jha, Rao, and Woolcock 2007, 232).

Even amongst researchers that work with simplified theories and models, however, there is a growing acknowledgement of the need to adapt these theories in light of improved understanding of the reality of developing country cities. As Edward Glaeser and Vernon Henderson write:

“Urban knowledge is disproportionately focused on the developed world, but urbanization is proceeding far more quickly in the developing world. It is time for urban economists to know as much about Dar es Salaam as about Detroit and as much as New Delhi as about New York”

(Glaeser and Henderson 2017, 5).

This thesis therefore aims to contribute to the ongoing challenge of resolving ambiguity about the nature of slums. In particular, it focuses on disentangling, testing, and refining understanding of the causes of slum deprivation. It concentrates on a set of theories which constitute an important subsection of the multidisciplinary literature on slums, which I term ‘market-orientated’ theories as a shorthand. These are a collection of ideas about the causes of slum deprivation which place land and housing market activities at the center of the analysis, which have been highly influential in the development of policy approaches to slums advocated by international development organisations such as UN Habitat and the World Bank.

The thesis focuses on a specific case study: Dar es Salaam, Tanzania. This is one of the fastest growing cities in Sub-Saharan Africa, and like many other cities in the region is marked by high levels of slum deprivation. Indeed, it is often regarded as an exemplar of urbanization patterns in the region (Brennan and Burton 2007a, 1–2). The thesis thus aims

not only to provide new data on this particular case of slum deprivation, but also to draw on this data to probe and refine our broader understanding of the patchy image of slums across the region.

In order to do this, I first divide the literature into two broad categories: that which focuses on the relationship between informality and slum deprivation; and that which emphasizes poverty. Within these broad groups, I then disentangle clear, causal hypotheses and interrogate them in light of a combination of quantitative and qualitative data. An overview of this approach and the key questions explored are provided in the section that follows. Overall, the findings strongly suggest that the ambiguity of the figure of the slum is not a question of data alone, as it reflects theoretical and conceptual limitations as well. In section 2, I outline steps that I take to try and introduce greater coherence into these accounts of the slum in this thesis. Specifically, I argue that improved understanding of market institutions in the analysis of slums is vital.

Section I: Disaggregating Poverty, Informality, and Housing Quality

The slum is the focus of a large and multidisciplinary body of research. Economists, geographers, and political scientists, amongst others, engage in debates about the slum that cross disciplinary boundaries. At its best, this results in a dynamic and vibrant area of research. At worst, debate can appear deadlocked in a confusing jumble of methodological, theoretical, and even ontological misunderstanding.

The first chapter of this thesis following the introduction is therefore necessarily dedicated to clearly articulating methods and defining terms. As set out in chapter 2, the choice of methods is pragmatic in that specific tools are selected on the basis of the most appropriate for the questions being asked. Yet the choice of methods also reflects epistemological considerations. As with many mixed methods research projects, this thesis is grounded in scepticism about universal truths as well as optimism that simplifying theories can help us make sense of the world. The aim of the research is thus to uncover what might be called ‘provisional truths’ that can be used to generalise and predict. Drawing on the words of Elinor Ostrom, we can say it is motivated by an understanding that:

“the observation that the world is more complex than it is presented in these models is obvious, and not useful by itself. What is needed is further theoretical development that can help identify variables that must be included in any effort to explain and predict.”

(Ostrom 2015, 183)

The case study approach is well suited to the objective of testing and refining theory. In chapter 2, I discuss the rationale for the selection of Dar es Salaam as a case study and introduce the data used throughout the thesis. This includes an overview of the Measuring Living Standards in Cities (MLSC) survey – a new survey instrument which I was able to help shape through engagement with the World Bank – and details of the qualitative interviews and focus groups conducted.

Chapters 3 and 4 explore the relationship between informality and slum deprivation. Developing country cities are often divided into the formal, legal city on the one side and the informal on the other. This formal-informal dichotomy dominates theorisation about

developing country cities in general (Roy 2005; Potts 2007), and research on urban land in Sub-Saharan Africa in particular (Rakodi 2006b). It does not, of course, accurately describe the daily reality of life in cities. In practice, it is widely accepted that the line between formal and informal is blurred at best (Roy 2005; Rakodi 1992). It should be understood as an analytical device, grounded in an expectation that *in general* the formal and informal are different in ways that matter for our understanding of the particular issue in question.⁶

In chapters 3 and 4 I explore a central claim that links informality to slum deprivation: that relative to formal markets, informal transactions are costly, inefficient, and even ‘savage’ (Buckley and Kalarickal 2006). As a result, informality is anticipated to reduce the value of the land, depress investment in housing, and thereby confine housing to slum quality standards. If rental markets emerge, they are likely to be exploitative since, in the absence of formal rights, landlords will either only rent to people they know or enforce their rights violently. Curiously, however, these expectations contrast with insight from a growing qualitative literature that suggests informal land and housing markets can be large and vibrant (Rakodi 2006b; Sanyal 2016). Chapters 3 and 4 therefore focus on two related questions: (i) why do these markets perform differently to what dominant market theory would predict; and (ii) what are the implications of this observation for expectations about the relationship between informality and key measures of housing quality that constitute slum deprivation?

Chapter 3 focuses on informality in owner-occupied housing. I draw on survey data to compare the value and quality of housing across formal and informal households, and then

⁶ Indeed, this is arguably the case of the use of the formal-informal dichotomy across the social sciences more generally (Guha-Khasnobis, Kanbur, and Ostrom 2006).

probe the processes that underpin the results with qualitative data. This reveals that formal and informal housing is remarkably similar, and that both formal and informal owners draw on the same informal dispute resolution mechanisms to resolve challenges to property rights. As such, there is little practical difference in tenure security and transaction risks across the two groups. This finding is underlined by the quantitative data analysis, which shows that there is no observable price premium for formality of tenure in the city.

Chapter 4 then turns to the rental market. It shows that – as in many developing country cities – informal rental arrangements take place between low-income landlords and tenants who live together in close cooperation but do not have any pre-existing ties. The analysis presented indicates that a combination of informal institutions sustain mutual expectations around the end of rental agreements. As such, there is an active rental market and landlords have strong financial incentives to expand and improve the quality of rental housing on offer. The findings cast serious doubt on the expectation that informality is a binding constraint on quality standards in this context.

Combined, chapters 3 and 4 indicate that our theoretical understanding of the relationship between property rights and slum deprivation can be developed further in two main ways. First, we need to better account for the role of informal institutions. The chapters do not contest that secure property rights and contracts are necessary for investment in housing, but instead challenge the expectation that formality is a good proxy for these conditions. This reflects both the failures of the formal legal system and the strength of the informal system, as has previously been argued in the context of rural land property (Platteau 2000, 145–47).

The main contribution of these chapters is to show that this also applies in urban areas: despite the fact that communities are much larger and more heterogeneous, informal institutions can nonetheless arise which can perform key functions sufficiently well for informal markets to operate as effectively as the formal market.

Second, the chapters also indicate that we need to expand our understanding of property rights. The literature currently stresses rights to own and transfer property, and largely overlooks the third component of the property rights ‘bundle’: land use rights. These are rights that define what property owners can legitimately do with their property (Eggertsson 1990, 34). The case of Dar es Salaam highlights that clearly defined and credible use rights are fundamental to urban housing quality. In their absence, a social dilemma emerges that can trap housing in a low-quality equilibrium. Indeed, somewhat paradoxically, this challenge may be particularly acute in areas where other dimensions of property rights are strong. Specifically, the case of the rental market in Dar es Salaam indicates that the coordination challenge is exacerbated by the profitability of expanding property to include rental accommodation in centrally located areas.

Chapter 5 turns to the relationship between poverty and slum deprivation. It contributes new empirical evidence to an entrenched debate: are slums poverty traps or the first step on the ladder out of poverty? It presents data from Dar es Salaam which shows that most slum households are neither poor nor easily distinguished from non-slum households in terms of health or other sociological characteristics. Instead, both slum and non-slum households have

complex trajectories through the city, renting accommodation in the centre when young or recent migrants and eventually moving out to the periphery to build housing.

The chapter serves to highlight that both the poverty-trap and poverty-escape arguments rely on a set of fairly restrictive assumptions about who lives in slums and why. This undermines their explanatory value for Dar es Salaam, but also likely limits their generalisability to the broader slum population across the world. Indeed, despite the rhetoric that surrounds both policy and research into slums, I argue that poverty plays a surprisingly marginal role in many mainstream theories of slum and that current ‘best practice’ policy approaches to slums implicitly anticipate that targeted slum households *are not poor*. Lack of clarity on this point, however, leads to fuzzy theorization about project impacts and hides potentially harmful policy outcomes from project evaluation.

Section II: Reconstructing the slum? Market Institutions in Focus

This thesis disaggregates the slum, unwinding ideas about the relationship between poverty, informality, and slum deprivation in order to explore the precise mechanisms thought to explain slums in practice. In doing so, it highlights that these individual accounts of the slum require further theoretical development. In the final chapter of this thesis, I pull these strands back together and propose a way to recast these claims in a manner that is more coherent and useful.

The theories analysed in this thesis all draw on simplified models to explain how government and market failures result in the proliferation of slums. The findings of this research indicate that these theories do not explain the case of Dar es Salaam well, as they fail to account for the influence of institutional context on market behaviour in practice. More pressingly, seen in light of the broader literature on institutions, there is a strong case to be made that this is an omission that undermines the usefulness of these theories in general – not only in the case of Dar es Salaam.

Yet in drawing together the literature on slums with the analysis of institutions, this thesis also signals an avenue forward to make these simplified models more useful to explaining slum deprivation and formulating policy responses in practice. Specifically, I argue that by bringing the market institutional framework to the forefront of our understanding of slums, it is possible to reformulate these theories as claims about the conditions necessary to ensure efficient land and housing markets that do not produce housing below the quality floor defined by the slum indicator. This involves two main steps: expanding our conceptualisation of ‘foundational’ institutions for the urban land market and shifting our focus from institutional forms to institutional functions.

First, I argue that in order to usefully apply market analysis to the ‘challenge of slums’, we must resolve an under-acknowledged challenge: as discussed in chapter 5, it is theoretically possible that even a ‘well-functioning’ market – conventionally defined – may produce slum housing if the poorest households simply cannot afford the cheapest non-slum housing. This outcome may be pareto efficient, but it is at odds with the core ideas that underpin the

MDGs/SDGs slum targets, which consider slum housing a form of deprivation that should be eliminated for all.

One approach to bridge this tension is to redefine the foundations of the urban land market. In neoclassical theory, the right to own and transfer property is regarded as ‘foundational’ to markets because they are central to ideas of allocative efficiency. Yet given the role that institutions play in shaping payoffs to land market activity, it is theoretically difficult to separate market institutions from questions of allocative efficiency in practice (Platteau 2008; Keogh and D’Arcy 1999). In the concluding chapter of this thesis I highlight that institutions for land use coordination, as well as those for the provision of basic services such as a sewage, can shape the payoffs to whether or not landowners will develop their property as slum housing. Rather than seeing land use regulation and the provision of public services as ‘interventions’ in the land market, I therefore propose that a serious commitment to market-based approaches to ‘cities without slums’ requires an expansion of our understanding of what the foundations of a well-functioning urban land market are.

Second, in advancing an agenda to understand what the institutional foundations of land markets without slums are, we must focus on institutions *functions* rather than institutional *forms*. It has been widely argued that institutional design does not map onto institutional outcomes in a straightforward way (Rodrik 2000; Rodrik 2007). Put simply, we cannot assume that institutional forms perform the same institutional functions from one context to another. As such, it is therefore important for research to focus on identifying generalizable functions that need to be performed to ensure that there is a quality ‘floor’ on market

outcomes. The chapter concludes with reflections on what the key institutional functions may be, based on the case of Dar es Salaam; and proposes that testing and refining these claims is a promising agenda for further research.

In drawing on frameworks of analysis from political science to understand new data on slum deprivation in Dar es Salaam, this thesis also makes two contributions to ongoing debates about informal institutions. The study of informal institutions has largely been focused on rural areas. This may reflect the perception that they are more common in small communities, where the costs of monitoring and enforcing compliance are likely to be lower than in urban areas where populations are large, heterogeneous, and transient. The case of informal land and housing market institutions in Dar es Salaam thus contributes new empirical evidence on a case study of informal institutions in the urban context.

Second, the case provides reflections relevant to long-standing debate on the relative virtues of formal versus informal institutions. On the one hand, the case of Dar es Salaam supports the assertion that informal institutions can provide flexible, low-cost solutions relative to state processes; on the other, it raises the possibility that complex challenges such as those relating to land use coordination may require institutional sophistication that may not arise ‘spontaneously’. Overall, it lends most support to the case that the formal and informal are ultimately part of the same system, and that analysis of the effect of institutional constraints on behaviour must be situated in an understanding of context that includes both.

Finally, the thesis advances the multidisciplinary and policy orientated literature on slums. Slums have dominated the research agenda of international development organisations for decades (Rakodi 2002; Huchzermeyer 2011). Policy documents pull together a dizzying array of literature into one ‘multidimensional’ slum agenda. Thus ‘problems’ of poverty, social marginalization, democratization, governance and political stability, rights, market functioning, and economic growth are to be ‘solved’ by ‘multidimensional responses’ to slums. The findings presented in this thesis highlight that these ideas can be traced to theories that often make competing claims; each relies on different assumptions about the characteristics of slum households, anticipating that they are either new-migrants, long-term residents, home-owners, or renters. In some cases, they are even grounded in directly contrasting theoretical frameworks. The expectation that slum policies can simultaneously address these different issues is thus not always realistic – and may explain the poor and contested track record of many slum policies in practice. The thesis closes with a number of concrete recommendations to refine existing slum policies.

Chapter 2. Numbers and Narratives

Introduction

This thesis is composed of three central empirical chapters. Each chapter is a stand-alone essay on the slum, yet the topics are closely interrelated and grounded in a common methodological and theoretical framework. This chapter provides an overview of the research methodology and key theoretical frameworks applied in each chapter. It also introduces the data used throughout the thesis.

The chapter is divided into four sections, the first of which introduces the mixed methods research design that shaped this study. It details the considerations that shaped the sequencing of research tools used, selection criteria for the case study, as well as the approaches employed for collection, validation, and analysis of both quantitative and qualitative data. The second section discusses the Institutional Analysis Development (IAD) framework developed by Ostrom and others. It highlights both strengths and limitations of the use of this framework in this thesis. Section three outlines case study selection criteria and introduces the case study city of Dar es Salaam. Section four then provides an overview of the quantitative and qualitative data used in this thesis.

Section I: Overview of the Research Design

The research project was designed under the framework of the Oxford Department of International Development's 'Ethical Guidelines for Good Research Practice'. In keeping with guidelines of ESRC funded research, the research was subject to review and approval by the Central University Research Ethics Committee (CUREC) of the University of Oxford.

The research design is guided by pragmatism: I draw on the most appropriate tools to answer the research questions and aim to 'mix' these methods in a manner that strengthens the validity of the findings. The overall approach, however, is shaped by epistemological considerations. The division in the social sciences between quantitative and qualitative methods is often about more than just research tools: it can reflect a division between positivist and constructivist research philosophy.⁷ The effort of 'mixing' methods implies a rejection of both of these positions. As with many mixed methods research projects, this research project is grounded in scepticism about universal truths as well as optimism that simplifying theories can help us make sense of the world.

The aim of the research is thus to uncover provisional truths that can be used to generalise and predict. This is reflected in the mixed methods logic of inquiry: induction to discover patterns, deduction to test theories, and abduction to draw these two approaches together and propose the best set of explanations to interpret the results (Johnson and Onwuegbuzie

⁷ Positivist research draws on quantitative methods to uncover 'universal truths' and constructivist or post-structuralists employ qualitative methods with the aim of understanding 'relative truths' (Mahoney 2006; Teddlie and Tashakkori 2008). Of course, it should not be assumed that all researchers who employ these methods necessarily ascribe to these different philosophical positions.

2004). This method reflects interest in understanding the complexity of the social world *as well as* the aim to uncover relationships or theories that can be measured.

Selection, Sequencing, and Validation Criteria

This thesis has both confirmatory and exploratory objectives: I aim to measure relationships between the characteristics of households and the housing that they live in, and to understand the processes that shape the observed patterns. I use quantitative methods for the former, as they are best suited to explore trends and patterns, measure outcomes, and test theories. Qualitative approaches are used for the latter, as these methods are most suited to uncovering meaning, explaining processes, and/or generating theories (Plano Clark and Badiiee 2010; Teddlie and Tashakkori 2008).

I analyse the quantitative and qualitative data in an iterative sequence, in order to allow for triangulation across the results. All research methods have their weaknesses. Qualitative researchers therefore often advocate use of multiple sources of data to confirm that specific outcomes observed are not a product of one particular data collection and analysis method used. In mixed methods research, quantitative and qualitative data can be compared, and convergence, inconsistency, or contradiction between results interrogated (Johnson, Onwuegbuzie, and Turner 2007). The research design for this thesis allowed for triangulation across the results of various stages of the analysis, as well as use of insights from early stages of the research to improve the data collection at later stages.

First, qualitative methods were used to help refine the quantitative data collection. Survey data is only useful to make generalisations if it captures the population and the topics of interest. There are few examples of large-scale surveys that capture slum populations and particular issues of interest to the analysis of life in slums (Jha, Rao, and Woolcock 2007). In order to be able to use quantitative tools it was therefore necessary to design and collect new data. The specific details of the quantitative data collection are detailed below, but it is worth noting that the process drew on insights from qualitative data: the survey questionnaire and sampling strategy were designed in light of insight from interviews with government officials and urban development specialists conducted prior to the finalisation of the survey questionnaire.⁸

Second, insights from the first stage of quantitative analysis then informed the qualitative data collection. For example, a number of urban development/ housing market specialists interviewed in the first stage of the research made broad statements during the interviews that indicated that they felt property formalisation projects would help to reduce slum deprivation in the city.⁹ I was able to draw on the survey data to probe these statements further. I had the opportunity to ask their opinion about an unusual result I had found in my

⁸ As part of the World Bank team, I held meetings with: (i) National government authorities (Mr. Alphayo Kidata, Permanent Secretary, Ministry of Lands, Housing and Human Settlements Development, Mr. Jabir Shekimweri, Prime Minister' Office Regional Administration and Local Government (PMO RALG); and Mr. Nashon Sigalla, SUMATRA); (ii) Local government authorities (Hon. Jerry Slaa, Mayor, Ilala Municipality, and Eng. Mussa Nnati, City Director, Kinondoni City Council); (iii) representatives of international organizations (World Bank and DFID); and (iv) Researchers (Prof. Kombe, Institute for Human Settlement Studies, Ardhi University, Mr. Joseph Nganga, REPOA, and Dr. Lunogelo, Director, Economic and Social Research Foundation).

⁹ As noted above, these were meetings as part of a World Bank team. Seen in light of later results, it is likely that my initial understanding of the responses provided was shaped both by my own pre-conceptions and by the respondents' expectations about what the interviewers considered to be 'facts'. In the second round of qualitative research, discussed in depth below, I was more careful to critically assess my own positionality in the framing of questions and in analysing interview data.

initial analysis of the data: I could not find any evidence of the anticipated relationship between titles and housing quality. Although I was careful to caveat that it was highly likely that this reflected some error in the data or analysis, this opened a new and fruitful avenue of discussion. In four separate cases respondents immediately volunteered that they themselves did not have any formal documentation of ownership for their house nor felt any need for it.

Finally, insight from the qualitative data analysis further shaped the final stage of quantitative analysis. There are a number of well-known examples of research in which follow-up qualitative studies have helped to ‘make sense’ of quantitative data (Shaffer 2013). The qualitative stage of data collection shed light on important omissions in the quantitative data collection, raising issues that had been overlooked. For example, interviews and focus group data highlighted that housing value may be affected by land-use coordination challenges and that housing quality may affect not only total rent paid but the length of pre-payment periods. It also became clear that the wording in the survey questionnaire over one particular category of property documentation (‘Sales Agreements’) was ambiguous. I was able to adjust the quantitative analysis and interpretation in light of these insights, as discussed in greater depth below.

Limitations of the approach

The iterative approach associated with mixed methods research also has some drawbacks.¹⁰

In particular, it requires flexibility in the research design to respond to new understanding of

¹⁰ Iteration in the context of a mixed methods study is described as when “the results of one method are used to inform the development of another” (Greene, 2007, p126).

the topic being researched that arises with each phase of the research. This means that research questions “get modified as the research proceeds” (Tashakkori and Teddlie 2010 p278). This raises challenges, as new questions emerge that cannot be fully answered within the project timeline.

In the initial stages of this research I anticipated that slum household and/or slum areas would be characterised by distinct patterns of residential movement. This hypothesis emerged from the literature; as discussed in chapter 5, this idea is widely held by policy makers and researchers alike but has been the subject of very little empirical investigation. The survey instrument was therefore designed with careful consideration over the best way to capture past and anticipated residential mobility within the city (discussed in further detail below).

The research questions shifted in response to insight from the data. As indicated in chapter 5, the results revealed few observable differences in residential movement patterns and motivations across slum and non-slum households/areas. It was also difficult to distinguish between slum and non-slum households in characteristics and behaviour patterns that are often considered to be self-evident. The objectives for the qualitative research phase thus shifted towards probing whether these results made sense and understanding *why* these common assumptions did not appear to hold. This involved iterative analysis not only between the different sources of data, but also between data and theory.

Theoretical frameworks from New Institutional Economics proved to be particularly helpful in this process. In particular, Ostrom and others’ Institutional Analysis and Development

framework provided a framework to distinguish meaningful institutional features of the land and rental market and synthesise results. Yet given that this approach emerged from the data once the research processes was already well-underway, the scope to fully integrate it into the data collection was constrained. As such, the analysis was not able to extend into all relevant action arenas. This is discussed in greater depth in the following section.

Section II: Institutional Analysis and Development Framework

This thesis draws on the Institutional Analysis and Development framework (IAD) developed by Elinor Ostrom and others. The IAD framework is a tool to undertake systematic analysis of the structure of situations that shape individual behaviour (Ostrom 2005). The IAD framework is best known for its application in analysing common pool resources regimes. It has, however, been applied to understand how institutions shape behaviour in a wide range of complex social situations by a large and multidisciplinary group of researchers (Polski and Ostrom 2017). The framework can usefully be applied to the analysis of real estate markets; helping to shift our analytical focus from market consequences to the building blocks of the market itself (Mooya 2011). In this thesis, the IAD framework is applied to analyse the action arena and context that shapes outcomes observed in land and rental markets in Dar es Salaam.

A simplified version of the IAD framework is depicted in Figure 2. At the centre of the image is the ‘action arena’. The action arena is the social space in which individuals interact, for example to exchange goods or solve problems (Ostrom 2005). It is composed of actors, each

of which have their own preferences and resources. Activity in the action arena is also, however, shaped by exogenous factors, as depicted in the figure. In the analysis of natural and common-pool resource management, this context is generally taken to mean community attributes (socioeconomic characteristics of the group), physical resources of the resource being managed, and the set of institutions that govern the arrangements (Doss and Meinzen-Dick 2015). These institutions can be further defined as formal and informal rules, norms, and strategies that shape interaction between actors. Combined, the action situation and exogenous factors shape the payoffs to action, and thus help us to understand and predict outcomes from interactions between actors (also pictured).

In breaking down activity into context and action arena the IAD framework helps to isolate outcomes that result from interaction within these spaces. This includes understanding of who the actors are, the information available to them, as well as their own understanding of the behaviour of others, which determines the payoffs to different action. The IAD framework can be applied to very fine grained or broad institutional analysis. Often fine grained analysis can also be understood as being part of the system in analysis conducted at another level (Ostrom 2005). The features of the context or exogenous variables included in the analysis depend on the level of analysis, and the researcher must draw boundaries according to the specific theoretical questions being studied (Crawford and Ostrom 1995).

In this thesis, the ‘action arena’ of interest is the private real estate market. The level focus has implications for the depth of analysis for certain issues, most notably gender. Specifically, although the analysis does explore differences in outcomes across female and

male-headed households, it does not look at how gender dynamics *within* the household may affect women's land and housing market behaviour. This severely limits the extent to which the thesis is able to engage with questions relating to women's property rights specifically, which may not occur in the market-place but within the household. As one respondent explained, when she and her siblings inherited their house from her father, they "*sat as a family and discussed as a family how we would own it and how the rent would be collected. It is a family agreement*" (interview, March 2017).

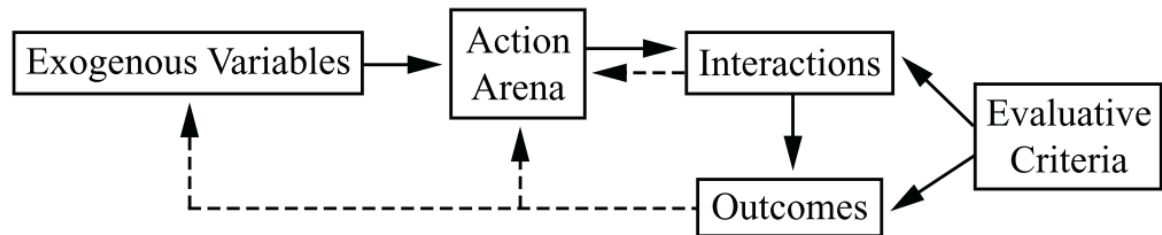
A complete analysis of women's property rights would therefore need to explore not only formal laws, informal institutions, but also look within the family. This would be particularly interesting in light of evidence from a recent RCT of formalisation which finds that households in Dar es Salaam can be easily 'nudged' into co-titling; leading the authors to question whether participants are treating the decision as if it has significant implications for household bargaining power (Ali et al. 2014). Yet the family is an action arena in its own right (Doss and Meinzen-Dick 2015). It is a nested system within the broader understanding of the real estate market.¹¹ As this is an insight that emerged through the research, time limitations prevented me from being able to explore it fully. It remains an important area for further research.

Overall, in this thesis, I use the IAD framework to understand the institutional context that shapes both land market behaviour and rental market interactions. The framework helps to identify the presence and role of key rules, norms, and strategies that shape behaviour. This

¹¹ Institutional analysis is sometimes described as 'nested systems', in which each action situation is connected to an adjacent situation (McGinnis 2011).

is vital for understanding why market transactions and outcomes differ from what simplified theory would predict, and therefore provide insight that can be useful to refine and improve these models.

Figure 2: Simplified IAD Framework



Source: Ostrom 2005 p13

Section III: Overview of the case study and selection criteria

There are two main factors that make Dar es Salaam an appropriate case study. First, Dar es Salaam is a rapidly expanding city that is marked by many characteristics thought to be typical of urbanisation in Sub-Saharan Africa; indeed, it is often considered an exemplar of urban development in the region (Brennan and Burton 2007a). In addition to this, local and national government policy towards slums has also been strongly shaped by ‘best practice’ international development policy advice. As such, the findings are likely to be relevant to other cities beyond the case study itself. Secondly, and no doubt as a result of broader interest in Dar es Salaam as an example of urbanisation in Africa, there is considerable interest in the city – which meant that I had the opportunity to participate in new raw data collection. As

discussed in chapter 1, there is a serious lack of reliable data on slum deprivations in developing country cities. Data availability is thus the second, pragmatic motivation for the case study selection.

Dar es Salaam is the largest and most economically important city in Tanzania (UN Habitat 2009). Economic growth in Tanzania has been strongly concentrated in Dar es Salaam over the last decades, and the city has experienced dramatic improvements in poverty rates: the proportion of poor households fell by 70 percent over the period 2007-2012, compared with 15 percent in rural areas of the country and 5 percent in secondary cities and towns (World Bank 2015b). Dar es Salaam is also home to most of the national government bureaucracy, despite officially being replaced by Dodoma as the national capital in the 1970s. As indicated in Figure 2, it is governed under five municipalities – Ilala, Kinondoni, Temeke, Ubungo and Kigamboni – in cooperation with the city council and the national government.

The city is expanding rapidly. In 1957 it was home to less than 130,000 residents; by 2012 this number reached 4.4 million (Jones et al. 2016). Current estimates suggest that the population will exceed 7 million by 2025 (Moldrop Wolff, Kuch, and Chipman 2018). This population growth has been driven largely by in-migration from other regions in the country (Collier and Jones 2017). Contrary to rapid urbanisation in other regions across the world, it does not appear that this migration comes in response to the ‘pull’ of demand for industrial labour; most people in Dar es Salaam work in microenterprises, which lack the scale to specialise and harness the productivity benefits of agglomeration (Collier and Jones 2017). In this sense, the city may fit the mould of a Sub-Saharan African ‘consumption city’,

dominated by service jobs that arise from the success of natural resource extraction rather than economic transformation towards industrialisation (Gollin, Jedwab, and Vollrath 2016; Collier and Jones 2017).

Dar es Salaam has expanded horizontally as its population has grown. The city has a broadly monocentric pattern, but it sprawls over 1393 square kilometres. Multi-storey buildings are concentrated within 5 kilometres of the city centre and along the main road arteries. As shown in the map, these roads start at the large natural harbour and shoot out towards important regions in the country in a star-like formation.

Figure 3: Municipal Map of Dar es Salaam



Source: Map created by Msilikale Msilanga with Ramani Huria data

As with many cities in the region, the urban footprint of Dar es Salaam has also been shaped by distinct historical urban policy phases. This includes colonial rule, socialist government,

and liberalization. Under the German and British colonial administrations, access to land and basic infrastructure was deliberately curtailed in order to discourage ‘natives’ from permanently settling in the city and to maintain a system of racial segregation.¹² By the 1970s, independent Tanzania was an exemplar of African socialist development models (Green 2014). All land was vested in the president, who granted rights of occupancy to citizens. Power was centralized away from local authorities, large buildings were nationalised and an ambitious program of government provision of housing was undertaken. Restrictions on migration, forced relocation, and slum clearance activities were also applied to limit the population in light of dominant theories of urban bias (Beall and Fox 2009). Detailed master plans were created for the city in 1968 and 1979, but they had little impact on the shape of development in practice.

In the early 21st century, Tanzania came to be seen as a poster-child for international development aid and policy advice (Green 2014).¹³ This builds on a longer-agenda of economic liberalization and government reform that can be dated back to the reestablishment of Local Government Authorities in 1982 and the IMF economic-recovery program in 1986.

¹² Racial segregation of land uses introduced under German colonial rule (1887-1919) demarcated ‘African’ areas of the city with lower levels and quality of services. In 1914 the ordinance was updated to create three zones: Zone 1, where only European style buildings were permitted (specifying, for example, that all rooms must have a window and the home should have a flush toilet); Zone 2 where greater plurality was allowed but ‘African styles’ were still prohibited; and Zone 3, which was zoned specifically for Africans (Smiley 2013; Brennan and Burton 2007). Under the British administration (1919-1961), this policy continued but without reference to explicit racial segregation: as minutes of a meeting between Governor Byatt and chief secretary Hollis record: *“racial segregation not being practicable, a standard to which all new buildings must conform has been adopted, and this, it is hoped, will secure the same advantages”* (22 December 1920, TNA 3152; as quoted by Brennan 2007).

¹³ Since 2017 tensions between international donors and the policy objectives of the Government of Tanzania under the leadership of President Magafuli are becoming more apparent. This is most evident in issues related to social policy (including LGBTQ rights and education of pregnant schoolgirls), restrictions on rights to protest, journalistic freedoms, and legislation concerning the publication of research. To date, however, policies towards land and housing continue to align closely with international best practice advice.

Changes to land policy followed in 1999, with the Land Act and Village Land Act. These Acts came into force in 2001, and were designed to support land market activity (Moldrop Wolff, Kuch, and Chipman 2018). Although the constitution continues to recognize that the President is the owner of all land, the Government’s market-based approach to economic development emphasizes formalisation of individual property as a tool for economic development (Briggs 2011). Indeed, based on interviews with national and local policy makers in Dar es Salaam, Patricia Campbell concludes that urban politics is framed in a “binary conceptualisation extralegal and legal, formal and informal and an understanding that extralegal must become legal and emerge from the ‘shadows’ in order to achieve development” (Campbell 2013, 498).

Formalisation initiatives are complemented with other ‘best practice’ policy advice for slums advocated by UN Habitat, such as regularization and upgrading of informal settlements, as well as providing an ‘enabling environment’ for housing markets to improve access to homeownership.¹⁴ Notable projects include a large-scale land formalization initiative introduced in 2005 with international donor aid and guidance from Hernando de Soto (Cadstedt 2010); policies to upgrade half of the city’s existing unplanned and unserved areas by 2020; the 2002 project to survey ‘20,000 plots’ by 2006. Efforts to reform of housing sector finance include the establishment of the Mortgage Finance Act of 2008 and Banking

¹⁴ These policies are set out in a number of policies, including: National Human Settlements Development Policy of 2000, which aims to ‘create an enabling environment’ for housing; the National Strategy for Economic Growth and Poverty Reduction (known by its Swahili acronym, MKUKUTA), which aims to regularize all unplanned settlements by 2020 (Kwanama 2015); and the Mkukuta II national poverty strategy, which stresses: (i) development of settlement plans, land surveys and gender-balanced issuance of land titles; (ii) establishment of land reserves in peri-urban areas; (iii) regularization of unplanned settlements; and (iv) capacity-building for local leaders, including education and awareness-building on land rights, obligations and women’s rights (USAID 2010).

and Financial Institutions Regulations of 2011 which were developed with support of the World Bank (Centre for Affordable Housing in Africa 2017).¹⁵

Despite this, Dar es Salaam continues to be marked by high levels of slum deprivation. This is typical of Sub-Saharan Africa, where 60 percent of the urban population lives in slums (UN-HABITAT 2016a). Indeed, the level of deprivation is so high that Dar es Salaam and other African cities are sometimes classified as a “slum cities” (UN-HABITAT 2008, 113).

Recent research into slum deprivation in Dar es Salaam and urban Tanzania has focused on documenting the failures of the formal land management system and evaluating the impact of slum policies. In terms of the former, there are a number of articles and working papers that analyse the functioning of formal land market and land use systems. This work highlights that in practice processes often differ markedly from the formal law, and links this divergence to the proliferation of informal settlements and slum deprivation (Kironde 2000; Kironde 2006; Kironde 2009; Moldrop Wolff, Kuch, and Chipman 2018; Kombe 1994). This view is also reflected in broader policy analysis for the city (Collier and Jones 2017; Jones et al. 2016). The research does not, however, not explore dynamics anticipated to link informality to slum deprivation directly.

The empirical literature evaluating key slum policies in Dar es Salaam includes both quantitative and qualitative evaluations of property rights formalization, slum upgrading

¹⁵ The number of mortgage providers has increased from three in 2009 to 30 in 2017, but the market remains one of the smallest in East Africa and it is thought that most clients are high income earners (Centre for Affordable Housing in Africa 2017).

initiatives, and efforts to facilitate access to homeownership in the city. Formalisation policies have been evaluated through randomised field experiments (Ali et al. 2014), semi-experimental approaches that exploit randomisation in the delivery of a temporary licensing program (Collin, Sandefur, and Zeitlin 2015), qualitative studies (Parsa et al. 2011; Briggs 2011), and donor program reports (USAID 2010). Overall, a unifying insight across these studies is that demand for title is low. As will be discussed further in chapter 3, Ali et al find that most households would not participate in formalisation even if the price were one fifth of the cost of issuing the documentation (Ali et al. 2014); donors have questioned whether the underlying assumptions of the value of title are valid (USAID 2010); and qualitative researchers find that informal households are ambivalent towards titles (Briggs 2011). Evaluations further fail to find evidence that temporary licenses improve access to credit, tenure security, or transaction risks (Collin, Sandefur, and Zeitlin 2015; Parsa et al. 2011).¹⁶

The track record of slum upgrading and access to homeownership policies are also contested. Case studies of specific areas in Dar es Salaam stress that residents are quick to capitalise on improved infrastructure to expand accommodation for rental purposes (Precht 2005), and that infrastructure is associated with rising housing values (Collin et al. 2012).¹⁷ Yet drawing on satellite imagery and survey data for a number of cities in Tanzania, Michaels et al. conclude that housing quality in upgraded neighbourhoods is low relative to comparable

¹⁶ Although there is some evidence that a temporary license program led to improved housing values, this finding is hard to interpret. Theory would predict that rising real estate values result from reduced transaction risks and/or increased investment resulting from improved tenure security; the residential license program, however, had no measurable impact on tenure security and appears to increase market friction and may thus reduce transactions (although results are not robust to specifications) (Collin, Sandefur, and Zeitlin 2015).

¹⁷ Exploiting variation across areas in planned and delivered infrastructure across neighbourhoods included in the titling RCT discussed above, Collin et al. further note that demand for title decreases with proximity to new infrastructure. They argue that this reflects higher demand for title where fear of government expropriation – associated with infrastructure investment – is greater (Collin et al. 2012).

neighbourhoods over time (Michaels et al. 2017). Similarly, a recent assessment of the '20,000' plots project highlights that while the project exceeded its target by making 40,000 surveyed plots available, funds were not included for providing any services beyond the construction of roads (Kironde 2015). This raises questions about whether they are likely to be developed as non-slum housing.

These policy challenges are not unique to Dar es Salaam. The track record of slum policies in the region has been highly variable (Gulyani and Bassett 2007; Ali et al. 2014). Although it is difficult to disentangle the role that implementation challenges play in these outcomes, the track record of these policies raises questions about the underlying assumptions that guide these policies about how informal land and housing markets work and the characteristics of households that live in slums. These questions are the focus of chapters 3, 4 and 5 of this thesis. This discussion is also informed by related research into urban livelihoods, which does not directly engage with these questions but provides important contextual insight. This includes ethnographic and qualitative research into: residential mobility (Andreasen and Agergaard 2016; Limbumba 2010) and access to basic services in Dar es Salaam (Kyessi 2005; Andreasen and Moller-Jensen 2016); and rental housing (Cadstedt 2010) and informal land development and dispute adjudication in secondary cities in the country (Kombe and Kreibich 2001; Kombe 2005).¹⁸

¹⁸ I also draw on insight from extensive research into informal and customary land management in rural areas, as well as literature on land reform as well as informal and customary land management that is focused on rural areas and extractive industries (e.g. Pedersen 2013; Pedersen 2016; Boone and Nyeme 2015). Yet it is important to note that – in contrast to urban areas - Village Chairmen have a legally defined role in land allocation and dispute resolution (as set out in the Land Act and Village Land Act of 1999 and Land Disputes Courts Act of 2002).

Section IV: Overview of data

This section introduces the quantitative and qualitative data used in this thesis. It details collection methods and approaches to validating of the data. It also provides some additional contextual information on Dar es Salaam provided by this data.

4.1. Quantitative data

The quantitative sections of the research draw on data from the World Bank Measuring Living Standards in Cities (MLSC) survey to explore broad patterns in housing and living standards in Dar es Salaam. The survey was fielded in Dar es Salaam between November 2014 and February 2015. I was contracted by the World Bank as a Short-Term Consultant to help design and supervise the fielding of the MLSC survey questionnaire in December 2013. Between this date and June 2016, my main responsibilities were to: design and refine the survey questionnaire; participate in field-work trips to Dar es Salaam; provide guidance on fielding of the survey; clean and analyse portions of the completed data; and write a report detailing the process of survey implantation and headline results.¹⁹

The objective of the MLSC survey was to collect new data on living standards in cities. To this end, we designed the survey with a number of innovations to address data gaps and challenges that exist in urban areas. In this section, I outline key points of the survey design and implementation. It draws on sole-authored inputs to the MLSC Survey Report, which

¹⁹ Given that I started the DPhil in October 2014, I did not directly participate in the fielding of the survey – although I remained in remote contact with the team. Given the sensitive nature of the data, I returned to Washington, D.C. between June 2015 and February 2016 to work on cleaning the data.

has been published online (World Bank 2016). The section further details specific challenges that arose during the data cleaning process and provides an overview of the data itself.²⁰

Sampling, listing, and fielding strategy

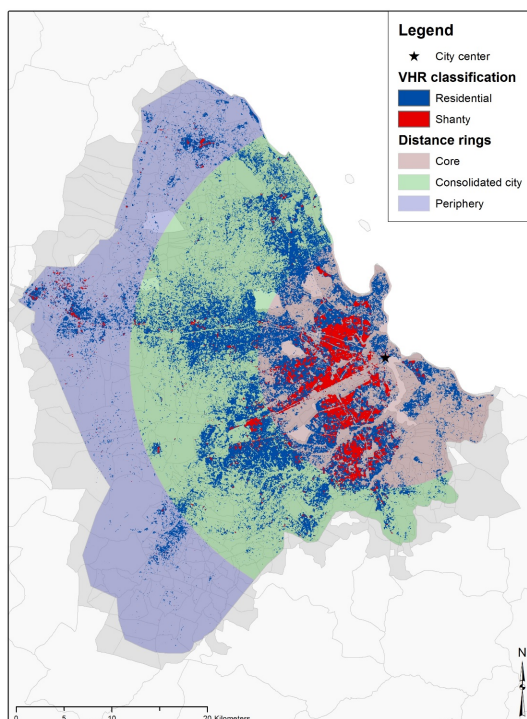
One of the main data constraints for urban analysts is that it is difficult to capture variation in living standards *within* cities in standard household surveys. Most large-scale household surveys are representative for urban-rural distinctions, or at best, for the capital city. The MLSC survey aimed to capture variation in living standards in different geographical areas of Dar es Salaam. These priorities were reflected in the sampling strategy, which was designed by Juan Munoz (Sistemas Integrales).

The first stage of the sampling strategy involved selecting and sorting 200 Enumeration Areas (EAs) into several strata. They were sorted based on their distance to the city center. Three strata ‘rings’ were created: the centre, consolidated city, and peripheral areas. In addition to this, satellite imagery was used to classify EAs according to whether their development pattern was ‘regular’ or ‘irregular’. This methodology follows emerging best practice in the identification of ‘slum’ areas from satellite imagery (World Bank 2016). The majority of EAs that could be clearly distinguished as either ‘non-slum’ or ‘slum’ were found within the central ring of the city (as indicated by the term ‘shanty’ in Figure 4). As such, this distinction was built into the sampling strategy. The survey data is thus representative

²⁰ It was a condition of my contract that I could use the MLSC data for my DPhil research (see Annex 1: Terms of Use of Data Agreement for further details).

for different geographical areas of the city: centre, centre-slum, consolidated core, and periphery.

Figure 4: Geographical Depiction of Sample Strata



Source: World Bank 2016

Within each stratum, the EAs in the expanded sample were selected randomly with probability proportional to size, using the number of households as a measure of size, and with implicit stratification by the administrative units (region, district, ward, etc.). The EAs in the target sample were then selected at random with equal probability from the expanded sample.²¹ Two EAs were found to be inaccessible during the listing, and therefore replaced

²¹ The distribution of the sample of 200 EAs was determined in accordance to Markward's rule (also known as the '50/50 equal/proportional allocation'). This approach was selected because it was considered the most appropriate means of ensuring accurate estimation at both the metropolitan and stratum level. The alternatives

with two reserve EAs in the second stage of the sampling.²² In the second stage of the sampling strategy, 12 households were selected from each of the 200 EAs. The second stage of the sampling took place after listing. The process is summarized in Table 1.

A second major challenge to capturing living standards in urban areas is that many of the most vulnerable and poor segments of the urban population live in areas that may be underrepresented in final survey samples, due to the difficulty of listing and interviewing in these areas. Not only is there a risk that enumerators make efforts to minimize time spent in areas where they perceive crime and other threats to be high, but also it is possible that residents of these areas may be more suspicious and reluctant to engage with strangers.²³ In the MLSC survey implementation steps were taken to minimise these risks through both outreach and careful checks on enumeration.

First, the survey design included extensive community sensitisation. Enumerators visited the local authorities in their assigned EA two days in advance of listing and on the day of listing. Second, the household listing operations were implemented with computer assisted paperless interviewing (CAPI) techniques, which directly generates electronic files. The CAPI

would have been either by proportion to the population of the strata – which would deliver nearly optimal estimates for Metropolitan Dar es Salaam as a whole – or selecting the same number of EAs in each stratum, which would deliver estimates of nearly the same quality for each stratum.

²² Ten additional EAs were identified as *reserve* in the first phase of the sampling to be mobilized in case of justified need. These reserve EAs were assigned to groups of 10 selected EAs. During the listing exercises the implementing firm found that two EAs were found to be in need of replacement: one of the EAs was found to be a prison and the other police quarters to which the enumerators could not gain access. These EAs were thus replaced with their assigned reserve EA. In one of the two cases, however, the assigned reserve EA was also found to be inaccessible: the EA was in the area of an airport area and it would require at least 2 weeks to get permission to start listing. The decision was taken to therefore use the ‘next’ reserve EA on the list of 10.

²³ Although it is hard to measure the impact of these omissions, they may not be trivial: at an international level it has been estimated that there are between 300 and 350 million of the poorest missing from world population counts as a result of both political and technical constraints on surveying hard to reach areas and groups (Carr-Hill 2013).

application used a platform supported by Google Earth (Google My Maps), which increased oversight of any potential patterns in exclusion of households by geographical areas. Third, households that sub-let/ rent rooms *within* houses are often ‘lost’ in household surveys and census, as they are neither recorded as members of the household nor specifically identified as a separate household. Enumerators were therefore instructed to identify all households living within dwellings at the listing stage, so that they would be included in the sample of households from which respondents were selected.

Further efforts were also made during the fielding process. Interviewers were provided electronic and hardcopy maps, as well as a printed completion form, and could contact the listing manager through email, WhatsApp, or Google Hangouts if they were unable to find the assigned house. The implementing firm carried out standard weekly monitoring of data quality indicators, and increased supervision where necessary.²⁴ Summaries were provided to the World Bank team on a weekly basis, and back checks were systematically carried out on 5 percent of interviews.

²⁴ Typical indicators included summary statistics such as the average household size, average number of children per household, average number of people attending school per household, number of jobs recorded, average number of food items purchased or consumed per household, among others. These indicators were summarized by the week of data collection and enumerator, in order to address data quality concerns in real time.

Table 1: Summary of Sampling, Listing and Fielding of Survey

	Comments
Sample frame	16,000 EAs generated by the Tanzania National Bureau of Statistics (NBS) for the 2012 Census. ²⁵
Stage one	200 EAs sorted into four strata. The central stratum was divided into ‘central core, irregular’ and ‘central core, regular’. Two EAs were replaced with reserve EAs as the original EAs were found to be inaccessible.
Stage two	12 households randomly selected by systematic equal-probability from updated listing of each EA.
Listing	Took place between first and second stage of sampling.
Team composition	30 enumerators, each of which was assigned between 3 and 9 EAs for listing (enumerators were selected on the basis of performance from a group of 35 that were trained for listing).
Fielding	9 weeks between November 2014 and February 2015
Team composition	30 interviewers
Households visited	2,397 (enumerators visited each house at least twice before a component could be marked as unavailable – in many cases, however, more than two visits were conducted)
Non-response rate	13% (refusal, long term unavailable, uninhabited dwelling, or partially completed)
Total interviews	2,083

Overall, the refusal and non-completion rate was 13 percent. This is high by survey standards, but not unusual for surveying in urban areas. High refusal rates are common in urban areas, given that urban residents may be away from their houses for much of the day or night, as they may commute long distances for daily work or other activities. When the same survey was fielded in Durban, for example, the refusal and non-compliance rate was 41 percent (World Bank 2016).

²⁵ The database included information on: Region, District, Ward, Sub-ward (or village), and numeric code within the sub-ward. The number of households and the population of each EA, as well as a digital description of the EA boundaries were also indicated.

Sample weights were designed to deliver unbiased estimates from the sample. The ‘raw sampling weight’ is a raising factor applied to each household that is equal to the inverse of its selection probability.²⁶ Any given household's selection probability is the product of the probability of selection at each stage of the sampling. The MLSC weights for Dar es Salaam thus reflect the probability of selecting the EA in the first stage of the sampling, and the conditional probability of selecting the household in the second stage. The raw sampling weights are then further adjusted to account for non-response rates. To account for non-response rates, the number of ‘usable households’ in each EA is calculated.²⁷

Data overview

A number of innovations were introduced in to the MLSC survey to capture variables that are of particular interest to the analysis of urban areas, such as information relating the value and structure of houses. This section provides an overview of key variables used in the analysis throughout the following empirical chapters. It discusses general and specific data issues that arose in implementation of the survey.

Consumption Aggregate and Poverty Measures

The consumption module of the MLSC survey broadly followed that of the Tanzania Living Standards Measurement Survey (LSMS). As such, I was able to use the MLSC data to

²⁶ The sample is approximately self-weighted within each stratum: if the number of households in the EA, as per the sample frame and the number of households in the EA or segment, as per the household listing operation were always the same in all EAs, the formula would simplify to a constant.

²⁷ ‘Usable households’ are defined as those where at least one of the three respondents (main, household head, and random) could be interviewed, at least partially. This differs from the nominal sample of 12 per EA.

construct a consumption aggregate that directly follows the LSMS methodology. A summary of the steps involved in constructing the aggregate is provided in Table 2 below. In cleaning the data, I followed guidelines applied to the cleaning of outliers in the 2011 Tanzania LSMS survey. This involved three main steps. First, an algorithm was used to identify gross outliers for each item of expenditure. Second, flagged records were examined.²⁸ This analysis was guided by principles of ‘reasonableness’, and further drew on insights from the LSMS survey, in which cut-off points for many items were determined in consultation with local government officials. Third, where necessary, outlier values were replaced with imputed median values for the lowest geographical level of data collection for which there was a sufficient number of items recorded.

In some instances, additional steps were needed to check for interviewer errors in the data. This is because, after interviewer training phases, it was determined that the questionnaire was too long and thus resulted in interviewer and respondent fatigue. As such, small changes were introduced to the consumption module to shorten it. In addition to some changes to units of food, this involved collapsing expenses recorded by household. The changes – and additional checks then needed in the data cleaning phase – are outlined in Table 2.

²⁸ This involved looking at both the details of the individual record (other items the household recorded, patterns by interviewer, etc.) and the item (i.e. distribution of the data and sensitivity of the mean to the outliers).

Table 2: Summary of Steps to Prepare Data and Construct the Consumption Aggregate

	Tasks	Additional comments
Food in the Home	Standardise units (e.g. adjust liquids by density; convert non-standard units into standard units).	Additional steps added due to two challenges: 1) the interviewer manual was ambiguous about whether units should be collected in kilos or grams/ litres or millilitres; 2) non-standard units were introduced for the collection of 21 food items, but without any standard measure for these units being defined or recorded. ²⁹ Following consultation with members of the World Bank’s LSMS team, I employed the following tools to check the validity of the data. I checked for patterns by interviewers, time, location, and corresponding prices for each item of food. In many cases, the price provided a strong indicator of how units should be standardised. In those cases where non-standard units were being used, I converted the responses using the mean standard unit weight of a ‘piece’ or ‘heap’ of a given item recorded in LSMS surveys in Malawi and Uganda.
	Create an ‘adult equivalent’ value based on age and gender.	Following standard practice, where this is unknown, based on reasonable assumption given household composition (e.g. if age of wife missing, guess reasonable age band based on age of husband and age of any children of hers).
	Check for outliers by price and quantity per item, as well as total value; Impute values and replace outliers per item.	Additional checks added by interviewer, date, and location of interview. The check by total value was not possible, as the ‘total value’ of purchased food was not collected.
	Add calorie content	Based on existing LSMS estimates for Tanzania.
Food Away From Home	Check for outliers and impute missing values.	Records were collected for the household as a whole rather than individual members. This may have resulted in underreporting on expenditures. ³⁰
Education	Check for outliers by looking at distribution of costs by different types and levels of education.	Expenses were recorded at the household rather than level, and information was not collected by school types. In order to address this, I matched the records with an existing list of schools provided by local World Bank counterparts. I was then able to compare actual household expenses to a crude estimate of expenses, created by averaging costs of schools across different categories and levels of

²⁹ Non-standard units are, for example, ‘pieces’ or ‘heaps’ rather than milligrams or milliliters. There are clear advantages to using non-standard units for items in which respondents are more familiar in using them. They must, however, be carefully defined. For example, in the Malawi LSMS non-standard units were used but interviewers carried visual aids to help identify whether respondents mean a big, medium, or small heap of the specific item, to ensure accurate conversion to standard measures in the data processes phases.

³⁰ For recent advances on methodology for measuring food outside the home see Farfán, Genoni, and Vakis (2017).

		school recorded by Dar es Salaam respondents in the 2011 Tanzania LSMS (inflation adjusted).
Health	Identify outliers, impute missing values, and aggregate expenditure across different components of health costs collected.	Outliers explored by looking at expenditure per person and adult equivalent, taking into account if members of the household had disability and the number of health incidents that had been recorded.
Other food	Non- Identify outliers, impute missing values, aggregate expenditures in: utilities; eligible household expenses; transportation; communication; recreation; and other miscellaneous expenditures.	

On the basis of this consumption aggregate, I construct the poverty variable that I use in this thesis. I do not use either a nationally or internationally comparable poverty line, for four main reasons. First, as Beegle and others have shown consumption data is very sensitive to small changes in the collection module (Beegle et al. 2010). As such, any differences in poverty estimates between this and other measures would need to account for the differences in the collection module. Second, the poverty line is a politically contentious issue in Tanzania. The Government of Tanzania employs a basic needs poverty line that is considerably lower than the World Bank’s international line, which results in 16 percent lower national headcount rates for the country as a whole.³¹ Third, many urban analysts argue that all national poverty lines result in an under-representation of urban poverty, as prices

³¹ The national basic needs poverty line in 2012 was T Sh 36,482 per adult per month. This was equivalent to approximately \$1 per day, rather than the World Bank line of \$1.25 (World Bank 2015b). There have also been contentious differences in poverty *trends* between national and international estimates. This is largely attributed to differences that result from different data sets (national statistics are constructed from HBS survey data, while World Bank statistics employed the Tanzania National Panel Survey) and differences in estimating the poverty line – including spatial and temporal price deflators (Belghith et al. 2018).

can vary considerably between urban and rural areas, as well as between cities in any given country (Satterthwaite 2016).³²

Most importantly, however, the analysis is focused on comparing slum households to non-slum households within the city. As such, the objective of the poverty variable is to have a measure that identifies households within the city that are relatively less well-off compared to other households in Dar es Salaam. A relative measure within the city is thus the most appropriate. I therefore classify the urban poor as those who fall into the bottom 40 percent of consumption expenditures.³³

I also construct a measure of asset poverty, as a second source of information on living standards. The asset measure is based on estimates provided by respondents for the value of assets, based on the following question: “If you wanted to sell this asset today, how much would you receive for it?” The list of assets collected is in keeping with the Tanzania LSMS module.³⁴ As with consumption poverty, each item was examined for extreme outliers.³⁵ I

³² An alternative would be to estimate a local price line to establish the Cost of Basic Needs (CBN) basket. There are, however, a number of challenges to using household survey data as price data in urban areas. Some researchers question whether the basket of basic needs in urban areas is the same as in rural areas. In addition to this, CBN prices are often established according to price levels inferred from unit values in household surveys, which may not be appropriate for the construction of price data at levels of spatial disaggregation (given that they are often only representative for all urban areas). There has been limited research to establish the accuracy of price data inferred from surveys compared with outlet survey data (Gibson and Kim 2013). In addition to this, food prices may vary across cities, and even within urban areas. Search costs and storage constraints may mean that even within cities there food costs have a u-shape, with the poor facing higher prices than the non-poor who can search for bargains and buy in larger quantities, while higher income groups pay higher prices because they have a higher opportunity cost of time and therefore do not search out cheaper foods (Gibson and Kim 2013).

³³ 40 percent is a common measure for identifying the ‘less well-off’. See for example, the World Bank’s target of ‘shared prosperity’.

³⁴ These are: refrigerator/ freezer, television, mobile phone, vehicle, motorbike, computer, livestock, air conditioner, Bajaji, complete music system, and landline.

³⁵ A median value was imputed by stratum if value was not provided or if extreme outlier. If there were fewer than 8 observations in the stratum, then the median value for Dar es Salaam was used for imputation.

define the ‘asset poor’ as households whose total asset value falls in the bottom 40 percent of asset values recorded.

Consumption and asset poverty is positively correlated, although moderately weakly (0.36). This is not unusual, as the measures capture different dimensions of wellbeing. While consumption provides insight into current expenditure, low asset stocks may be central to understanding persistent poverty and vulnerability to shocks (Barrett and Carter 2013). As outlined in Table 3, one quarter of the population are both consumption and asset poor. Overall, 61 percent of households classified as poor are also asset poor. A further 16 per cent of the consumption poor are in asset quintile 3.

Asset approaches to wealth measurement are rare in the analysis of urban poverty. This may be because although there are generally higher levels of asset ownership in urban areas, there is also arguably higher ‘necessity’ for asset ownership than in rural areas. Furthermore, the list of assets collected have been defined primarily with rural poverty in mind, and may thus not be the most appropriate to construct an index for urban areas (Satterthwaite 2014). As such, in the analysis that follows, the asset poverty measure is used as a secondary source of information on living standards to the consumption poverty measure.

Table 3: Distribution of Households Classified as Poor and Asset Poor

	Consumption poor	Consumption non-poor
Asset poor	24%	16%
Asset non-poor	16%	44%

Note: data are survey weighted. Total observations: 2016

Slum measurement

The most commonly used measure of slum deprivation is the UN Habitat slum index. The slum index was initially developed by the UN's 2002 Expert Group Meeting, as an indicator to chart progress towards target 11 (also known as 7d) of the Millennium Development Goals. It is defined as: a group of individuals living under the same roof in an urban area with at least one of the following four basic shelter deprivations: lack of access to improved water supply;³⁶ lack of access to improved sanitation;³⁷ overcrowding (three or more persons per room); and dwellings made of non- durable material.³⁸ Although tenure informality/ insecurity was also initially proposed as one of the criterion, it is generally excluded from the definition because of a lack of measurable data (Payne and Durand-Lasserve 2012; Chant and McIlwaine 2015; UN-HABITAT 2003b).

This definition of the slum is used by policy makers, academic researchers, and popular literature. For example, it is the basis of Mike Davis' claim that neoliberal capitalism has multiplied Dickensian style slums exponentially, to the point where "*[r]esidents of slums....constitute 78.2 percent of urbanites in the least-developed countries*" (Davis 2006,

³⁶ Access to improved water, which is defined as piped into dwelling, piped into yard, public or private standpipe, tubewell or borehole, protected well, spring, rainwater. Unimproved water sources are: unprotected spring or dug well, as well as tank, truck, surface, or bottled water.

³⁷ Improved sanitation is defined as flush to pipe, flush to septic, improved pit latrine, vip, and composting/ecosan toilet. Unimproved sanitation is pit, open pit, bucket latrine, pour to flush to pit, open defecation, and other.

³⁸ Durable materials are defined as stone, concrete, or cement for walls and floors, but metal sheets are included for roofs. The majority of houses in Dar have stone, cement, or concrete walls (98 percent) and floor (97 percent); only three percent however, have a roof made of these materials. The vast majority - 95 percent – have metal sheet roofs. If metal sheet roofing is not considered 'durable, then the percentage of slum households rises to 98 percent. The climatic conditions in Dar es Salaam are such, however, that it is reasonable to include metal roofs as durable.

23). Yet is also used across the social sciences literature and is widely thought to provide a useful ‘short hand’ for slums (Nuissl and Heinrichs 2013; Gulyani and Talukdar 2008).

There are limitations to this measure, however. The decision to define the measure in binary terms (slum/non-slum) based on any one of deprivation criterion being satisfied has implications for the level of detail that the measure provides. Indeed, it may lead researchers to overlook important changes in any one dimension over time, and obscures insights into how the different components of the indicator interact (Gulyani and Talukdar 2008).³⁹ In light of this, there is a small literature which instead reports aggregate slum deprivations.⁴⁰ In this thesis I prioritise comparability and therefore primarily report the binary slum index. I complement the analysis by providing insight on the levels of deprivation as well as specific individual deprivations where relevant.

Perhaps most challengingly, the UN Habitat slum index does not make any reference to spatial characteristics. That is to say, although it is commonly assumed that slum households are located in slum *areas*, the UN Habitat index focuses on housing attributes without specific reference to neighbourhood characteristics. To what extent is this omission problematic? The answer is unclear. On the one hand, as will be discussed in depth in Chapter

³⁹ There is an interesting parallel here in critiques of the Human Development Index (HDI). The development of the HDI marked an important advance in measuring multidimensional poverty but relied on underdeveloped conceptual foundation, particularly as with regard to whether or not wellbeing can be said to improve if the different components of the indicator (income, literacy, and life expectancy) move in opposite directions (Grusky and Kanbur 2006).

⁴⁰ For example, Patel et al. highlight the severity of the slum deprivation based on the number of deprivations each household suffers from (Patel, Koizumi, and Crooks 2014). Similarly Weeks et al, create a composite measure of ‘slumness’, in which the sum of individual household slum deprivations are averaged across a defined area (Weeks et al. 2007). Yet there are also challenges to this approach, indeed it is notable that in neither case is the decision to weight each deprivation equally interrogated.

5, there is widespread adherence to the idea that socio-spatial dynamics produce and reproduce deprivation and disadvantage in slums. On the other hand, there is remarkably little research which actively explores spatial dynamics in specific settlement areas (Desai and Loftus 2013; Nijman 2010); and much of the literature on slums is in fact focused at the individual or household level.

The literature provides two main ways of measuring slums spatially.⁴¹ UN Habitat proposes that areas can be classified as ‘slum neighbourhoods’ if more than fifty percent of resident households are slum households. This approach effectively adds an additional criterion of a spatial ‘break point’ to distinguish slum households from households located in slum areas. In cities like Dar es Salaam where slum deprivation is very widespread, this cut-off point does not help to identify clearly distinguishable ‘neighbourhoods’, as it increases the number of slum households to 92 percent of the whole city.⁴² The second approach is to employ visual criteria.⁴³ Recent technological developments have improved the quality and reduced the cost of satellite data. As such, there has been increased interest in using satellite imagery to identify slum areas (Lucci and Bhatkal 2014; UN-HABITAT 2012). As mentioned above,

⁴¹ A third method would be to measure living standards in ‘slum’ areas based on common knowledge or even a given city’s official classification. Thus, for example, Gulyani and Basset (2010) collect data in areas of Nairobi and Dakar locally known to be slums, and then develop a ‘living standards triangle’ to explore how living conditions vary across the areas. There is, however, a challenge in drawing comparative insights through this approach. Given that the criteria for definition of areas as ‘slums’ is not explicit, the extent to which differences in observed outcomes reflect differences in selection criteria is unclear.

⁴² If we make this criterion more stringent and restrict the definition of slum neighbourhoods to enumeration areas where 50 percent of households are deprived on *two or more* criterion, then the number of households living in slum areas declines to 52 percent. It is worth noting, however, that the correlation between this more restricted measure of slum residence and the satellite defined slum EA is still very small (0.0796)

⁴³ In both cases I rely on Enumeration Areas (EAs) to define ‘neighbourhoods’. This is an imperfect proxy for a neighbourhood, although they have distinguishable cartographic boundaries that often follow geographical division points (e.g. larger road or a small river) that may also align with a social boundary. As such EAs or ‘census tracts’ are often used in lieu of ‘neighbourhoods’ in literature on cities in the United States (Weeks et al. 2007).

a methodology to identify slum areas was built into the sampling strategy of the MLSC survey. The methodology was developed by a team of researchers from the University of Puerto Rico and World Bank GIS staff (for further details, see Antos, Lall, and Gracia 2014).

Overall, 85 percent of households in Dar es Salaam classify as slum households. Not all slum households suffer the same degree of deprivation. As Table 4 shows, only one percent is deprived in all four dimensions. The table also shows that the distribution of deprivations are remarkably similar across the city.

Table 4: Extent of Slum Deprivation across Survey Strata

	Centre (regular)	Centre (irregular)	Consolidated	Periphery	Total
Non-slum	18%	12%	15%	16%	14%
	(2%)	(1%)	(2%)	(2%)	(1%)
1 deprivation	38%	36%	37%	38%	36%
	(2%)	(2%)	(2%)	(3%)	(1%)
2 deprivations	35%	37%	35%	31%	36%
	(2%)	(2%)	(2%)	(3%)	(1%)
3 deprivations	10%	15%	12%	13%	13%
	(1%)	(1%)	(2%)	(2%)	(1%)
4 deprivations	0%	0%	1%	2%	1%
	(no obs.)	(0%)	(0%)	(1%)	(0%)

Note: data are survey weighted. Standard errors in parenthesis. Observations: 2019

Overall, less than half (44 percent) of households live in enumeration areas that are made up of at least 50 percent ‘slum’ pixels and thus classified as a slum area. Within these areas, a larger portion of households are slum deprived than in non-slum areas: 88 percent of households in slum areas suffer slum deprivations, compared with 84 percent in non-slum

areas. Interestingly, however, within those that are slum deprived, the number of the deprivations suffered is similar.

Tenure formality and insecurity

The MLSC survey asked respondents to identify whether they owned the house that they occupy. Overall, 37 percent of households in Dar es Salaam are owner-occupiers, while 57 percent are renters. The remaining 6 percent receive their house for free, for example from a relative or employer.⁴⁴

Owner-occupier households were asked to respond to further questions aimed at understanding formality and insecurity of tenure. Informality of tenure is an ‘umbrella term’ that covers a wide range of ideas. Although the meaning of the term alters across different uses, the property rights literature generally uses the formal-informal dichotomy to distinguish between the ‘legal’ market transactions and that which occurs outside of ‘legal’ exchange (UN-HABITAT 2013). As such, owner-occupier households were asked to indicate whether they had any forms of legal documentation of tenure, from a list of available documentation developed in consultation with officials in the Ministry of Lands and with local urban development specialists of the World Bank.

In the analysis that follows, I classify households as formal if they hold any of the six forms of property ownership document outlined in Table 5. I exclude a seventh form of property

⁴⁴ The distinction between renters and ‘free’ housing is common across the world (UN-HABITAT 2003a). In Dar es Salaam, most of those who receive their house for free said it belonged to a friend, family member, or relative (76 percent), followed by an employer (31 percent), or other (5 percent).

documentation, a ‘sales agreement’, because, following additional field research, it became clear that the wording of the questionnaire relating to this document was ambiguous.⁴⁵ It is also worth noting that the list of formal documents did not include temporary ‘residential licenses’ (valid for 2-5 years), which were introduced as a pilot scheme in 43 wards in 2005. Just over 200,000 households were made eligible for the licenses in the first phase of this scheme, but less than half (44.5%) had taken them up by 2012, and the second phase has yet to be rolled out (Sheuya and Burra 2016). Furthermore, assessments of the pilot to date suggest that there is little reason to expect that these temporary licenses impact tenure security (Collin, Sandefur, and Zeitlin 2015; Moyo 2006). Summary statistics for the variable ‘informal’ can be found in Table 5.

⁴⁵ A Sales Agreement is a formal, notarized document that is needed for a CRO application. It is also, however, possible to interpret it as an informal agreement of sale between buyers and sellers. The questionnaire was not clearly worded to indicate that it referred to the former and not the latter agreement. Given that households with a formal Sales Agreement are very likely to have other documentation from the process of a formally recorded exchange, the conservative approach was to drop this category as a formal category. That is to say, in excluding Sales Agreement from the definition of formal, only households that *only* have a Sales Agreement and no other property documentation are counted as informal.

Table 5: List of Documents of Ownership in Dar es Salaam

Document type	% Households
CRO	4% (1%)
Title deed	12% (1%)
Inheritance letter	4% (1%)
Traditional Right of Occupancy	0% (0%)
Settlement permit	17% (1%)
Letter of allocation	9% (1%)
Total at least one formal	41% (2%)
Observations	811

Note: Table only includes owner-occupier households, who account for about one third of the total MLSC survey sample. A total of 5 respondents had traditional rights of occupancy. Households can possess more than one document. Data are survey weighted, standard errors in parenthesis.

There is no single authoritative way of defining tenure insecurity. Self-assessed measures of insecurity are arguably the most useful because, as Lanjouw and Levy stress, even “if perceived security differs systematically from actual security, it is perceptions that give us the better variable for understanding utility” (Lanjouw and Levy 2002, 999). The MLSC survey asked households whether they felt any degree of concern about someone taking their property away from them without their consent. Nearly 80 percent of respondents said that they did not feel any degree of concern. Of those that expressed some concern, 15 percent said they were ‘a little’ concerned, 5 percent ‘very’ concerned, and 1 percent ‘extremely’ concerned. When asked to elaborate on who they were concerned might take their property away from them, 170 households expressed concern about government expropriation. This

compares with only ten respondents who explained that they worried that they might lose their property to a relative, and one who spoke of fear of a money lender/ bank. In Chapter 3, I probe the relationship between self-assessed insecurity and formality of tenure.

Rent and house values

There is a long tradition of research that uses household survey data to conduct housing market analysis (Malpezzi 1999). Given the absence of reliable housing market transaction data in many developing countries, self-reported house prices are needed for this analysis. Nonetheless, collecting accurate house price data is not straightforward.

It is generally considered that rental values are more accurate than owner-occupied estimates of housing value, as renters pay rent at frequent intervals. Some LSMS surveys attempt to record a similar value for owner-occupied housing, by asking how much households would have to pay “if, instead of owning your home, you had to rent it” (Deaton 2009, 27). Consultation with colleagues at the World Bank, however, revealed two challenges with this phrasing, including that it assumes that the owner-occupier has accurate knowledge of rental values. The wording for the MLSC was thus modified to: “If a friend of yours wanted to buy a property like this in the same neighborhood, how much would he/she have to pay?”

This phrasing also reflects lessons from behavioral economics and psychology, which suggest that respondents tend to ascribe more value to things merely because they own them. This is sometimes called the ‘endowment affect’. During one semi-structured interview a

land owner further indicated that there was a widespread sense that land should appreciate in value. As one explained, “*I bought the land two weeks ago for 6 million...if I wanted to sell it today, I would sell it for 7 million of course!*”; later in the interview, when asked what the value of a similar plot to the one he recently bought was in the same neighbourhood, however, he answered that it was 6 million (interview March 2017).

Renters were also asked both what they currently pay for their accommodation (per month) and also what a friend of theirs would have to pay for a similar property in the same neighborhood. The results across the two questions were consistent in the majority of cases, although the additional question provided a useful point of comparison for potential interviewer data entry errors. The results for both renters and owners are summarized in Table 6. Values divided by square meter estimates (from satellite imagery) and number of rooms (from survey responses) are also reported.

Table 6: Summary of Recorded Responses to Housing Values

	Mean	Obs.
Sale Price	30503.48 (2087.63)	799
Sale Price/Sqm	378.56 (26.86)	786
Sale Price/ Rooms	9134.96 (604.03)	799
Annual Rent	253.36 (9.98)	1053
Annual Rent/ Sqm	3.07 (0.30)	1046
Annual Rent/rooms	155.70 (3.82)	1052

Note: data are survey weighted. Standard errors in parenthesis. Prices have been converted into USD using an average of the official exchange rate over the time of the survey (1USD:0.000455Tsh).

In both the case of rent and sale estimates, the data is marked by a wide range of responses. This is not surprising, given the challenges of collecting accurate data on house prices discussed above. In addition to this, existing information suggests that there is a wide range of difference in land and housing values across the city. During fieldwork I was provided access to the Ministry of Lands official land valuation guide for tax and insurance valuers from 2016. Over the 94 wards in the city covered by the guide, the mean price of land per square meter was \$99USD (converted using the same rate as above). The median value was \$30USD, and prices ranged from a minimum of \$2.50USD to a maximum of \$1092USD. On top of this, variation in the quality of housing is likely to account for further differences in prices. I explore this further in chapters 3 and 4 with hedonic price regressions.

Residential history

There is remarkably little empirical evidence about residential movement within developing country cities. Rates of attrition in panel surveys provide some indication of movement, but both surveys and ethnographic studies face major challenges in tracking respondents once they move house. In the design of the MLSC survey we introduced a ‘residential history’ module to collect information on movement within the city through recall.

There are a number of lessons learned from the piloting of the residential history module. Although interviewers reported that households often enjoyed telling their residential history, the module was very time consuming. Households sometimes provided information about a past house out of chronological order, which meant that additional care had to be taken when cleaning the data in recording their move-out date. In addition to this, I designed the module to record all the places household heads had lived in Dar es Salaam, and, if they were migrants, the house before they migrated. I failed to specify how interviewers should deal with cases in which respondents move in and out of the city numerous times over the course of their lifetime. In the final data, there were 195 cases where household heads recorded this form of repeat migration. Unfortunately, it is not possible to ascertain how representative this is, as it is likely that many interviewers stopped asking about previous houses once they reached a house outside of Dar es Salaam, and thus many of the histories may be incomplete.

The module nonetheless provides insight on the average length of time that households spend in each house. As shown in Table 7, on average households in the sample have lived in three

houses. For migrants, this means we capture one move into the city, and one move within the city.⁴⁶ For non-migrants, it is one move out of the house they were born in, and one further move. There are no clear trends in length of tenure in their current house by location in the city, although households in the ‘consolidated core’ of the city record fewer years (Table 8).

Table 7: Summary of Residential History data

	Obs.	Mean	Median	SD	Min	Max
Total number of houses	1920	3.22	3	1.22	2.00	10
Average years lived in past houses	1920	10.77	8	9.72	0.33	67
Years lived in current house	1919	11.20	7	11.19	1.00	67

NB the number of records for years lived in past and current house are reduced because records where accurate move-in/out dates could not be established are not included

Table 8: Mean Years in Current House, by Stratum

	Years
Centre- regular	11.48 (0.55)
Centre-irregular	11.78 (0.52)
Consolidated core	8.01 (0.35)
Periphery	12.90 (0.74)

Note: data are survey weighted. Standard error in parenthesis. Total observations: 1919

⁴⁶ for household that recorded moves in and out of the city, all records other than the earliest house outside of the city were excluded from this number.

Distances to work and plot sizes

Households are often thought to trade-off housing amenities such as property size and access to open space for proximity to work. Employed household heads in the MLSC survey were asked to provide an address or landmark of the location where they work. Based on this data, commuting distances were calculated.⁴⁷ On average employed household heads commute 6.4 kilometers to work (3.7 km, median). As indicated in Table 9 below, respondents living further away from the city centre do appear to commute further than those living in central areas. Caution is needed in inferring the direction of the relationship between location and commuting distances, however, as there is often a relationship between housing preferences and employment patterns. Better paying jobs may be ‘worth’ commuting further for. Indeed, it is notable that the mean commuting distance for salaried employed heads is more than 2 kilometers further than their non-salaried counterparts (7.8km compared with 5.2km).

Table 9: Distances to Work by Strata

	Mean	Standard Error	Confidence Interval	
Centre-regular	5.4	0.3	4.8	5.9
Centre-irregular	4.4	0.2	3.9	4.8
Consolidated core	8.2	0.4	7.5	8.9
Periphery	11.7	0.9	10.1	13.4

Note: data are survey weighted. Total observations: 1608

⁴⁷ I was not directly involved in the preparation and cleaning of this data. For details of the methodology for this and other spatial variables, please see World Bank 2016.

In the initial design of the survey we intended to collect data on plot sizes through GIS recording of points at all four corners of the property. Soon after listing began, it became clear that this approach was not viable, as it elicited strong negative responses from local citizens. Instead, a single GIS recording was taken, and satellite imagery was used to estimate the total roof area in square meters. In the case of multiple occupancy buildings, the roof area estimation was refined with information on the number of households living in the building, collected at listing.

The average roof size recorded was just over 115m² (106 median). Table 10 shows that, remarkably, they decline with distance from the city centre. The sizes are also notably small, given that officially the minimum plot size in Dar es Salaam is 500 square meters. In addition to this, the difference in roof sizes is not significant across buildings that have formal documents of tenure and those that do not. These findings raise questions about the link between formality of tenure and official planning regulations, which are discussed further in Chapter 3.

Table 10: Roof Size by Stratum

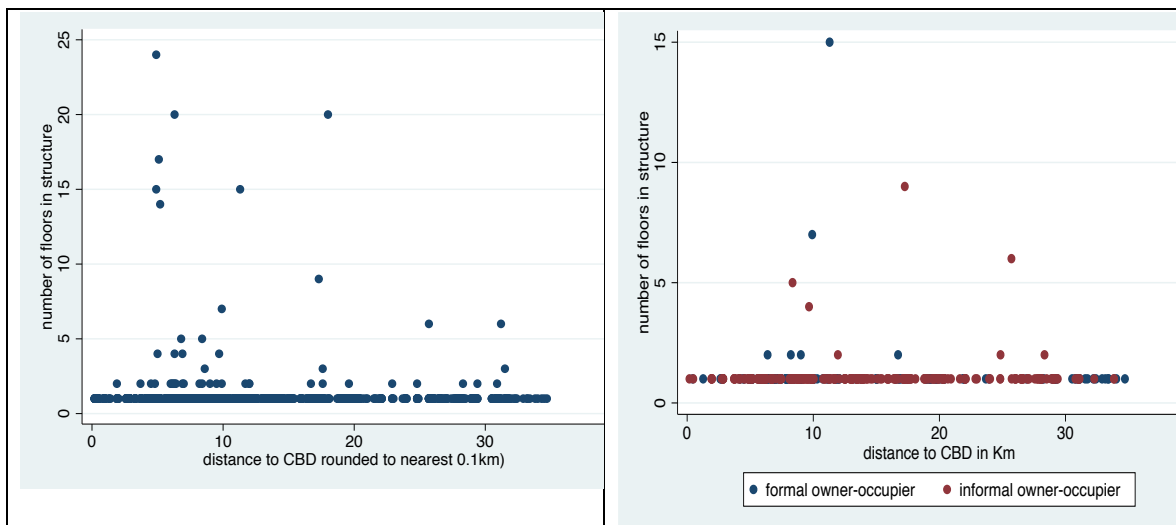
	Mean	Standard Error	Confidence Interval	
Centre-regular	131.21	5.21	121.00	141.42
Centre-irregular	106.75	2.54	101.77	111.74
Consolidated core	119.54	3.29	113.10	125.98
Periphery	88.35	4.40	79.73	96.97

Note: data is survey weighted. Total observations 1931.

Floor height and plot sizes

Building height is an important dimension of urban development that is difficult to gauge from satellite imagery. The addition of a simple instruction to record the number of floors in buildings at the listing stage proved to be a cost-effective means to gather information that provides insights for the analysis of the fabric of a city. Unfortunately, the idea to record building heights came once listing had already begun. As such, building height is only available for a subsection of the households that were interviewed. Nonetheless, this data provides an additional point of verification on other trends visible in the data. For example, it is notable that a number of owner-occupiers in multistory buildings say that they do not have any formal documents of tenure. Tenure formality is discussed in depth in chapter 3.

Figure 5: Building Height, Distance to CBD, and Informality of Tenure



NB Floor height observations are available for 1453 respondents. For owner-occupied households, there are 533 observations.

4.2. Qualitative data

The qualitative data is composed of 43 semi-structured interviews and 3 focus groups, conducted over two months of field research in 2017. The number of respondents for semi-structured interviews was determined through principles of saturation. That is to say, I continued to sample until I was no longer detecting variance in the responses accrued (Morse 2004). In total, 43 respondents were interviewed. An overview of the profile of respondents is provided in Table 11. I am also grateful for conversations with Professor Kironde (Ardhi University) and Dr. Kiduanga (Dar es Salaam University).

Respondents were selected through two main approaches. Snowballing methods were used to interview urban development professionals and local government officials. Starting with existing contacts through my prior work with the World Bank, I was able to make connections with Ward-level government officials who were, in turn, able to provide an introduction to lower levels of government (Subward and Ten-Cell leaders). I also reached out to academic colleagues, who provided introductions to urban development specialists.

Geographical location was the main criteria for approaching low-income resident interview respondents. I focused on residents of centrally located unplanned areas, where competition for land is high. These are areas that have densified most rapidly in recent years (Jones et al. 2016). Approximately half of the 22 resident respondents were also targeted through snowballing. These respondents lived in five different informal neighbourhoods in the city. The remaining respondents were targeted geographically through seven research days spent

in three informal neighbourhoods. Given security concerns, these research days were organised in partnership with an organisation that runs community-based natural disaster risk management projects in the city.

I used two different approaches to contact residents because I had concerns over limitations of each method. On the one hand, snowballing resulted in interviewing a number of respondents away from their place of residence (8 in total), and as such, provided limited opportunities to observe and ask them about specific features of their living conditions. On the other hand, I was concerned that respondents approached at home may feel more cautious in responding, given the presence of neighbours and the nearby representative from the partner organization. In practice, responses across the two groups show a high degree of consistency, although respondents approached at home discussed conflicts in more impersonal terms than respondents approached through snowballing.

Table 11: List of Interviews Completed in February and March 2017

Type of respondent	Number of respondents
Resident of central informal area (of which half are owners and half renters)	22
Informal real estate broker (<i>'Dalali'</i>)	3
Mtaa official (Chairman, Executive Officers, and Mjumbe)	7
Ward Executive Officer	3
Urban development professional (Certified urban planners, local NGO officials, and international organization officials)	8

Interview questions were not fixed in advanced, in order to ensure that they were responsive and flexible to the concerns and insights raised by the respondents. I nonetheless prepared an interview guide in order to structure topics in a manner that would help minimise imposition of my preconceptions of the issues on the interview, put the interviewee at ease, and allow them the room to engage with the research in their own words, and make the connections between questions clear. The interviews would open with exploratory questions that solicit descriptive answers, allowing the respondent to point out things that they think are important. This question varied according the characteristics of the respondents, but included asking officials to describe their jobs, and encouraging residents to talk about things that they like and dislike about their neighbourhood.

I also held three focus group discussions in February 2017. These groups were composed of members of three local community groups focused on flood awareness and prevention activities, convened by the Red Cross. In total, there were 15 participants (5 in each group). Each group was composed of both men and women, land owners and tenants, and a range of ages. This provided a useful source of additional information to the semi-structured interviews.

The group setting necessarily changes the nature of the data collected. One the one hand, there are advantages in that often disagreement and discussion between respondents was highly illustrative. On the other, it may restrict the answers that some participants are willing to give. The participants were all also different to respondents of semi-structured interviews in so far as they were all members of the Red Cross; as such, for example, they tended to

show higher levels of awareness of local government activities. Given these differences in data collection methods, it is notable that there was a high level of agreement across the focus groups and individual interviews over the key dynamics of slum deprivation discussed in this thesis.

The focus group discussions as well as many of the resident and local government interviews were conducted with the support of a translator. There are a number of potential challenges in working with a translator, not least of which is the concern that meaning or detail may be lost either in accuracy of translation or through some deliberate filtering on the part of the translator. In advance of interviewing I spent time with the translator to ensure that they were clear about the objectives of the research, the approach to asking question, and approach to translating information, in order to minimise this risk. I also discussed the interviews with translator at the end, in order to understand whether there were any impressions that I may have missed or may have influenced the information that they transmitted to me.

The analysis of this data was also informed by reflections from additional fieldwork in November 2017, as part of a team of 3 exploring community participation dynamics in flood prone wards for a World Bank project. This was particularly useful in terms of validating insight on the functioning of local government. Specifically, insight from the four different Subwards in which I had conducted research indicated that there was variation in both types of activity and approaches adopted at this level.⁴⁸ It also became clear that Ten-Cell leaders

⁴⁸ The legal description of the powers of this level of government is sometimes vague: although there are official distinctions between the power that Subward officials have to that of their counterpart in rural areas, Village officials, in practice the laws appear to sometimes use ‘Village’ to refer to both.

– political party representatives at the grass roots level – play a key role in daily governance that is not formally documented.

Under single-party politics, Ten-Cell leaders were elected from every group of ten houses. They played a vital official role in local government until the introduction of multiparty politics in 1992. At this point, their official local government role ended. During my interviews, however, it became clear that Ten-Cell leaders continued to play a strong role in connecting households to the local government: their letter of introduction is needed before residents can access local government services, such as starting the process to get identification papers. At the same time, local government officials rely on Ten-Cell leaders to communicate with local residents. Ten-Cell leaders interviewed described their responsibilities as including: registering the name and contact details of all new residents (including renters) in the area, disseminating information from the Subward, and both attending and encouraging residents to attend Subward community meetings.

This was confirmed in follow up interviews in November 2017 in 6 new Subwards. These interviews also indicated that local residents often assumed they were members of the local government structure, while higher level experts and even ward-level government officials demonstrated confusion about whether they were elected and what activities they undertook. There was also notable variation in the extent to which Subward officials would work with Ten-Cell leaders from the ruling (*Chama Cha Mapinduzi*, CCM) party and/or with opposition party representatives as well. Based on the combined insight from the two rounds of fieldwork, I was able to develop an organogram of local government with one of my fellow

researchers, Ian Madison (DPhil candidate, University of Oxford). This is depicted in Figure 6.

Figure 6: Organogram of local land governance appointments and responsibilities

<p>National</p> <p>The President's Office – Regional Administration and Local Government (PO-RALG); Sector ministries (e.g. health, land) also define policies to be implemented by the local government system</p>
<p>Dar es Salaam Region</p> <p><u>Appointed:</u> Regional Commissioner; <u>Elected:</u> City Council (Mayor, Deputy, and district Mayors)</p>
<p>District Authorities/ Municipalities (<i>manispaa</i>)</p> <p>5 districts/ municipalities: Ilala, Kinondoni, Temeke, Ubungo, and Kigamboni, each of which has:</p> <p><u>Political appointees:</u> District commissioner (answers to Regional Commissioner) and Executive Director (appointed by PO-RALG)</p> <p><u>Elected officials:</u> Mayors and District Councils (Members of Parliament for the area, ward councillors, and reps from national electoral commission)</p>
<p>Ward (<i>kata</i>)</p> <p>Each municipality is divided into wards (e.g. Temeke has 24 wards) composed of:</p> <p><u>Elected official:</u> Ward Councillor (<i>Diwani</i>)</p> <p><u>Ward Office civil servants:</u> appointed by municipality and rotated every few years, they often do not live in the ward. They are lead by the <i>Ward Executive Officer</i> (WEO). Under the WEO are a number of officers (e.g. Community Development Officer, Health Officer, Education Officer, Social Welfare Officer)</p> <p><u>Key committees:</u> Ward Community Development Committee (WDC, secretary is WEO, attended by Ward Councillor and Subward Chairmen); Ward Tribunal (composed of one or two members from each Subward within the Ward. The members are nominated by meeting of adult members of the Mtaa, and approved by the Ward Office. The Tribunal hears cases ranging from family disputes, truant children, to land disputes)</p>
<p>Subward (<i>Mtaa</i>)</p> <p>Each ward is divided into subwards (e.g. Mbonde is a Subward in Makangarawe, Temeke)</p> <p><u>Civil servants:</u> <i>Mtaa Executive Officer</i>, runs daily business of office (appointed by the municipality, rotated).⁴⁹</p> <p><u>Elected officials:</u> <i>Mtaa Chairman</i> (5 yr terms, elected by all adult members of the Subward). No salary but charge "stamp fees". Holds at least 4 community meetings per year, minutes reported to WDC.</p> <p><i>5 elected Mjumbe</i>, perform general office responsibilities and each head a committee (health, sports and games, environment, safety and security, and education). Can be of any political party.</p>
<p>Ten Cell leaders (<i>Wajumbe, balosi, waratibu</i>)</p> <p>Not officially part of the local government structure, but residents need letter of introduction from Ten-Cell leader to approach the Subward; and Subward leaders often rely on the Ten-Cell Leaders to communicate policy to the local population. Can be either:</p> <p><u><i>Wajumbe mashina</i></u> (or <i>balosi</i>) CCM party reps, now responsible for 'branch' (<i>shina</i>) rather than 10 houses (e.g. Mbonde subdivided into 7 <i>shina</i>). They may work with 'assistant' wajumbe.</p> <p><u><i>Waratibu</i></u> Equivalent position for CUF or Chadema parties. CUF waratibu may be organised as '20 cell' leaders. Fieldwork indicates variation by Subward as to whether they are accepted by Subward.</p>

Note on language: many of the swahili names have different meanings when used in a different context, e.g. Mtaa is also 'street', 'mjumbe' is 'member', 'balosi' is 'ambassador', and 'waratibu' is 'coordinator'.

⁴⁹ The MEO is expected to be in the office every weekday. The Chairman and *Mjumbe* are expected to have other income generating activities, and thus rotate (i.e. so that there is always at least one of them present).

Annex 1: Terms of Use of Data Agreement

Nancy Lozano Gracia
Senior Economist
The World Bank
1818 H Street NW
Washington, D.C. 20433

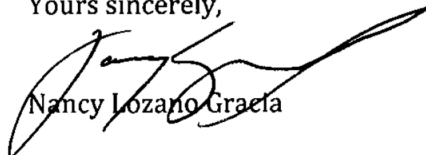
Dear Sir or Madam:

This letter is to confirm that Alexandra Panman (St. John's College, University of Oxford) will have access to household survey data collected under the 'Measuring Living Standards in Cities' component of the 'Spatial Development of African Cities Project' (P148736) for use in her doctoral research, under the conditions established below.

Alexandra Panman has been contracted as a Short Term Consultant (STC) to the Spatial Development of African Cities team, to: (i) provide descriptive analysis of the 'Measuring Living Standards in Cities' household data set; and (ii) prepare a report documenting the process in which the household survey was developed and implemented. Alexandra Panman will have full access to the data set - which is stored on World Bank computers in Washington, D.C. - for the completion of this work and other joint research.

In addition to this, it is agreed that Alexandra has full access to use the household survey data for individual research exploring the determinants of housing demand and household residential mobility in Dar es Salaam, as part of her D.Phil research at the University of Oxford. In order to protect the anonymity of respondents in this household survey, however, the conditions of access require that Alexandra will not remove the geocoded data from the World Bank computers. Should Alexandra wish to work on the data in locations outside of Washington D.C., she will be restricted to working with samples of the data from which the georeferences have been protected. These samples can be used to develop codes that can then be run using the full data set on World Bank network computers. Alexandra will also ensure that published text, data, and figures do not infringe on the confidentiality of individual respondents.

Yours sincerely,



Nancy Lozano Gracia

Chapter 3. Working Title? Property Rights, Informal Market Institutions, and Housing Quality in Dar es Salaam, Tanzania

Introduction

Informal property markets can be costly, inefficient, and even ‘savage’ (Buckley and Kalarickal 2006). For decades, development policy has emphasised the importance of formalising these markets. Specifically, organisations such as the World Bank and UN Habitat stress that informal property is insecure and risky to transact, which reduces the value of the land and depresses investment in housing quality (Payne and Durand-Lasserve 2012; Locke and Henley 2014). As such, the terms ‘informal’ and ‘slum’ are frequently used as though they were synonyms, and titling is seen as a ‘solution’ to the ‘problem’ of slums.

This policy approach is grounded in well-established theory yet stands at odds with insight from a growing empirical literature on informal property markets in developing countries. Largely ethnographic studies of informal market transactions in developing country cities indicate that informal markets are often vibrant (Mooya and Cloete 2007; Rakodi 2006a; Kihato and Royston 2013; Birch, Chattaraj, and Wachter 2016). In this chapter, I seek to reconcile theory and practice by drawing on theoretical frameworks from new institutional economics to analyse the informal market. The chapter asks two interrelated questions: (i) why do these informal property markets appear to perform differently to what dominant market theory would predict; and (ii) what are the implications of this observation for expectations about the relationship between informality and slum housing quality?

The analysis focuses on the case study of Dar es Salaam, where – like many Sub-Saharan African cities (Rakodi 2006a; World Bank 2015a) – the majority of aspiring home owners buy property through the informal market. It combines qualitative insights on the functioning of the informal market and quantitative data to compare the quality and value of formal and informal housing in the city. The results show that there is no clear indication of a relationship between either tenure formality and security or between formality and transaction risks; and strongly suggest that this is because there are informal institutional processes that allow households to resolve informal property disputes as effectively as formal disputes. As such, the anticipated link between informality and slum deprivation does not hold in practice.

In addition to this, this analytical approach reveals the influence of an important and largely overlooked component of property rights for housing quality: land *use* rights. Although land use rights are often ignored in the literature on informality and slum deprivation, I argue that they are fundamental to urban housing quality. In their absence, a social dilemma can emerge that traps housing in a low-quality equilibrium. The analysis suggests that this may be the case in Dar es Salaam, where informal institutional institutions appear to be much less effective at securing land use rights than other dimensions of property rights.

The chapter is structured in three sections. In the first section, I outline the theoretical case linking informal property rights and housing quality, as well as existing empirical evidence on this relationship in practice. Section II introduces the context of Dar es Salaam, outlining both formal and informal processes to acquire land, comparing the value and quality of

housing across these two categories, and analysing the informal institutional framework for ownership and transfer disputes. Section III focuses on land use rights, before the final section concludes.

The chapter makes three main contributions to the academic literature. First, it adds to the literature on informal markets, by providing new empirical data on a case study. Second, it extends this literature by exploring the implications of this informal institutional structure for housing quality by comparing outcomes to those in the formal market. Third, it sheds light on the often-overlooked role that land use rights play in housing quality, which may be central to our understanding of the emergence and persistence of slums.

In terms of policy, the results may help explain the variable track record of property formalisation projects in Dar es Salaam and across the world. Project benefits anticipate that titling will improve tenure security and reduce transaction risks, thereby resulting in appreciating real estate values. The analysis suggests that there is little reason to anticipate that this would occur in Dar es Salaam, and that more accurate estimation of benefits across the world requires more complete understanding of both the strengths of informal institutional arrangements as well as weaknesses of formal property rights. The findings also highlight that increased attention to land use rights in titling projects is key for long-term benefits.

Section I: Property Rights and Housing Quality

Economic theory provides a straightforward account of the relationship between property rights and housing quality, centred on incentives to invest in housing (Field 2005, 279). Put simply, without documents of tenure, households are unable to assert their claim to property through the law and are thus considered to be vulnerable to eviction. Under these circumstances, households are thought to be unwilling to invest in their property. These ideas are formalised in a body of literature that compares formal and informal household investment decisions in stylised urban models (for example, Hoy and Jimenez 1991).⁵⁰ They have been highly influential on international development policy; indeed, the link between informality, insecurity, and housing quality is often taken to be self-evident (UN-HABITAT 2011b; Payne and Durand-Lasserve 2012).⁵¹

The relationship between formal property rights and housing quality is more complex in practice, of course. Even among economists there is widespread recognition that property rights are social rights, shaped not only by laws but also by social norms and relationships (Buckley and Kalarickal 2006; Payne and Durand-Lasserve 2012). In urban Africa, in

⁵⁰ The simplified decision making process in Hoy and Jimenez is as follows: squatters invade a plot of land; the landowner chooses a value of activity to deter investment in housing stock and a rate of eviction; squatters choose a level of housing stock conditional on the expected rate and cost of eviction (Hoy and Jimenez 1991, 82–83). Other examples include Brueckner and Selod (2009), Turnbull (2008), and Brueckner (2013).

⁵¹ The ‘Cities Alliance quick guide for policy makers’ argues that lack of title “*makes residents of informal settlements reluctant to invest in improving their housing or settlement*” and thus reduces the quality of housing conditions. As such, they conclude, “*one of the most serious problems*” facing “*Africa’s informal urban settlements is insecure tenure*” (UN-HABITAT 2011b). Similarly, Payne and Durand-Lasserve (2012) state in their report to the UN Special Rapporteur on adequate housing, that it “*is undeniable that perceived security of tenure is widely accepted as a precondition for households to invest in house construction or improvements. Naturally, people cannot be expected to invest if they do not feel reasonably secure*” (Payne & Durand-Lasserve 2012, p.46).

particular, state and customary land allocation systems often coexist (Durand-Lasserve, Durand-Lasserve, and Selod 2013; Collier and Venables 2017). In most cases, there is also widespread ‘informal’ market exchange of property (Rakodi 2006a). That is to say, land is bought and sold outside of any legally recognised process.

The dynamics of informal land markets are relatively understudied. Research has been focused on documenting the failings of the formal market at the expense of efforts to understand how property transactions take place outside of the legal framework (Rakodi 2006b; Pamuk 2000; Mooya and Cloete 2007; Kihato and Royston 2013). An emerging empirical literature, however, stresses that informal transactions are shaped by established rules and norms that structure behaviour. These can be classified as informal institutions (North 1990; Guha-Khasnobis, Kanbur, and Ostrom 2006; Platteau 2000).

These informal institutions shape market activity. Residents are described as drawing on social relationships and the authority of local leaders to sell, buy, and hold land. In many settings, these arrangements are described as cooperative. This includes research on transactions in Bahir Dar, Ethiopia (A. G. Adam 2014), Maputo, Mozambique (Kihato et al. 2013), Kampala, Uganda (Nkurunziza 2007), Eldoret, Kenya (Musyoka 2006), and Dar es Salaam, Tanzania (Kombe 1994; Kombe 2005). In other contexts, the threat of extra-legal violence is thought to underpin transactions. Thus the role of gangs may be central to enforcement of rights in the favelas of Rio de Janeiro, Brazil (Perlman 2016) and Nairobi, Kenya (Joireman 2011; B. Marx, Stoker, and Suri 2016).⁵²

⁵² Perlman describes how property transactions take place, but not how disputes are resolved. Nonetheless it is interesting to note that she describes transactions being witnessed by a local authority figure which – although

What do the presence of these informal arrangements mean for the quality of informal housing? Seminal works of social science research have shown that informal institutions can be as effective as formal property rights in shaping behaviour around common resource management and private land disputes in rural areas (Ostrom 2005; Platteau 2000; Ellickson 1991). In theory, informal institutional arrangements could play such a role in urban housing as well; indeed, it has been posited that informal institutions arise precisely because they shape transactions in a manner that is more suited to the opportunities than the formal system (Mooya and Cloete 2007; Antwi and Adams 2003).⁵³ If this were the case, then there would be no reason to expect that informal property would be lower quality or value than formal property.

Yet the context of urban informal settlements differs in a number of important ways to the conditions that are often thought central to effective informal property rights regimes. Specifically, property transactions require external mechanisms to enforce agreements since they are one-off interactions between a buyer and seller. Informal enforcement is possible in contexts where costs of monitoring are low and there is capacity to punish deviant behaviour through social sanctioning (Baland and Platteau 2000; Ellickson 1991; Fafchamps 1992). This does not describe large, anonymous cities. In addition to this, the stakes are also likely higher in urban areas because land is scarce and very valuable. Indeed, economic historians

initially established by the local government – is in practice appointed by local drug gangs (Perlman 2016). Joireman and Marx et al. describe the role of ethnic gangs and connections in the rental market of Kibera, but not in property transactions.

⁵³ There is no consensus on how and why institutions emerge (Platteau 2000; Platteau 2008). A powerful counter-case would be that institutions reflect power structures of society and may thus work to reduce transaction costs of certain groups but not others (Sheuya 2009).

argue that formal property rights emerged in Europe in response to demand for more effective enforcement as property values rose and transactions became increasingly impersonal with urbanization and industrialization (Cai, Selod, and Steinbuks 2015).

Thus, while few deny that informal institutions can support some degree of market activity in urban areas, it is generally believed that this activity is more costly and more limited than it would be in the formal system. As Douglas North puts it, “lack of formal property right safeguards” in third world countries increases the costs of transactions and “restricts activity to personalised exchange systems that can provide self enforcing types of contracts” (North 1990, 67). These limitations are expected to exert a downward pressure on land values, reducing returns on investment in housing.⁵⁴ Therefore, even in locations where informal transactions are commonplace, many nonetheless anticipate that tenure formalization can result in rising property values and increased investment in housing.⁵⁵

In this chapter, however, I treat this as an empirical question. Are there observable differences in the quality and value of housing by formality of tenure? If not, why not? I

⁵⁴ Lanjouw and Levy (2002) set out the rationale neatly: a risk neutral household will not buy a property unless the price of the property is less than the utility it derives from the property multiplied by its expectation of being able to keep the property. Only households that are close to the seller (such as friends or family) can have sufficient information on the nature of the informal rights that the seller holds to properly assess the security of their claim. Given these information constraints, the uncertainty cannot be accommodated to mutual satisfaction of the buyer and the seller by adjusting the price of the property. Formal titles remove this uncertainty, and thereby increase the pool of potential buyers to include strangers.

⁵⁵ Although critiques of land titling sometimes characterise the policy as being ignorant of informal tenure norms, I would argue it can be more usefully understood as a commitment to the idea that private property rights in urban areas are *more secure* and *more easily transferred* when they have formal documentation than when they rely on informal sources of property rights. This is reflected in the use of the metaphor of a ‘continuum’ of property rights in policy orientated literature (e.g. Brueckner and Lall 2015; Buckley and Kalarickal 2006; UN-HABITAT 2012). The idea of the continuum both acknowledges that informal sources of property rights exist while simultaneously asserting that formal documentation is the most secure form of tenure that exists.

draw on the Institutional Analysis and Development (IAD) framework developed by Ostrom and others to understand the processes that shape the results. The analysis highlights three key institutional factors that make the informal system relatively effective in securing property rights and managing transaction risks. First, a high degree of social interdependence among urban residents creates incentives for property rights norms to be upheld, despite the heterogeneous nature of the community. Second, informal institutional arrangements support hierarchical monitoring of transgressions and sanctioning, despite the large size of the urban community. Third, formal and informal dispute resolution institutions are interconnected in such a way that there is an important check on the behaviour of informal actors upholding informal property norms, reducing incentives for claimants to seek alternative resolution through formal processes.

The analysis also reveals, however, that these institutional frameworks do not appear to be as effective in upholding land *use* rights. Property rights are commonly thought of as a ‘bundle’ of rights, composed of the right to occupy, transfer, and use land (Lombard and Rakodi 2016; Payne and Durand-Lasserve 2012).⁵⁶ The first two components – the rights to occupy and transfer land – are integral to Coasian notions of allocative efficiency. Yet property rights also play an important institutional role in addressing transaction costs and other real world features of markets (North 1993; Bardham 2010; Platteau 2008). One such role is to help people form expectations around the action of others, and the responses of others to their own actions (Demsetz 1967). Land use rights are the component of property rights that help shape expectations around actions relating to the use of land.

⁵⁶ The Roman Legal system of property rights defines Rights of *Usus* (right to use land), *Abusus* (right to change land), and *Usus fructus* (right to make profit and loss) (Doss and Meinzen-Dick forthcoming).

In the literature on common pool resources, land is not held individually but instead by a group. Land use rights are thus discussed primarily in terms of *who* has access to the common resources and *how* it can be exploited. In urban areas, these issues also apply to the management of commons and uses of public land. For example, in Brazil, norms dictate that individuals may be accepted as squatters on public land, but they are evicted if they rent out the property (Lonardoni and Bolay 2016). In this chapter, however, I focus analysis on land use rights for *privately* owned land.

What do we mean by land use rights in the context of private property? Eggertsson describes three categories of individual property rights, of which the first is the use rights that define what property owners can legitimately do with their property (Eggertsson 1990, 34). This is different to the other two categories, which are the right to earn an income from the asset as well as the right to alienate or sell the property. Use rights are therefore a form of restriction; as Alchian and Demsetz put it, when we “speak of someone owning this land, that house, or these bonds...[w]hat is owned are *rights to use* resources...and these rights are always circumscribed, often by the prohibition of certain actions” (Alchian and Demsetz 1973, 17).

Crucially, however, land use rights not only curtail individual action, but they set expectations about neighbours’ behaviour. As Alchian and Demsetz put it, when we say we “own land”, we mean that we have certain rights to use the land (tilling, mining, offering the rights for sale etc.), “but not to have the right to throw soil at a passer-by, to use it to change the course of a stream, or to *force* someone to buy it. What are owned are socially recognized

rights of action” (ibid.). Therefore, when an individual purchases a plot of land, it is use rights that provide them with confidence that their neighbour will not change the course of the stream that provides the plot with vital water, or that their neighbour will not become a nuisance by using their property to cause harm in unexpected ways (as captured by the curious image of a property owner throwing soil).

Why are expectations about land uses important for housing quality? Most urban economics and real estate text books stress that the single most distinctive feature of urban land markets is that land is a fixed asset (Sheuya 2009; Cheshire and Sheppard 2004; Quigley 2008). As such, land uses are interdependent: individual owners bare some of the costs and benefits – often called spatial externalities – of their neighbours’ land use decisions, and the payoffs to different land uses will be at least in part determined by uses of neighbouring land. To state it simply, the value of your house would plunge if your neighbour converted her plot into a noisy bar or polluting factory. This might cause you to radically re-think whether you will invest in improvements to your property.⁵⁷

In most cities in advanced industrial countries, landowners’ expectations about what their neighbours will and will not do with their property are formed by land use regulations, such as land use zoning and building standards. Formal rules may even make ownership conditional on certain uses; for example, recipients of formal plots allocated by the government in Tanzania are required to develop the plot within a specified period of time.

⁵⁷ Although land use regulation are often treated as ‘interventions’ in the land market, land use rights shape the payoffs to different forms of land uses, and thus they cannot easily be distinguished from property rights that are ‘foundational’ to the market. As Platteau argues, institutional structures that shape the payoffs to different forms of resource exploitation cannot truly be separated from efficiency concerns (Platteau 2008).

In many developing country cities, however, land use regulations are considered inappropriate and ineffective (Collier and Venables 2013; Boudreaux 2008; Henderson 2009). They are also widely ignored. In these circumstances, how is uncertainty over land uses managed in practice?

Areas settled outside of legal planning frameworks are not anarchical. Expectations about what you and your neighbours can and cannot do with privately held land are also shaped by informal institutions such as norms and social relationships. As such, areas settled outside of land use regulations are sometimes considered to be ‘self-planned’, or ‘self-regulated’; and the emerging land use patterns are thought to reflect social relationships and the power and shape of community groups (Kreibich 2000; Fekade 2000; R. Harris 2014; Kombe 2005). Nonetheless, most researchers agree that challenges of effective land use coordination in these contexts are large. Therefore, even in comparatively well-ordered informal settlements, land use is often considered to be inefficient and associated with considerable public health challenges (Fekade 2000; Kombe 2005). In practice, there is a general consensus that some degree of state directed land use regulation is needed (R. Harris 2014).

In section III, I explore how land use rights are managed in informal settlements in Dar es Salaam. I show that there are observable differences in the level of land use coordination across different neighbourhoods, that cannot be explained by formality of tenure or adherence to formal planning processes alone. I highlight features of the institutional context

that may help explain this variation. I further draw on quantitative data to highlight the potential consequences of lack of credible land use restrictions on housing quality.

Section II: Informality and Housing Quality in Dar es Salaam

The majority of households in Dar es Salaam do not have any formal documents of property ownership. These residents are considered ‘informal owners’, in that they purchased their land through procedures that do not align with those set out by the law. This section provides a short overview of the legal structure for land management in the city, as well as informal processes to purchase land. Section 2.2 then provides descriptive statistics comparing the quality of housing across formal and informal properties and presents results of a hedonic price regression to explore the value of legal title. Section 2.3 draws on qualitative data to explore the informal institutional framework that shapes land dispute resolution, to explain why informal property does not appear to be riskier or more difficult to transact than formal property.

2.1 Overview of formal and informal property transactions in Dar es Salaam

The constitution of Tanzania defines the President as owner of all land in the country. This land is divided into three classes: (i) ‘general land’, which is administered under the Ministry of Lands and Human Settlements; (ii) ‘reserved land’, such as forests, roads, and high tension electricity lines, which is managed under their associated ministries; and (iii) ‘village land’,

which is land that belongs to villages, and is managed by village councils. In urban areas, most land is ‘general land’.

Legal recognition of the right to occupy general land for residential purposes is conveyed through a Certificate of Right of Occupancy (CRO). The President, through the Ministry of Lands and Human Settlement, grants CROs for 33-99 years. Approval for a CRO requires evidence of a land survey and town planning drawing, and as such, will only be granted for land in surveyed areas allocated for residential use (Moldrop Wolff, Kuch, and Chipman 2018). The process is administered by the Land Officer of the Municipal Land Office, with input and administrative support from municipal governments (see chapter 2 for further details).

According to this legal framework for land, residential buildings can only be constructed in areas where land has been allocated and approved for this use. The surveying and planning of land is a government led process, which Kironde has described as comprising four steps: acquisition, clearance, planning, and allocation (Kironde 2006). These official processes of land conversion are, however, thought to account for only a small portion of the land occupied in the city in practice (Kironde 2000).

Most of the urban land area has been developed for residential or commercial purposes outside of the legal system. These areas are known as ‘unplanned’, ‘informal’, or ‘squatter’ areas although, as a number of researchers have highlighted, land in these areas is generally acquired through purchase rather than invasion (Kironde 2006; Kironde 2000; Kombe 2005).

All residents that have either been allocated or bought land (formally or informally) are referred to as property owners in every-day language.

Data from the MLSC survey indicates that 37 percent of the population of the city define themselves as owning the property they live on, as opposed to renting (57 percent) or receiving housing for free from friends, family or an employer (6 percent). The majority of these owner-occupier households do not have formal documents of tenure. The MLSC survey asked owner-occupiers households about seven different forms of legally recognised property documentation.⁵⁸ The distribution of documents is set out in Table 5. Less than 16 percent of owner-occupier households have a CRO or title deed, although 40 percent indicate that they have some form of legal documentation of property ownership.

Existing qualitative research suggests that it is not uncommon that households fail to complete or renew the paper work required have a CRO, despite being eligible for them.⁵⁹ Although this documentation is not a complete title, it is indicative of the ability of the household to process a CRO application or assert a separate claim (e.g. traditional rights,

⁵⁸ See chapter 2 for further details about these documents. It is worth highlighting that the list of formal documents did not include temporary residential licenses (valid for 2-5 years), which were introduced as a pilot scheme in 43 wards in 2005. Just over 200,000 households that were made eligible for the licenses in the first phase of this scheme, but less than half (44.5%) had taken them up by 2012, and the second phase has yet to be rolled out (Sheuya and Burra 2016). Furthermore, assessments of the pilot to date suggest that there is little reason to expect that these temporary licenses impact tenure security (Collin, Sandefur, and Zeitlin 2015; Moyo 2006)

⁵⁹ This may in part reflect the lengthy delays that were associated with processing these forms in the past (Kironde 2006). World Bank doing business indicators suggest that the costs and time to process formal documents have been reduced in recent years. Yet it is likely many eligible households still do not have the full legal documentation. Indeed, it is notable that in February 2017, adverts for mortgage finance from the FNB bank were visible in various locations in Dar es Salaam claiming that applicants can secure a loan within three days, and that “*we’ll even get you the title deed*” (in Swahili and English).

which may be held in village lands, of which there is still a small percentage in Dar es Salaam). As such, for the purposes of this analysis, these households are considered ‘formal’.

Table 12: List of Documents of Ownership in Dar es Salaam

Document type	% Households
CRO	4% (1%)
Title deed	12% (1%)
Inheritance letter	4% (1%)
Traditional Right of Occupancy	0% (0%)
Settlement permit	17% (1%)
Letter of allocation	9% (1%)
Total at least one formal	41% (2%)
Observations	811

Note: Data are survey weighted, standard errors in parenthesis. Households can possess more than one document. See annex 2 for additional analysis of patterns between the type and number of documents and security of tenure.

How do informal property transactions take place? Interview respondents indicated that land transactions are a private matter; all that is needed is a willing buyer and seller. Owner occupiers that lived in the centre of the city described having bought their plot from a landowner that was subdividing their property into various plots, many years prior, when the area was still largely agricultural. There were two exceptions: one had inherited her house, and another had bought property with a building already constructed on it. The procedures that they described were similar to those that had bought their property more recently,

although recent purchases were located in the periphery of the city.⁶⁰ Most did not know the owner of the plot before the transaction; they were introduced by either a friend or an informal property broker (*dalali*, in Swahili).

Respondents described a standard sale process. Once the sale is agreed, a written statement is created and signed by each party and a witness on both sides, who are usually a family member or friend. The agreement is kept by the buyer. Households and local officials alike stated that many chose to involve Subward officials and/or Ten-Cell leaders as witnesses to these transactions. As described in chapter 2, the Subward or *Mtaa* (street, in Swahili) is the level of local government below the Ward, while the Ten-Cell leader is a local political party representative. The Subward does not have any formal role in land management, and there is no provision in the Local Government and Finance Act for Subward officials to collect revenues from land transactions or other land related activities. Nonetheless, all respondents that had bought a plot of land recently described paying a fee of between 5 and 10 percent of the value of the transaction to the Subward Chairman for this purpose. The processes described show remarkable alignment with those detailed by Kombe and Kreibich in previous research in Morogoro and Dodoma, as well as Kombe's work in Dar es Salaam more than twenty years ago (Kombe 1994; Kombe and Kreibich 2001; Kombe 2005).

Case studies from informal settlements in Dar es Salaam stress that informal property owners express high levels of tenure security (Kironde 2000; Kombe 2005; Moyo 2006; Briggs

⁶⁰ Furthermore, it is worth noting that although the focus of the interviews were on low-income neighbourhoods, a number of town planners and people in positions of authority – such as directors of NGOs – confirmed that they also used this process to purchase the land where they currently reside.

2011). This is surprising given the informal nature of these rights. Indeed, residents, local officials, and real estate specialists interviewed confirmed that property transactions can be subject to fraud. Accurate records on property conflicts do not exist, but, as one urban development expert interviewed suggested, the extent of the problem can be gauged from the fact that property owners may attach a sign to an empty plot or building to warn naïve buyers that the land is not for sale (interview February 2017).⁶¹

At the same time, disputes over formal property are also common, including problems with double allocation of formal plots (Kironde 2009; Moldrop Wolff, Kuch, and Chipman 2018; Kironde 2006; Kironde 1997).⁶² It is therefore not self-evident that informal processes are less effective than formal ones. As Platteau points out, where corruption and failures of the formal system are such that formal property owners feel insecure, it may not stand that the formal system compares favourably to the informal (Platteau 2000, 145–47).

On balance, many nonetheless believe that informal land is less secure than formal property, that transactions are riskier, and the quality of housing is lower (Kironde 2000; Moldrop Wolff, Kuch, and Chipman 2018; Collier and Jones 2017). Urban land titling is a policy priority, although projects have not been developed beyond pilot stage. This may be partially attributed to implementation problems: across the world, titling projects in urban areas have been marred by higher than anticipated costs and human resource challenges (Buckley and

⁶¹ In her research in the periphery of Dar es Salaam, Claire Mercer notes that it “is not unusual to see the words ‘nyumba hii haiuzwi’ (‘this house is not for sale’) painted on to half-built buildings” (Mercer 2017, 78)

⁶² Indeed, in February 2018, media sources reported lawyers camping outside the Regional Commissioner for Dar es Salaam’s office to draw attention to a spate of unresolved legal cases over land disputes (Jamal and Kaniki 2018).

Kalarickal 2005; DFID 2002). Yet it is also notable that some project evaluations indicate that *demand* for title is weak among informal households. A project evaluation of the Norwegian Agency for Development cooperation (NORAD) questioned whether the underlying assumptions of the value of title were valid (USAID 2010). More recently, data from a Randomized Control Trial (RCT), indicate that even if the price were reduced to 20 percent of the cost of issuing a title deed, less than fifty percent of eligible households would purchase it (Ali et al. 2014).⁶³

2.2 Formal and Informal Property Compared

In this section, I explore whether housing quality and value differs by formality of tenure with data from the MLSC survey. Descriptive statistics comparing the characteristics of informal and formal houses across the survey are provided in Table 13. This table shows that there are observable differences between formal and informal houses, but the differences in the key slum indicators of building materials, improved water, and improved sanitation are remarkably slight. Moreover, the difference in the proportion that report tenure insecurity is surprisingly small.

On average, formal houses are older than informal houses and located closer to the city centre. A much larger portion of respondents with formal documents paid property taxes than

⁶³ The full cost of the title in the RCT was 100,000 shillings. The design of the RCT included various voucher discounts. The estimated demand curve shows that predicted take-up at mean values of the socio-economic controls was 20 percent. The take up rises to 45 percent at a price of 20,000 shillings (Ali et al. 2014). It is further worth noting that participants in the RCT received information on the benefits of titling from the local partner NGO that implementing the project. As such, it is possible that demand among households that lack information on the potential benefits of titling may even be lower.

those without (59 percent, compared to 24 percent). Curiously, formality of tenure is higher in irregular areas than regular areas. As will be discussed further in Chapter 5, these ‘irregular areas’ are an alternative measure for ‘slum’ areas. It is surprising that formal documentation is higher in these areas, because formality of tenure is often associated with adherence to planning regulations. This is discussed further in part III.

There is little variation in variables that are indicative of housing quality across formal and informal properties. The quality of building materials across the two groups is similar. Formal houses are larger in terms of number of rooms, but the difference in the mean roof size across the two categories is not significant. There is less than 7 percent difference in the proportion of formal and informal households that have access to mains water and sanitation. This difference is surprisingly small, given that it is often expected that access to services is lower among informal households.⁶⁴ At the same time, however, it should be noted that there are no official constraints on the provision of these services to households that lack formal documentation of ownership. In fact, official statements from the Dar es Salaam Water and Sewerage Corporation (DAWASCO) indicates that they aim to provide services to all residents of Dar es Salaam.⁶⁵

⁶⁴ For example, UN Habitat’s Dar es Salaam city profile states that “[p]eople living and working on informal land lack access to sufficient housing, secure tenure, and services such as water and sanitation.” (UN-HABITAT 2009, 7).

⁶⁵ DAWASCO’s public media statements indicate that they interpret their mandate as to provide water to all citizens in Dar es Salaam (Kazoka 2017). This builds on a longstanding government aim of provide water for all, including free water for the poor in the city through standpipes (de Waal and Cooksey 2008). Research from periphery areas of the city further indicates that informality of tenure is not a barrier to formal network extension (Andreasen and Moller-Jensen 2016; Burra 2004).

Most notably, the proportion of informal households are insecure in their tenure is remarkably similar across formal and informal households. Survey respondents were asked whether they were concerned about having their property taken away from them. I classify households as ‘insecure’ if they responded as being a little, very, or extremely concerned about having their property taken away from them without their consent (for further discussion about the definition of insecurity, see chapter 2). As indicated in Table 13, the difference in the proportion of formal and informal households that are insecure in their tenure is small. Just under one quarter (24 percent) of informal households expressed some degree of concern, compared with 18 percent of formal households.⁶⁶

Most households that said they felt insecure in their tenure explained that they worried about government expropriation.⁶⁷ There have been a number of high profile cases of expropriation for large infrastructure and redevelopment projects in the city in recent years (Moldrop Wolff, Kuch, and Chipman 2018). The president has extensive expropriation powers for such initiatives, and official policy does not distinguish between households on the basis of their tenure documentation.⁶⁸ Given the large number of land conflicts that are thought to exist in the city, however, it is puzzling that so few households say they are concerned about conflicts with other citizens: only 10 households said they felt any degree of concern that they would lose their property in a conflict with someone that they knew.

⁶⁶ The differences in the proportion that are insecure across households with different numbers or types of documents is not significant, with the exception of CROs (discussed further in annex 2).

⁶⁷ 170 households expressed concern about government expropriation. One spoke of fear of a money lender/bank.

⁶⁸ The Land Acquisition Act (1967) and Land Act (1999) maintain the President’s role as custodian of all land with extensive powers to acquire land for public-interest uses. Compensation for expropriation is defined by the constitution. All landowners are compensated, regardless of formal tenure status: “it does not matter whether they are registered or not provided they are recognized locally as the owners” (Kironde 2009, 14).

Table 13: Formal and Informal Owner-Occupied Housing Compared

	Informal	Formal	
Insecure	24.4%	18.2%	**
Pays property tax	24.2%	58.6%	***
<i>Slum & quality measures</i>			
Has concrete walls	96.1%	96.6%	
Has concrete roof	3.1%	2.5%	
Has durable floor	93.4%	95.7%	
Connected to mains	33.5%	40.1%	**
Connected to Electricity	52.0%	65.7%	***
Has garbage collection	41.3%	48.1%	**
<i>Other property features</i>			
Is a freestanding house	87.3%	78.7%	***
Number of rooms	3.51	3.85	***
Rooms sublet	0.91	1.43	***
Roof size	109.00	116.48	
Property age	11.10	14.93	***
<i>Locational features</i>			
Located in irregular EA	16.6%	26.9%	***
Distance from city centre	16.16	14.51	***

*NB Stars denote a significant difference between the groups. Means are compared for continuous variables and proportions for dummy variables. Stars Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0$.*

It is possible that the relationship between informality, insecurity, and housing investment is conditional on other factors. For example, households that receive public services may consider this to be a form of recognition of their tenure by the government and may thus feel secure despite the absence of any formal documentation. Poorer households may feel more insecure in the absence of title than richer households with higher social capital. As such, in annex 1, I probe the relationship between these variables and tenure formality further with a logistic regression. Following Friedman, Jimenez, and Mayo (1988) and Kim (2004), I also include characteristics of the household in the regression, such as the age and migration status of the head, and whether the household is poor in consumption terms. This analysis helps to

disentangle the conditional relationship between these individual variables and formality of tenure, when controlling for the other variables.

As described in further detail in the annex, I fail to find any significant relationship between formality of tenure and security of tenure, housing quality, access to services, or even locational attributes of housing. Only the results of property age and taxation are significant. The oldest houses in the sample (top 25%) have more than 2 times the odds of the newest (bottom 25%) of having formal documents of ownership, while those that pay property taxes have nearly 4 times the odds of those that do not of being formal. This reflects a pattern between cadastral records and property taxation that is witnessed across the world; indeed, the primary motive for the development of cadastral records across the world was arguably state interest in making land more ‘fiscally legible’ (Scott 1998).

Although caution is needed in interpreting these results, the relationship between property age, formality, and taxation, hint at the possibility that differences in formality of tenure may reflect changes over time in state capacity to register housing. Indeed, it is often thought that state capacity to provide services and register property has been outstripped by the pace of rapid urbanisation in cities like Dar es Salaam (Lall, Henderson, and Venables 2017; Fekade 2000).

2.3. Is there a price premium for formal title?

In this section, I use hedonic price regression to explore housing values. The hedonic method was developed to uncover implicit prices for composite goods. The method has been applied to estimate the size of the price premium for formal title in a number of developing country cities, including Manila, Philippines; Bogota and Cali, Colombia; Jakarta, Indonesia; and Ho Chi Min City, Vietnam (Friedman, Jimenez, and Mayo 1988; Dowall and Leaf 1991; Kim 2004). To the best of my knowledge, the hedonic method has only been applied in Sub-Saharan Africa to measure the value of formal property documentation for undeveloped plots in Bamako, Mali (Durand-Lasserve, Durand-Lasserve, and Selod 2013; Selod and Tobin 2013).⁶⁹

The hedonic regression employs the following log-linear equation:

$$\ln(P) = \beta_0 + \beta_1(T) + \beta_2(H) + \beta_3(L) + \varepsilon$$

Where P is self-reported housing values.⁷⁰ As indicated by the summary statistics in Table 14, the housing value estimates range widely. This is not surprising – existing information suggests that land and housing values differ greatly across the city.⁷¹ In keeping with

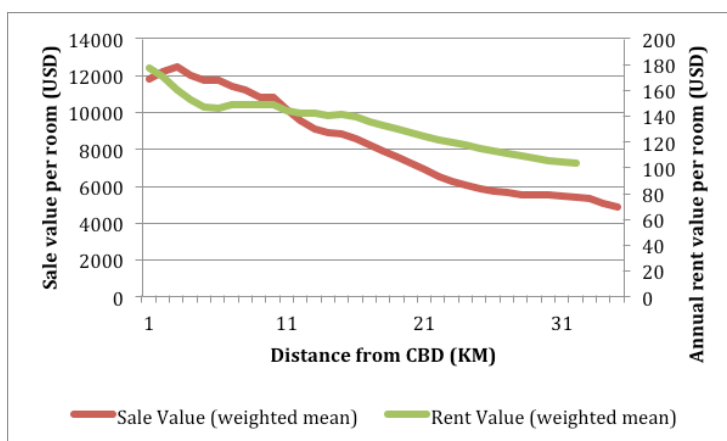
⁶⁹ There is a small handful of papers that employ hedonic methods in the region, but these do not measure the value of titles (Arimah 1992; Megbolugbe 1989; Lozano-Gracia and Young 2014).

⁷⁰ Please see chapter 2 for further details on the methodology to collect data on housing values.

⁷¹ For example, the Ministry of Lands official land valuation guide for tax and insurance valuers from 2016 provides an estimate of land value across the 94 wards in the city. In this guide, the mean price of land per square meter was \$99USD (converted using the same rate as above). The median value was \$30USD, and prices ranged from a minimum of \$2.50USD to a maximum of \$1092USD. On top of this, variation in the quality of housing is likely to account for further differences in prices. In their study of housing value across

theoretical expectations, prices decline with distance from the city centre, as depicted in Figure 7 (which also shows rental values paid by renters, as a point of comparison). I nonetheless opt for the cautious approach in the use of this data. This is because the estimates may suffer both from precision and accuracy challenges. I am particularly concerned with potential inaccuracy that could stem from information failures, since households may simply lack knowledge of housing values. As such, I employ a robust regression, which weights observations based on the size of their residuals through a process of iterative re-weighting.⁷²

Figure 7: Estimated Sale and Rental Prices by Distance to City Centre



Note: weighted average. Prices have been converted into USD using an average of the official exchange rate over the time of the survey (1USD:0.000455Tsh.).

On the right-hand side of the equation are tenure variables (T), house characteristics and amenity variables (H), and locational attributes (L). Tenure variables refer to formality and

Sub-Saharan Africa, Lozano-Gracia and Young show that there are large price premiums for access to services. They note that in Dar es Salaam, access to a flushing toilet alone may increase rental prices by \$150USD.

⁷² Values that are clear outliers – i.e. observations that are unusual given the value of predictor variables – are weighted 0 and thus effectively excluded from the analysis. In the analysis below 56 observations are weighted 0. There are no clear patterns in the characteristics of households that suggest that the estimates are biased for a specific reason. The proportion of informal, insecure, and migrant household heads differs by no more than 5% of all owner-occupiers. They do not differ in age (mean age is 46), or proportion with secondary education or higher.

security of tenure, housing characteristics include the property size and services, while location attributes refer to distance from the city centre and a variable that indicates if the house is located in a visibly irregular neighbourhood. A full definition of these variables is provided in Table 14. Given the nature of these variables, hedonic price regressions can suffer from issues of multicollinearity (Xiao 2017). The coefficients must thus be interpreted with caution, although, as discussed in annex 2, there is comparatively little covariation among the variables included in this model.

Table 14: Definition of Variables

Variable	Definition	Obs.	Mean	SD	Min	Max
Ln(price)	Dependent variable, log of estimated sale value of house (Tsh).	799	16.85	2.11	9.21	21.42
<i>Tenure variables</i>						
Formal	Dummy variable that takes on the value of 1 if the household has any of the legally recognised documents of ownership.	811	0.40	0.49	0	1
Title	Dummy variable that takes on the value of 1 if the household has either title deed or CRO.	811	0.16	0.36	0	1
Formal_o ther	Dummy that takes on the value of one if if households have formal documents but <u>do not</u> have title or CRO.	811	.24	.43	0	1
Insecure	Dummy variables that takes the value of 1 if the household expresses any degree of concern that their property may be taken away from them without consent	811	0.22	0.41	0	1
<i>Housing characteristics and amenity variables</i>						
House	Dummy that takes on value of 1 if the property is a detached house (rather than a semi-detached house or flat)	811	0.84	0.37	0	1

Prop_age	Number of years since the property was first built. For missing values (111 observations), the median property age for the strata was imputed.	811	12.69	10.21	1	65
Prop_age 2	Prop_age squared, to account for possible ‘vintage effect’ of property	811	265.32	459.36	1	4225
Mains	Dummy variable that takes the value of 1 if household is connected to either piped water or sewage system	811	0.36	0.48	0	1
Electric	Dummy that takes the value of 1 if household is supplied electricity by the utility company	811	0.57	0.49	0	1
Garbage	Dummy that takes the value of 1 if household garbage is collected by the municipality	811	0.44	0.50	0	1
Concrete	Number of roof, floor, and/or roof that is made of concrete.	811	1.95	0.42	0	3
Rooms	The number of rooms the household occupies	811	3.64	1.61	1	15
Sublet	The number of rooms that the household sublets to tenants	811	1.12	2.37	0	22
Roof_area	The estimated roof area (calculated from satellite imagery)	798	112.02	86.55	4	1044
<i>Locational attribute variables</i>						
km_cbd	Measure of distance from the city center, rounded to 0.5 kilometers.	798	15.50	8.53	0	35
Irregular	Dummy that takes the value of 1 if the house is located in an slum area EA, as identified by satellite imagery	811	0.21	0.41	0	1

The results are presented in Table 15 below. As would be expected, the results indicate that the value of housing reflects both housing and neighbourhood amenities. A larger house – measured in number of rooms and square meters – is associated with higher estimated sales value, all other things being equal. There is a positive and statistically significant effect for access to all services measured, *ceteris paribus*. For example, access to mains

water/sanitation and electricity are both associated with a 30 percent price premium. The effect is negative for distance from the city centre. Furthermore, as theory would predict, households that feel insecure in their tenure also estimate the value of their house 51 percent lower than those who feel secure, all other things being equal. This supports expectations about the relationship between *insecurity* and housing value posited in the literature, even though, as discussed above, there is no observable relationship between insecurity and formality of tenure.

In contrast, the results do not indicate that formal documents of property ownership are associated with a property price premium. Households with formal documents of tenure value their property only fractionally higher than informal households, and the effect is not statistically significant. Given that some forms of property documentation such as a traditional right of occupancy may not be highly transferable, the analysis is repeated in column 2 using a restricted definition of formal. This restricted definition includes only title deeds and/or Rights of Occupancy. Once again, the results fail to indicate that there is a price premium associated with title.

In contrast, neighbourhood quality appears to be a very important factor in the value of housing. Houses located in slum areas (defined by the irregularity of their layout, as discussed in chapter 2) are valued 30 percent lower than those in regular areas, all other things being equal.⁷³ In addition to this, garbage collection commands a huge 60 percent price premium – which likely reflects the value of being located close to a passable road,

⁷³ As discussed in chapter 2, the variable ‘irregular’ is defined by using a semi-automated algorithm to classify areas based on their textural and structural composition, as detected from satellite images.

since this is one of the main obstacles to garbage trucks servicing houses. This finding is aligned with insights from an earlier study of housing values in selected case study areas of the city (Kironde 2000). Yet it is interesting to note that these neighbourhood characteristics are often associated with tenure informality;⁷⁴ yet there is no clear connection between legal documents of ownership and regularity of neighbourhood in Dar es Salaam (indeed, a larger portion of households with legal documents of ownership are found in these areas than those without, as shown in Table 13). I explore the implications of these results for our understanding of the relationship between property rights and housing quality further in section III.

Table 15: Hedonic Estimates for Sale Price of Housing (log)

	(1) Ln(price)	(2) Ln(price)
Formal	0.0600615 (0.0819881)	
Title		0.0670773 (0.1133456)
Formal_other		0.055289 (0.0954406)
Insecure	-0.5114768*** (0.0974709)	-0.511576 *** (0.0976385)
House	-0.103271 (0.1176632)	-0.103557 (0.1178138)
Prop_age	0.0209549* (0.0118724)	0.0209626 * (0.0118905)
Prop_age2	-0.0002136 (0.0002454)	-0.0002142 (0.0002458)
Mains	0.2840554*** (0.0879394)	0.2836965*** (0.0881901)
Electric	0.2947525***	0.295136***

⁷⁴ Indeed, it is worth noting that one of the seminal pieces of literature on the value of housing formalisation by Friedman, Jimenez, and Mayo (1988), housing is actually categorized on similar locational attributes (i.e. housing is considered formal unless it is located in a ‘squatter’ area).

	(0.0909353)	(0.0910515)
Garbage	0.6094121***	0.6098597***
	(0.0908452)	(0.0909657)
Concrete		
1	-0.1103336	-0.111372
	(0.3253643)	(0.3258946)
2	0.2474106	0.2460763
	(0.2850787)	(0.2855497)
3	0.2342222	0.2322526
	(0.3371701)	(0.33789)
Rooms	0.1015281***	0.1012701***
	(0.0268235)	(0.0268805)
Sublet	0.0496233***	0.0493976***
	(0.0192307)	(0.019286)
Roof_area	0.0010619**	0.0010622**
	(0.000469)	(0.0004696)
km_cbd	-0.0224876***	-0.0225008***
	(0.0057033)	(0.0057105)
Irregular	-0.3022623***	-0.301819***
	(0.1189494)	(0.1192153)
_cons	16.45721***	16.45963***
	(0.3583518)	(0.35896)
Observations	786	786
R2	0.18094586	0.18093533

Notes: Robust Standard Errors are in Parenthesis. Given that the regression employs a log-linear equation, the coefficients can be interpreted as the percentage increase in rent for a one unit change in the variable of interest, controlling for all other variables in the equation. For a dummy variable, the estimates reflect the percentage increase in rent associated with having that amenity, all other things being equal.

*** Significance at the 1% level

** Significance at the 5% level

* Significance at the 10% level

Taken as a whole, the results suggest that households value their houses higher when they have key amenities and when they are located in areas characterised by well-ordered development patterns. In contrast, the results do not indicate that households think that their property is worth more with formal documents of tenure than without them. This is surprising

when seen in light of the expectation in the literature that formal property transactions are less costly or risky than formal transactions: if households believed this to be true, the lower risk would be priced into their estimation of the value of property.

One possible explanation for the results observed in Dar es Salaam is that the standard error for formal documents is inflated by multicollinearity or biased by some omitted variable (discussed in annex 2). In the section that follows, I argue that the results can best be explained by key contextual features of the land market in Dar es Salaam. Specifically, in cases where price premiums have been observed, such as in the market for undeveloped plots in Bamako (Mali), informal transactions are described by local residents in inconsistent and unclear terms (Durand-Lasserve, Durand-Lasserve, and Selod 2013). This is not the case in Dar es Salaam: property transfers are shaped by clear – if informal – property rights norms, which has profound implications for the relationship between informality, housing value, and quality in practice.

2.3. This Land is My Land, This Land is Your Land: Dispute Resolution in Focus

The hedonic price regression suggests that informal households do not value their housing less than formal households, all other things being equal. This goes against dominant theoretical expectations and is particularly puzzling given the prevalence of property conflicts in the city. In this section, I probe these results by exploring how dispute resolution takes place in practice, highlighting that there are a number of important informal institutions that formal and informal owners alike draw on to assert their property rights. These

institutions are invisible – they are “shared concepts that exist in the minds and routines of participants” (Polski and Ostrom 2017, 3) – and not necessarily articulated as institutions by the actors involved. Yet by drawing on the IAD framework (introduced in chapter 2), we can clearly identify in the accounts provided by respondents the mark of commonly held norms, rules, and strategies that create incentives for individual behaviour and provide confidence to informal owners that their property rights will be upheld.

The experience of one respondent, Joyce, is illustrative.⁷⁵ Joyce is a 30 year old woman who rents two rooms in a house in a central unplanned settlement, which she shares with her sister. In the last ten years, she has bought three plots of land in three different periphery areas of Dar es Salaam.⁷⁶ Two of these plots have been subject to ownership disputes.

Joyce explained that in the first of the two land disputes, it emerged that the entire neighbourhood where she had bought land had been cleared, subdivided, and sold without the owner’s permission. One day, she recalled, “*the owner bring a truck and break down everything...*” As will be discussed further below, she is currently still trying to resolve this issue by drawing on dispute resolution processes available to her.

In the second instance, the owner himself was involved in the fraud. One afternoon, Joyce recounted, she went to visit her new plot and discovered “*a man there cutting the trees...[and so] asked him, ‘what are you doing on my plot?’*”. This man, it transpired, had made a down

⁷⁵ Not the respondents real name. Interviewed twice, February and March 2017.

⁷⁶ In all three cases, Joyce followed the same process for buying land: she made contact with the seller through a personal recommendation; agreed on a sale price in the presence of friends or family; and paid the Mtaa Chairman a small fee to witness the transaction.

payment on the plot some years prior; and he was furious to discover that the original owner had sold it for a second time (he was, Joyce said, “*so angry he could have killed someone*”). Together, they tracked down the man responsible for the double sale. It did not take long, she recalled, as he was in the neighbourhood to sell another piece of land. In this instance, Joyce recalled, they were able to resolve the conflict directly. It was decided that since she had paid the full price for the land, she should keep the plot. The other man was given the option of either accepting a different plot in the area or getting his money back.

Today, Joyce has nearly completed building her house on the second plot, and recently bought a third plot of land in a different periphery area of the city as an investment. She maintains that she does not worry about land disputes; she believes that “*at the end of the day, all will be fine. He [the prior owner] is the one who just has to tell the truth*”. In other words, Joyce has confidence that her rights to ownership are safeguarded by social norms. She expects that there is common acceptance as to what constitutes valid criteria for owning land and has confidence that the norm of telling the truth will prevail. What is the basis of her confidence, given her own experience of conflict?

Drawing on the Institutional Analysis and Development (IAD) framework, I argue that informal property rights rules are enforced through three main channels. First, a high degree of social interdependence among urban residents creates incentives for property rights norms to be upheld. Second, informal institutional arrangements support hierarchical monitoring of transgressions and sanctioning. Third, formal and informal dispute resolution institutions are

interconnected in such a way that there is an important check on the behaviour of informal actors upholding informal property norms.

Interview respondents indicated that rules around land transactions and dispute resolution are widely known. As such, they can be classified as informal institutions (Polski and Ostrom 2017). A more complete understanding of how these institutions shape and incentivise behaviour, however, requires a broader point of analysis than description of the rules alone. These include understanding of contextual factors, the actors involved in upholding the rules, and the 'action situation' or positions that these actors can adopt.

Context is a key factor in shaping the payoffs and costs to following rules.⁷⁷ Contextual features such as the specific attributes of the community in particular are relevant for understanding the adequacy of cooperative rules governing repeated interactions (Ostrom 2005). For example, attributes of the community are often highlighted to help explain how cooperative solutions to common pool and natural resource management work. Cooperative outcomes can be enforced in small, homogenous communities, where monitoring costs are low and there is strong social sanctioning capacity to punish deviant behaviour (Ostrom 2005; Fafchamps 1992). Yet these community attributes are associated with tightknit rural areas, and not with rapidly urbanizing cities (Baland and Platteau 2000; Ellickson 1991). What are the attributes of communities in cities like Dar es Salaam?

⁷⁷ This is often treated as an exogenous variable that structures the arena in which patterns of interactions take place; in the language of game theory, it is the context in which the game is played.

Dar es Salaam is a fast growing and ethnically heterogeneous city (UN-HABITAT 2009; Jones et al. 2016). Under these conditions, it is often thought that social norms are weak. High mobility reduces the costs of ‘exit’ from a community, and thus reduces the power of social sanctioning. Compared with rural areas, individuals are likely to be part of much larger and more heterogeneous networks, which make monitoring of behaviour costly. As such, cooperative solutions are thought to be unlikely.⁷⁸ Yet the accounts of conflict described above suggest that cooperative solutions do, apparently, emerge. Why is this?

One key contextual factor is that life is precarious in cities like Dar es Salaam. The city of Dar es Salaam is known locally as “*Bongo*”, which derives from the Kiswahili word for brains. This nickname speaks to a common belief that you have to rely on your wits to get by in the city. Indeed, one respondent, after recounting the many difficulties she faced when she first migrated to the city – including her powerlessness in the face of her first employer’s refusal to pay her for months of work – sighed by way of explanation, “*that’s life in Dar es Salaam*” (interview February 2017).

There are few official employment or social safety nets. More than half (60%) of employed household heads in the city work without a contract. Financial services are lacking; the mortgage market in Tanzania is one of the smallest in East Africa (Jones et al. 2016), and only three respondents in the MLSC survey said they had made a mortgage payment in the last month. Only 82 respondents in the whole survey indicated that they paid for health, auto,

⁷⁸ Game theory stresses that cooperation is difficult to achieve when the play is not repeated or there is an endgame, when the players do not possess information about the other players, and when there are large numbers of players (North 1993). Indeed, property transactions are often used as an example of market activity that *requires* legal institutions (Fafchamps 2010).

home, or life insurance in the last 12 months. In contexts such as this, where crucial markets such as employment and insurance are deficient, complex networks of social rights and obligations may arise that induce cooperation amongst people in a range of activities (Baland and Platteau 2000; Platteau 2000). This high degree of social interdependence can create incentives for cooperation, as it creates opportunities for transgression of social norms in one sphere to be punished in other (Baland and Platteau 2000; Platteau 2000).

Both the quantitative and qualitative data indicate a high degree of social interdependence in Dar es Salaam. Residents are dependent on their neighbours for a number of key social services. Nearly 40 percent of households in the MLSC survey rely on their neighbours' connection to access water. When asked to discuss what they liked about where they live, three interview respondents stressed that they can ask their neighbours for periodic help with small things, for example, if they need salt. Much more vital mutual dependence was also discussed. As one interview respondent described, she was away from home one terrible day in 2011 when heavy rains began to fall; it is fortunate, she reflected, "*that I have a good relationship with my neighbours, because they went to my house and took my children and grandchildren to higher ground*" (Interview March 2017).

Furthermore, while it may be that households are more mobile than in rural settings, it is important not to underestimate the costs of moving within the city. The MLSC data indicates that on average, households have lived in three different places in the city. Yet only one quarter say they have any intention to move house again in the next three years. This proportion drops to less than 3 percent when only considering owner-occupiers. Indeed,

owners have on average lived in their current property for 19 years (compared with 12 years overall), and when households described their past residential history in the city, the vast majority of moves recounted occurred from rental housing to other rental housing or to homeownership. This indicates that the costs of 'exit' or transgressing social norms may be higher than is commonly thought.

Punishment of social transgressions nonetheless requires effective monitoring and enforcement capacity. Cooperative enforcement by community members is thought to be costly in urban areas, since social networks may be large and span a wide geographical area. Here, it is important to look at the actors involved in property rights enforcement, and the arena in which their decisions are taken. Although the literature on extra-legal property rights tends to focus on community level (horizontal) enforcement mechanisms, enforcement can also be conducted vertically. As Fafchamps argues, where ability to help others is linked to prestige and power, mutual obligations based on trust may take on a 'star shaped' network with a patron at the centre (Fafchamps 1992). In Dar es Salaam, interview responses indicate that the Subward chairman may occupy this point in the network, as their position provides opportunities both for monitoring and sanctioning of transgressions.

As noted above, respondents indicated that there is a growing tendency to involve the Subward in informal property transactions. Town planners and local officials interviewed explained this in terms of growing concern over property transactions; a factor also noted by Kombe and Kreibich (2001).⁷⁹ As discussed above, the chairman does not have legal

⁷⁹ Two older residents of an unplanned area explained it differently: when they bought their land, they said, the local government structure did not exist in the area; but now that it does, it has become normal to involve the

authority or specific powers to adjudicate land disputes; and when asked how they would adjudicate a conflict of ownership, the three Subward chairman interviewed explained that they rely on the knowledge of neighbouring houses on boundaries and past sales transactions. What, then, gives weight to their judgement? Two features of the Subward chairman's position may be critical to their capacity to perform this function. The first is the wide range of responsibilities in daily life that the chairman has; and the second, is their position in the broader local government structure.

The Chairman's influence can extend into many different facets of urban life, as a gatekeeper to a number of urban services. Their signature is needed for a range of documents, from opening a bank account to joining the military. They even have responsibilities relating to law and order. As one chairman explained,

"I am also the chairman of the peace and defence of the people. So I am having people who are 'policijame' which means people who are working as volunteer security...Someone with problems will call me, even at midnight. If something is more serious we call the police, maybe the officer in charge of the district, or the commanding officer of the district. We call for them to come" (Mtaa Chairman, March 2017)

As such, the Chairman have the capacity to punish non-compliance with property rights norms in other vital areas of daily life. They can also draw on a remarkably extensive monitoring network, in the form of local political party leaders or 'Ten-Cell' leaders. As discussed in chapter 2, the Ten-Cell leader was originally a feature of the CCM political party structure, and not officially part of the formal local government structure in Tanzania.

10 cell leaders and/or the Subward office in transactions. It is unclear therefore whether this development should be interpreted as either a "push" or "pull" of governance.

There is, however, some indication they continue to operate as an extension of government today.⁸⁰ The three Subward chairman interviewed all stated that a letter of introduction from a Ten-Cell leader was needed before the chairman could provide services to a new resident in the area. In one Subward office, a list of Ten-Cell leaders was pinned to the wall. In another, the chairman paused the interview to attend a local resident and proceeded to split the fee for the service with the Ten-Cell leader that had provided a letter of introduction.⁸¹

Third, although the Subward chairman does not have legal powers over land transactions, they nonetheless have an official role in the local government structure. Other government officials accept the chairman's engagement in land issues. As one WEO explained, "*[i]t is not the law, but it is recommended*" that the chairman be involved in sales transactions (Ward Executive Officer, interview February 2017). Furthermore, they are regarded as being the "*interface with the formal system*" because, as one former municipal planner explained, "*the chairperson is a recognized authority so his stamp has legal strength*" (interview, March 2017). All local government respondents agreed that disputes can be referred from the Subward to the Ward Tribunal. The Ward Tribunal is the first forum of the legal system for dispute resolution.⁸² If the decision of the Ward Tribunal is not accepted by one of the parties, the files are transferred to the district and primary courts. Appeals from the primary courts

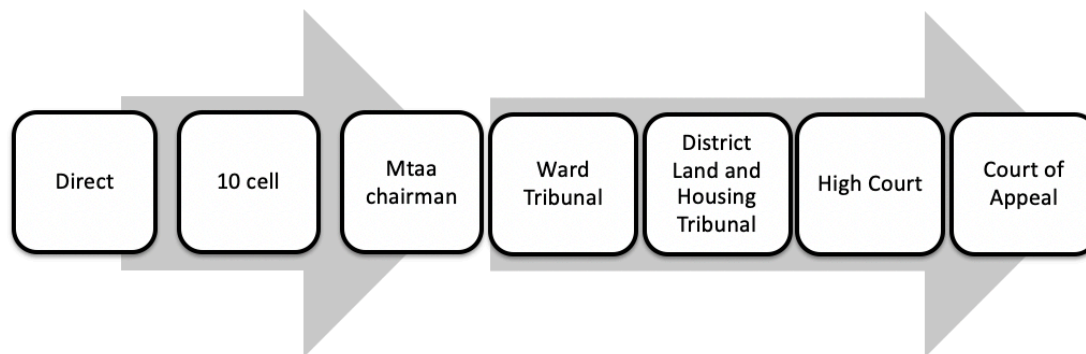
⁸⁰ Indeed, it is worth noting that many residents were unsure whether the Ten-Cell leader was a representative of a political party or local government.

⁸¹ After providing her with the official forms she had come to request, he asked for 2000 shillings payment (approximately £0.70). The resident gave him one thousand only, explaining that she had already agreed to give the other one thousand to her Ten-Cell leader.

⁸² Ward Tribunals were introduced under the Land Act and established between 2004 and 2005 to ease the burden on the court system (Pedersen 2010). The Ward Tribunal deals with cases valued at less than 3 million Shillings. Cases of more than 3 million are referred to the District Land and Housing Tribunal (where lawyers are permitted). The proceedings occur without the presence of lawyers.

are heard in the High Court, and, if necessary, the Court of Appeals (Pedersen 2010). The process is depicted in Figure 8.

Figure 8: Informal and Formal Land Dispute Resolution Process



Source: author's elaboration

Thus, returning to the experience of the interview respondent Joyce, the first case of disputed ownership she described is currently being heard in the legal system. As she explained, “*we have the case at the court... We have a lawyer... The first time the government said it was ours, and then not... At the moment we just wait... It's a bit hard...*”. Joyce’s experience suggests that although the legal system is slow and costly, it nonetheless serves informal owners as well as those with legal documents of tenure, as long as the case first passes through the Subward.

Indeed, it is worth noting that two Ward officials interviewed stated that even if residents in their area had been titled, they would still turn to the Subward chairman for dispute resolution before involving the court system. This finding is supported by research from Morogoro and Dodoma, where Kombe and Kreibich indicate that respondents prefer to resolve disputes at

the Subward and Ward levels, as it is faster and cheaper than the court system. Should the process fail, however, their case is referred to the Primary Courts (Kombe and Kreibich 2001).

The use of Subward dispute resolution processes by those with the option to access courts directly may indicate that households generally expect that adjudication from the Subward will either similar to that of the courts or that the difference in outcome is too small to merit the time and financial cost of court proceedings. Indeed, in general, respondents suggested that they felt the chairman adjudicated fairly. While respondents may have felt reticent to share concerns during the interviews, it is worth noting that overall Subward chairman are rated more favourably than other officials in the Afrobarometer survey.⁸³

Some Subward chairman abuse their position. In fact, one Ward officer interviewed explained that sometimes the Chairman themselves are party to fraudulent land sales. Yet in these instances, he explained, “*we take it to court and the court decides*” (Interview February 2017). Chairman may feel constrained by this possibility, as they are elected to office. Indeed, the literature on legal pluralism suggests that local leaders may even feel their authority is weakened when community members seek legal recourse rather than accepting their authority in dispute resolution (Aldashev et al. 2012). This may provide an incentive for local leaders to make judgements that do not differ substantively from court systems.⁸⁴

⁸³ Responses to the Afrobarometer question about how often the Mtaa chairman ‘tries their best to listen to what people like them have to say’ in 2015 for Dar es Salaam was: 25% “never”; 47% “only sometimes”; 21% “often”; 6% “always”; and 1% “do not know”. These results are higher than other government officials (to which 38% responded “never”).

⁸⁴ For this reason, Aldashev et al. hypothesize that law can have a ‘magnet effect’ on local customs, even if most community members continue to use customary authorities (Aldashev et al. 2012).

The analysis suggests, therefore, that for many informal households the institutional arrangements that uphold their property rights are largely indistinguishable from those available to formal households. It strongly indicates that the results of the hedonic price regression reflect the absence of a risk premium associated with informal housing and helps explain why there is little observable difference in quality of housing by formal documentation.

Section III: Land Use Rights and Housing Quality

The previous section has explored the relationship between housing quality and the rights to own and transfer land. In this section, I focus the third component of the property rights ‘bundle’: land use rights. As discussed in section 1, land use rights are the component of property rights that help shape expectations around actions relating to the use of land.

The first part of this section provides an overview of land use rights in practice. It shows that formal rules are applied unevenly, and that there is considerable variation in the degree to which land use is coordinated in ‘informal’ areas. Observing that spatially regular development patterns have a positive impact on housing prices and that interview respondents express strong preferences for land use coordination, section 2.2 goes on to explore why efforts and land use coordination appear to be ineffective in centrally located informal settlements. Drawing on the IAD framework, the analysis indicates that compared to the case of ownership and transfer rights, we might say that the key actors remain the same

but there are differences in the context and action situation. Specifically, land use norms are not clearly defined or shared, ad-hoc agreements are marked by failure to account for increasing costs over time, and the payoffs to leadership are small.

The section closes with discussion of the implications of this situation for housing quality. Specifically, I argue that in the absence of credible constraints on land uses, a social dilemma may emerge in which it is individually rational for landowners to develop their plots in a manner that reduces the overall value of housing in an area. The emerging development pattern makes both private and public provision of water and sanitation more costly, further compounding slum deprivation in the city.

3.1. Beyond Dichotomies: Land Use Planning in Practice

Dar es Salaam is commonly referred to as being composed of ‘planned’ and ‘unplanned’ areas. These terms are often used interchangeably with ‘formal’ and ‘informal’ areas. The official planning standards are highly restrictive and inappropriate (Lall, Henderson, and Venables 2017; Collier and Venables 2013). These restrictions have their origin in urban planning standards set by both German and British colonial governments, who employed them as part of an attempt to segregate the city by income, and, as a direct consequence, by race (Brennan 2007). They are also, however, widely ignored. Indeed, it is not self-evident that ‘planned’ and ‘unplanned’ areas can be distinguished by clear differences in adherence to either formal land use rules or formal property documentation.

As discussed in section I, the formal land allocation process in Dar es Salaam involves first surveying and planning land. Even in planned areas, however, actual land use deviates from the official plans. For example, in Oysterbay – the most expensive residential neighbourhood of the city – it is possible to find roads like Ali Ibin Said, where one side of the street is lined with expensive houses on large plots, and the other is an irregular mosaic of tightly packed houses and small front-room shops (known as ‘frames’). Qualitative research further indicates that buildings in the Central Business District are often built in contravention to the specifications of their building permit, or simply without a permit at all (Kironde 2009). Many also violate minimum plot size regulations.⁸⁵

Furthermore, formality of tenure does not appear to be a good indicator of whether or not land use regulations are adhered to. As shown in Table 13 (section 1), a larger portion of formal households (27 percent) live in irregular areas than informal households (17 percent). In addition to this, the table also shows that there is little observable difference in roof sizes across formal and informal property. This plausibly indicates that they have similar plot sizes.

As a number of researchers have highlighted, the formal planning system is beset with challenges. National and Municipal level authorities face both human and financial resource constraint, and planning is often fragmented (Moldrop Wolff, Kuch, and Chipman 2018; Kironde 2006). Efforts to implement formal planning approaches appear to be spatially targeted; concentrated on areas perceived to have high commercial value or to be central to

⁸⁵ The minimum plot size requirement of 500 m² is also often ignored, as plots are subdivided and sold; indeed, even in the early 1990s, most plots in Kariakoo were between 140 and 240m² (Kombe 1994).

the overall development of the city. Thus, in the area of Kigambone, which has been ‘opened up’ for development by the construction of a new bridge, residents are being expropriated in order for land to be formally planned and developed in partnership with commercial developers (Moldrop Wolff, Kuch, and Chipman 2018). There is also some indication that the areas around the main arterial roads receive greater attention from the national and municipal planning authorities.⁸⁶

Yet it is notable that not all areas that are left out of top-down planning are equally irregular in their settlement patterns. Local officials contested the idea that there were no rules for land uses in these areas, but instead indicated that they faced great difficulty in enforcing them. As one WEO explained, “*People do not listen. If they want to build they build. Sometimes they build without you knowing. You visit and find a structure*” (interview with Ward Executive Officer, February 2017).

This aligns with insight from existing case studies into land uses in Tanzania. Kombe’s research in the periphery of Dar es Salaam, and Kombe and Kreibich’s case studies of comparatively well-ordered informal settlements in the periphery of Morogoro and Dodoma (Kombe 2005; Kombe and Kreibich 2001) show that ‘informal’ areas can go through periods of collective efforts to coordinate on land uses followed by periods of more conflictive relationships.⁸⁷ In the subsection that follows I also discuss insight from two case studies of

⁸⁶ One local official interviewed indicated that the Ministry for Lands blocked private landowners efforts to build multi-storey buildings along the Morogoro road, as part of an effort to ensure development was state directed. Kombe describes a similar process having occurred along another major arterial road, the Bagamoyo road (Kombe 2005). Today, development along this road is marked by large commercial multi-storey buildings.

⁸⁷ In one of these cases, the area was originally planned under Nyerere’s villagisation program. The area in the suburbs of Morogoro, was originally a farm. In 1975 it was allocated to be an area to resettle villagers moved under the villagisation program. Semi-skilled technicians known as ‘barefoot surveyors’ worked with village

two Community Based Organizations (CBOs) in Dar es Salaam that were created in an effort to regularise irregular areas (Burra 2004; Magigi and Majani 2006).⁸⁸

In the centrally located areas of Dar es Salaam that are the focus of this thesis, plots are subdivided and developed without reference to any broader neighbourhood development vision. New houses emerge at the back of old houses, without direct access to the road, and houses are built backing onto each other, so that the front door of one opens onto the latrine of another. What guides these rules, and why are they more effective in some areas than others? And what are the implications of this for housing quality?

3.2. Informal land use restrictions in focus

Joyce, the interview respondent, stressed that one of the things she likes the most about the area in the periphery of the city where she is currently building her house is that: *“me and my neighbours, we leave the space for roads. It’s easier that way for development to come faster. And if you arrange like this then its better...it is good for air, and I don’t like when it’s too much people”*. It seems that Joyce is not alone in her preference for well-ordered land development. The hedonic price analysis presented in section 2 shows that on average

leaders to allocate land to each household. They also established basic land use norms, not only in terms of ensuring road accesses, but also setting requirements for uses of plots. For example, houses built with temporary materials to be built at the back of the plot, reserving space for permanent structure at the front (Kombe and Kreibich 2000). The area in Dodoma experienced a period of strong coordination and cooperation on land use issues in the 1980s, led by Ten-Cell and Subward leaders. This period was distinguished by an effort to counter plans for eviction; once the threat passed, a new period of ‘unguided’ development began (Kombe and Kreibich 2000).

⁸⁸ Marco Burra’s account of a CBO in Makongo, and Magigi and Majani’s account of the Ubungo Darajani CBO provide accounts of the struggles faced by relatively well-developed informal areas to be accepted by municipal planning authorities after they were identified for expropriation in order to implement the formal masterplan for the city.

there is a 30 percent price premium for property located in visibly more regular areas of the city, even controlling for whether or not they have formal documents of ownership. In addition to this, interview respondents were quick to raise issues relating to land use coordination when asked to describe things they like and dislike in their neighbourhood.⁸⁹ Common concerns raised were: lack of space for roads, open sewage in the drains, crowding, noise, and feeling insecure at night in narrow passages between houses.

If land use regulations exist, and people prefer well-ordered development, why are so many areas so irregular? The data suggests that there are two key differences between informal land use coordination and land ownership and transfer arrangements. Analysed from the perspective of the IAD framework, it could be said that the actors remain the same, but there are differences in the context and action situation. The key difference in the context is that norms on land uses are not clearly defined and commonly shared. This means that any coordination over land uses is the result of agreement between neighbours; and these agreements appear to be marked by failure to account for increasing costs over time. Furthermore, as areas become denser and communities become more heterogeneous, leadership is needed to enforce agreements. Differences in the action situation, however, mean that the payoffs to leadership on land use restrictions may be small in highly irregular areas.

It is notable that there was little consensus among respondents about what land use restrictions applied in informal areas. Although most respondents indicated that land use

⁸⁹ When asked to talk about things they like about their neighbourhood, residents tended to highlight locational attributes – such as access to work, markets, and either mosques or churches – as positive features.

restrictions did apply in their area, they showed much greater uncertainty over what restrictions may apply and how processes operated. Some suggested that the Ten-Cell leader should report on building activity; some indicated that households should proactively approach the Subward for permission to build; and others claimed that although there was no obligation on the part of the households to report their building activities, Ward officials would sometimes come and issue fines.⁹⁰

Research in periphery neighbourhoods of Dar es Salaam indicate that simple norms guide land uses, but the effectiveness of these arrangements varies considerably from one settlement to another. Thus, for example, in their study of self-help basic services extension initiatives, Andreasen and Moller-Jensen record considerable variation among periphery settlements in the degree of coordination in the spatial layout, manifested in road accessibility (Andreasen and Moller-Jensen 2016). Kombe notes a similar situation, comparing two case study areas; in both cases, initial land use layout reflected agreement between neighbours to ensure that plots are accessible, but in one settlement the arrangements are clearly deteriorating over time. Furthermore, even where arrangements are guided by social relationships, he nonetheless concludes that the process is generally characterised by lack of foresight, uneconomic use of land, and public health threats (Kombe 2005).

⁹⁰ Indeed, this was also confirmed through observation. Walking through an informal area one day with a Subward Mjumbe, the Mjumbe stopped to ask a man building an extension to this house whether or not he had submitted a permit to do this; the man appeared to be surprised and claimed to be unaware that he required permission.

One of the challenges of effective negotiation over land use externalities is imperfect information: the negative externalities may not be obvious to the parties involved. One reason for this is lack of foresight. Forward looking land-owners may see the benefit of coordinating land uses, but the cost of irregular development may not be apparent to initial settlers, who may have an imperfect understanding of the way the payoffs to cooperation on land use coordination may change over time.

For example, households living in low density neighbourhoods may fail to properly weigh in the long-term consequences of new development that restricts their access to the road, particularly if they do not envisage being able to afford a car. Once density increases, however, lack of road access has many implications: as plots become smaller, residents can no longer simply dig a new pit latrine when theirs becomes full, and without access to the road, they cannot be serviced by liquid waste removal trucks. They may thus be left with few options but unsanitary manual latrine emptying methods. Other services, such as solid waste removal will also be affected, as trucks only service houses they can reach. Initial settlers in areas where these services do not yet exist may fail to properly take these long-term costs into account.

Indeed, urban development specialists interviewed expressed the belief that settlement patterns reflect actions taken by migrants following building practices that have served them well in rural areas but are not appropriate in dense urban areas. They also identified education as an important factor. This sentiment was echoed by one tenant resident of an irregular

centrally located settlement, who lamented that “*the people who built [this neighbourhood] didn’t have the skills to build it properly*” (interview, February 2017).

As areas densify, land use coordination issues become more intense and immediately obvious to residents. Focus group participants directly related lack of effective land use restrictions to increased flooding risks, as new buildings reduce the overall permeability of the soil and interrupt storm water drainage. Furthermore, when it floods, households are known to release the plug on their latrines, so that the contents will be emptied and washed away with the storm water. Focus group respondents expressed great concern and anger over the health consequences of this situation. One participant recounted with pain that her infant son had been hospitalised after falling into the flood water. She explained that she had kept his clothes in the state that they were in after the incident, in order to show the local leaders how filthy the water was.

Yet this example indicates that density not only increases the severity of the problems, but also the challenges in resolving them; they cannot be resolved directly between the affected parties. The focus participant whose son was hospitalised lives in a low-lying part of her settlement. Even if she could convince all of her neighbours with whom she has strong horizontal ties to change their sewage management practices, they would remain affected by the actions of households that they do not know well, who live higher up in the settlement.

As discussed in section II, Subward leaders likely play a key role in upholding informal rights to own and transfer land. Subward and Ten-Cell leaders are also highlighted as leading both

the Makongo and Ubungo CBOs (Burra 2004; Magigi and Majani 2006), and are described as pivotal players in helping to enforce communal development vision in the case study areas investigated by Kombe and Kreibisch in Morogoro and Dodoma (Kombe and Kreibich 2001). In his research in the periphery of Dar es Salaam, Kyessi describes Subward leaders – often working with Ten-cell leaders – as the central players in mobilising resources to address public goods issues such as water provision (Kyessi 2005). Yet focus group respondents in the central irregular settlements of Dar es Salaam conveyed the belief that officials were not sufficiently responsive to these issues. Similar sentiments were also echoed respondents Limbumba interviewed by centrally located residents (Limbumba 2010).

What features of the action situation differ that could explain this lack of engagement by local leaders? One possibility is challenges in verification of land use problems. In contrast to the examples of land use rights that Demsetz gives of diverting a stream or throwing soil at passers-by, it may not be easy to publicly monitor actions such as emptying a latrine into rainwater. This is, however, only a partial explanation as interview respondents also raised examples of issues that community members had reported to officials. For example, in one settlement, residents in one area had built a berm to keep flood water from their houses. The direct consequence was that the water was funnelled towards a different set of houses. The issue had been reported to the Subward office, but no action had as yet been taken. To the residents, it appeared that the Subward was not treating it as a priority.

An alternative explanation may be lack of knowledge, which causes leaders to underestimate the seriousness of the issues at hand. Indeed, highlighting the successes of the ‘barefoot

planners' of the villigisation process, Kombe and Kreibich advocate for improved technical knowledge of urban planning issues among local leaders (Kombe and Kreibich 2000). Yet the Subward leaders interviewed in centrally located areas did not appear to underestimate the risks associated with ever increasing flood incidence. Indeed, one confided that every time he looks up and sees dark rain clouds, he worries. This worry was not overstated: the day after the interview, a flash flood claimed the life of a resident of his Subward.

Jean-Philippe Platteau notes that whether or not leadership emerges to establish institutional constraints on behaviour will depend on whether the individual benefits of change are greater than the costs of leadership (Platteau 2008). Land use issues may be very high stakes, particularly in dense areas where retroactive adjustments to account for failures of foresight are needed. Thus, for example, the act of widening roads will necessarily encroach on private property and may even require resettlement of some residents. This can lead to political protest (Collier 2017, 426).

Under these circumstances, leaders may face greater reward for opposing redevelopment than spearheading it. In particular, Subward leaders can benefit from positioning themselves as defending the community against efforts to expropriate them. As Aldasheve and others (2012) argue, local leaders may enjoy particularly strong authority in contexts where they representing the community in negotiation with outside agents (Aldashev et al. 2012). It is thus notable that Ward officials interviewed stressed that Subward chairman were sometimes resistant to efforts to impose land use regulations. As one Ward Executive Officer explained,

“when you try to get them to follow the rules, the chairperson reacts by saying ‘you are disturbing my people’” (interview with Ward Executive Officer, February 2017).

Under what circumstances might Subward leaders act differently? Kombe and Kreibich, Magigi and Majani, and Burra each provide examples of cases where leaders spearheaded efforts to reorganise land uses in order to convince municipal planners not to expropriate the settlement in order to implement the formal planning process. Thus, in the 1980s, in the Chang’ombe settlement in Dodoma, local representatives of the ruling party joined with landlords to help homebuilders construct in a manner than aligned with the Capital Development Authorities (CDA) vision for the area (Kombe and Kreibich 2001). In the 1990s, Subward officials in Makonga and Ubungo Darajini spearheaded efforts to form CBOs that created alternative land use plans for the neighbourhoods.⁹¹ In Ubungo Darajini the community collectively financed cadastral survey and 31 landowners voluntarily contributing land to public roads (Magigi and Majani 2006).⁹²

Although further details would be needed of these specific cases to fully analyse what sets these contexts apart, two notable features can be highlighted. For one, the broader political

⁹¹ The Makongo settlement had informally developed on land designated in official plans for institutional uses as well as a greenbelt. When the Ministry of Lands decided to convert the area for residential use in 1991, they created a plan that did not incorporate any of the existing settlement. Local residents created a CBO in order to convince the Municipal planners to accept the existing land use pattern in the city plan, rather than to redevelop the area. The proposal was accepted, on condition that they prepare their own plan that met certain formal criteria. Marco Burra notes that at the time of publication, the main challenges to final acceptance of the plan prepared by the community is that some of the plots were too large (greater than 800 m²) and issues over allocation of land for communal facilities (Burra 2004).

⁹² Ubungo Darajani is located 9 kilometres from the city centre fo Dar es Salaam. According to Magigi and Majani, the area had been zoned as hazard land under the 1979 Dar es Salaam masterplan, but with a provision that it could be used in future for industrial activity. The CBO financed the production of a municipal quality plan for the area.

situation may play an important part in structuring payoffs to leadership. The political situation in Dar es Salaam is currently highly charged. Many local officials and Members of Parliament are from opposition parties, and some regard civil servants as representatives of the ruling party. As such, Subward and Ward officials noted that the relationship between elected Subward Chairman and appointed local government officials could sometimes be marred by political differences.⁹³ There was no consensus on how this shapes outcomes among interview respondents, but it is plausible that strategies for local leaders aligned with the ruling party may be different from those aligned with opposition politicians in responding to threats of expropriation.

Second, the pre-existing physical layout of the area itself is likely an important factor in determining the payoffs to leadership on land adjustments, as it will determine how the costs of adjustment are spread across the population. In both the cases of Ubungo and Makongo the authors note that the neighbourhoods were already relatively well organised. Thus, while many individual households incurred personal costs to accommodation changes in line with planning standards, the authors do not describe any households being physically removed or relocated as a result of the adjustments. In other words, leaders of well-organised settlements are more likely to be rewarded for taking initiative to guide development further.

Seen from a different perspective, these examples may indicate that there are particular moments when policy makers can shape incentives to support more regular development initiatives most effectively. In particular, while neighbourly agreement among early settlers

⁹³ This is also recorded by Limbumba (2010).

may be sufficient to guide some degree of land use coordination, this appears to break down as densities rise. Community leadership at this point may be galvanised by an external threat, such as the threat of expropriation. It could also be nudged by the delivery of benefits, such as public investment in infrastructure. Indeed, early infrastructure investment can be understood as a form of coordinating device as it is a visible and credible commitment to the benefits of organised development (Collier 2017, 426). Yet once densities get beyond a certain threshold, neither the carrot of services nor the stick of eviction are likely to result in community driven responses to improve land use coordination.

3.3. How do land use rights relate to housing quality and slum deprivation?

The situation described above suggests that there should be strong benefits to basic land use coordination. Households show a preference for areas where land uses are coordinated sufficiently to allow for road space and sanitation solutions. Yet there is little evidence that any given owner-occupier can reasonably anticipate that their neighbours will develop their plot according to any basic guiding principles. In the absence of credible constraints on land uses, the decision to develop ones' property may take the form of a social dilemma; a situation when choices made by rational individuals result in socially irrational outcomes (Bates 1995, 29).

That is to say, even if landowners realise that the value of their land will be higher if they and all other landowners follow certain development standards, they may still face individual incentives to develop their property in a highly irregular manner. The hedonic regression

presented in section 2 shows that property in irregular areas is worth 30 percent less than property in regular areas, all other things being equal. Yet in this instance, the value of your own plot will be depressed by the actions of your neighbours, not your own land use decisions. If there is no credible commitment on the actions of your neighbours, the rational decision may be to make full use of your own plot, without consideration of how it impacts the overall development of the area. As such, areas where there are no defined and enforceable land use rights are more likely to have an irregular form and meet spatial slum identification criterion.

Second, the emerging development patterns are linked to higher levels of slum deprivation in the form of reduced access to improved water and sanitation. As discussed above, irregular settlement patterns are associated with poor disposal of both liquid and solid waste. Even if only a few houses lack road access and therefore have to dispose of their waste in ways that impose costs on their neighbours, it may have important knock on effects for behaviour throughout the neighbourhood. Specifically, it may dampen demand for improved basic services more widely. This is because the benefits of improved sanitation are dependent on their use by *all* members of a neighbourhood. Individual action in these circumstances will not significantly reduce health risks unless neighbours also correctly deal with faecal sludge (Satterthwaite, Mitlin, and Bartlett 2015).

Moreover, without services such as adequate sanitation, the desirability of other improvements may decline. One Subward Chairman interviewed explained that he was shocked to find that, at the conclusion of nearly two years of intensive lobbying of the

DAWASCO to extend the water network to his area, some homeowners did not want the water to be connected inside their house. As he explained:

“I was also talking to a lady, a retired teacher. She is a widow. I said, ‘I am connecting the water supply to your house’. She said: put just a pipe [outside] or something. I said, ‘why? You don’t want water in your house? To enjoy bathing with a shower and all these kinds of things?’ She said no, ‘I don’t want to have problems with the cesspit getting full all the time... if I put [water in the house] I am going to suffer...my grandchildren will come and wash their hands the moment they touch anything...so no! I don’t want it” I was surprised because it’s a high-class family. The four daughters are graduates, first degree, second degree, good jobs...So I thought, if a family of this calibre doesn’t want to put water inside the house, then there are many houses that don’t want it. They want water to be near, but not inside the house” (Interview March 2017).

Insight from the survey data provides some evidence to support this hypothesis. The proportion of households in irregular areas with access to mains sanitation and/or water is notably lower than in regular areas (29 percent, compared with 38 percent). Interestingly, there is no price premium associated with access to the mains in these areas. Table 16 presents results of the hedonic model discussed above (Table 15), adjusted to include an interaction term for irregular neighbourhoods and access to mains. The results indicate that mains access is associated with a 37 percent price increase in regular areas, all other things being equal. In irregular areas, the effect is slightly negative, and is not significant. The effect of mains conditional on being in an irregular area is negative (a 43 percent price discount, all other things being equal) and significant at the 5 percent level.

Table 16: Hedonic Price Analysis with Mains Interaction

	(1) Ln(price)
Formal	0.0438992 (0.082027)

Insecure	-0.5059342*** (0.0972552)
House	-0.1212291 (0.1175892)
Prop_age	0.0200136* (0.0118447)
Prop_age2	-0.0001896 (0.0002449)
Electric	0.2947872*** (0.0906603)
Garbage	0.6109432*** (0.0905754)
Concrete	
1	-0.1074927 (0.324428)
2	0.2464374 (0.2842722)
3	0.2323534 (0.3361661)
Rooms	0.1061955*** (0.026748)
Sublet	0.0540923*** (0.0192165)
Roof_area	0.0010756** (0.0004678)
km_cbd	-0.0208879*** (0.0057163)
1.Mains	0.3726234*** (0.0960926)
1.Irregular	-0.1657848 (0.1367627)
Mains Irregular1 1	-0.4262218** (0.2119084)
_cons	16.40308*** (0.3575188)
R2	0.18406778
Obs.	786

Notes: Robust Standard Errors are in Parenthesis. Given that the regression employs a log-linear equation, the coefficients can be interpreted as the percentage increase in rent for a one unit change in the variable of interest, controlling for all other variables in the equation.

For a dummy variable, the estimates reflect the percentage increase in rent associated with having that amenity, all other things being equal.

*** Significance at the 1% level

** Significance at the 5% level

* Significance at the 10% level

Conclusions and implications

The quantitative data presented in this chapter shows that informal property owners in Dar es Salaam are not more insecure in their tenure and do not value their housing less than those with formal property rights, all other things being equal. The qualitative data indicates that this is because there are strong institutional arrangements that shape property dispute resolution processes for formal and informal alike. It also shows, however, that informal institutional arrangements have not emerged to manage land use coordination challenges effectively in the city, and, that in the absence of credible constraints on land uses, a social dilemma emerges which traps housing in a low-quality equilibrium.

The analysis speaks to two bodies of literature on informal markets and helps to bridge the gap between them by drawing on theories and frameworks from new institutional economics. Specifically, for the urban economics literature, the findings indicate that predictions about the relationship between informality of tenure and slum deprivation can be improved by adding a more sophisticated understanding of market institutions into basic market models. It contributes a new case study to the qualitative literature that describes the operation of informal markets and extends this literature by analysing not only how this market works but also in assessing how *well* they work, relative to formal markets.

The chapter also raises new questions for each body of literature. For the qualitative literature on informal markets, the case of Dar es Salaam suggests that there is scope to further explore the role of specific institutional arrangements for security of tenure and transaction risks. That is to say, researchers in a wide range of locations have noted the role of key actors who take on semi-official verification roles in informal transactions, similar to those observed in Dar es Salaam. Thus, in the Dharavi slum of Mumbai, Shahana Chattaraj describes a situation in which anonymous property transactions are brokered through informal agents and sealed with legalistic signature of contracts, despite occurring outside of any legal frameworks (Chattaraj 2016, 104). In the *favelas* of Rio de Janeiro, Janice Perlman describes a “bizarre arrangement” in which land transactions are witnessed and stamped by the local president of the ‘Residents Associations’ and then verified at the district *Cartórios de Registro de Títulos e Documentos* (Registry for Titles and Documents) for a fee of 20 dollars (Perlman 2016, 68–72).⁹⁴ In both Ethiopia and South Africa, local government officials are recorded as witnessing transactions, despite not having legal authority to do so (A. G. Adam 2014; C. Marx 2009). Insight from Dar es Salaam suggests that this role may be key in minimising the differences in transaction risks and tenure insecurity across formal and informal households. There is scope to test this further through comparative research.

The chapter also further raises questions about how we should judge whether an informal market is working well. The claim that the absence of land use coordination can result in a

⁹⁴ The *Cartórios* are quasi-public enterprises that charge a fee to register transactions such as formal corporate leases and apartment rental contracts, as well as documentation such as identity cards and marriage licenses. The RAs are an institution created by the city government, but in practice often controlled by drug lords or militia.

social dilemma is one that relies on standards of evaluation of market activity that goes beyond pareto efficiency. I return to this discussion in the concluding chapter of this thesis.

Policy implications

The findings of this chapter have policy implications for Dar es Salaam and beyond. The expectation that informal land transactions are riskier than formal transactions is central to the assumption that formalisation of property is a pro-poor policy intervention. Advocates of titling expected that the poor would benefit from increases to the value of their land as property transactions become easier (C. Marx 2009). Indeed, one of the key outcome indicators for titling projects is property price appreciation (Field and Kremer 2006).

The results presented in this chapter suggest that it is unlikely that titling will result in property price appreciation for titled households in Dar es Salaam, given lack of confidence in the formal property rights system as well as the strength of the informal institutional arrangements observed. This helps to explain why uptake for titling projects to date has been so low. Of course, there are other potential benefits to titling. Hernando de Soto's initial case for titling was made largely on the basis of the benefits of improved access to credit. Today, there is widespread consensus that formal title should not be regarded as a sufficient condition for access to formal credit markets (Buckley and Kalarickal 2006; Payne and Durand-Lasserve 2012), since in many developing countries credit markets are highly underdeveloped and many urban households have irregular incomes. This is the case in Tanzania as well – indeed, mortgage penetration is among the lowest in East Africa (Jones

et al. 2016).⁹⁵ Over time, however, as credit markets develop, however, this situation may change.

Furthermore, it is unlikely that the informal arrangements described in this chapter serve large-scale property developers, whose activities are regulated at municipal and national levels.⁹⁶ Titling as part of larger efforts to strengthen the property rights system as a whole could have benefits for large-scale housing development. This could ultimately benefit many people in the city, through increased government spending on services, improved productivity, and reduced costs in large-scale housing production. Similarly, the strong correlation between property registration and payment of property taxes suggests that strengthening the government's capacity to register property is an important step towards higher rates of taxation collection. Crucially, however, these are both examples of potential benefits that will not be felt directly by titled households in the short term. As such, it is unlikely that individual households will be willing to pay for titling, as current project design anticipates.

In addition to this, the analysis presented in this chapter suggests that there may, paradoxically, be some tensions between formalisation and slum reduction aims. Titling projects that provide title without reference to land use norms could contribute to worsening settlement development patterns. Indeed, an officer of an NGO that provides microfinance

⁹⁵ It is also notable that real estate experts interviewed suggested that many people are uncomfortable with the idea of borrowing against land or housing, as they see it as an asset that should not be 'risky'. This aligns with findings from research in many developing countries (Mooya and Cloete 2007).

⁹⁶ This may not have always been the case. Kombe notes that in the 1980s, individual landowners were able to buy-up various plots in the Kariakoo area to built multi-storey buildings. According to this account, these landowners sometimes even provided existing residents with alternative plots as part of the transaction (Kombe 1994)

for housing improvements confided that – while households need to have some official document of tenure to participate – the NGO itself does not make any stipulations about whether renovations financed conform with land use restrictions; “*we don’t say, ‘no this is too close’ or anything like that. We don’t go to that extent*” (interview March 2017). Reflecting on rural land titling policies, Platteau notes that direct and indirect state action can support or undermine institutional change (Platteau 2000, 107–8). It may thus be that titling policies inadvertently serve to undermine land use practices in urban areas.

Annex 1. Logistic Regression – Probability of Being Formal

In the following annex I explore the probability that a house will be classified as formal using a logistic regression. The objective is to further describe the differences between formal and informal housing, following Friedman, Jimenez, and Mayo (1988) and Kim (2004). In addition to the tenure, housing, and locational variables described above, the regression also includes characteristics of the household, as detailed in Table 17. Property ages are also grouped by quartiles, for ease of interpretation.

The results are displayed Table 18. Overall, they fail to show a conditional relationship between insecurity of tenure and formality of property documentation. They further fail to show that there is a relationship between access to services, location of property, or the characteristics of the household head and formality of tenure. The odds of the oldest properties (17 to 65 years old) having formal titles are 2.3 times those of the newest properties (built within the last 6 years). Most notably, the odds of having formal documents of tenure are almost four times higher for households that pay property tax than those who do not.

Table 17: Definition of Variables

	Definition	Obs.	Mean	S.D.	Min.	Max.
tax	Dummy that takes the value of 1 if the household pays property tax	811	0.38	0.49	0	1
hhh_age	Age of the household head	809	47.75	13.1 1	18	97
hhh_educ	Categorical variable indicating highest level of educational attainment for the household head 0. Illiterate; 1. Kinder; 2. Secondary; 3. University/ other tertiary	796	1.41	0.69	0	3
migrant	Dummy that takes the value of 1 if the household head was not born in Dar es Salaam	760	0.73	0.45	0	1
poor	Dummy variable that takes on the value of 1 if household is in the bottom 40% of consumption for Dar es Salaam	808	0.45	0.50	0	1

Table 18: Logistic Regression – Odds Ratio for Formal Tenure Documents

	(1) Formal
Insecure	0.9047079 (0.2134156)
House	0.8402039 (0.2107545)
Prop_age	
7-10 yrs	0.8527564 (0.236657)
11-17 yrs	1.219941 (0.3334772)
17-65	2.334952** (0.8120265)
Mains	1.105552 (0.2309919)
Electric	0.9446373 (0.2308578)
Garbage	0.9748929 (0.1998531)
Concrete	

1	0.2517176
	(0.2321272)
2	0.4197382
	(0.3514119)
3	0.365176
	(0.3482937)
Rooms	0.9662757
	(0.0631292)
Sublet	1.012638
	(0.0473973)
Roof_area	0.9996634
	(0.0009476)
km_cbd	1.008497
	(0.0155273)
Slum_area	1.031658
	(0.2849169)
Tax	3.911661***
	(0.8316452)
hhh_age	0.9962331
	(0.0085525)
hhh_educ	
Kinder/primary	1.861398
	(0.8908429)
Secondary	1.888239
	(0.9875846)
Uni	1.662546
	(0.9826468)
Migrant	1.059565
	(0.2351793)
Poor	0.8126094
	(0.1722616)
_cons	0.6423398
	(0.7426409)
Prob > chi2	0.000

Notes: Robust Standard Errors are in Parenthesis

*** Significance at the 1% level

** Significance at the 5% level

* Significance at the 10% level

Annex 2. Additional Quantitative Data Analysis

This annex provides additional data analysis and robustness checks for the results of the quantitative analysis presented in this chapter. I test for multicollinearity, discuss the potential that results are biased by an omitted variable, and provide additional descriptive statistics on the relationship between household characteristics and both formality and insecurity of tenure.

Hedonic price analysis is often characterised by issues of limited multicollinearity as a result of high covariance amongst different housing amenities. The choice of variables included in the hedonic model presented in the main body of this chapter is guided by the hedonic price literature (discussed above and in annex 1). The age of a property, its size, and location are all central tenets of housing values across the world, and thus important to include in the analysis. Yet covariance amongst these variables will affect both the size and significance of the coefficients, and thus complicate interpretation of the results.

Table 19 presents the variance inflation factor (VIF) amongst the independent variables included in the model. The VIF provides an indicator of how much the standard error is inflated by multicollinearity. The VIF of 1.07 for the formal tenure variable thus indicates that that the standard error is only 7 percent larger a result of multicollinearity. Indeed, as a general rule of thumb, a VIF of less than 5 is considered moderate and inconsequential to the interpretation of the results (Xiao 2017). Furthermore, it should be noted that the VIF may also reflect multicollinearity within a given variable, as is likely the case of ‘concrete’, which

is a categorical variable with four categories. Equally, the high VIF for the two property age variables is a reflection of their close collinearity with each other. Nonetheless, in column (1) of Table 20 I present the results of a specification of the model that excludes these variables. The results align with those presented in the main chapter in both direction and significance of effects, although the magnitude of the coefficient for formality of tenure increases from 6 percent to 8 percent.

Table 19: Variance Inflation Factors

Variable	VIF
Formal	1.07
Insecure	1.06
House	1.23
Prop_age	9.7
Prop_age2	8.43
Mains	1.18
Electric	1.33
Garbage	1.34
Concrete	
1	3.44
2	5.58
3	3.27
Rooms	1.15
Sublet	1.31
Roof_area	1.09
km cbd	1.55
Slum_area	1.54
Mean VIF	2.77

Table 20: Hedonic Price Model Adjusted for Potential Multicollinearity Concerns

	(1) ln(price)
Formal	0.0826088 (0.0816875)
Insecure	-0.5156501*** (0.0976445)
House	-0.1196758 (0.1170388)
Mains	0.2736202 *** (0.0876483)
Electric	0.3289087*** (0.089646)
Garbage	0.6048076 *** (0.0910289)
Rooms	0.1098979 *** (0.0267412)
Sublet	0.0652325 *** (0.0187592)
Roof_area	0.0010257*** (0.000469)
km_cbd	-0.0252348*** (0.0055965)
Irregular	-0.2078263* (0.113987)
_cons	16.8581 (0.1978653)
Obs.	786
R2	0.17462023

Notes: Standard Errors are in Parenthesis. Given that the regression employs a log-linear equation, the coefficients can be interpreted as the percentage increase in rent for a one unit change in the variable of interest, controlling for all other variables in the equation. For a dummy variable, the estimates reflect the percentage increase in rent associated with having that amenity, all other things being equal.

*** Significance at the 1% level

** Significance at the 5% level

* Significance at the 10% level

The small increase in the magnitude of the formal tenure coefficient as a result of excluding variables for property age reflects positive covariance across these variables. It is interesting to note that direct correlation between these variables is relatively weak (0.17). Yet the analysis presented in the main body of this chapter as well as in annex 1 points to the possibility that whether or not property is formally registered reflects government capacity to provide documentation of ownership, which has diminished as the city has grown. If this is the case, we cannot discount the possibility that the coefficient for titles is biased by the omission of some unobserved neighbourhood or property characteristic that is correlated with tenure formality and age.

It is difficult to prove the existence of an omitted neighbourhood quality variable, particularly given that challenges of multicollinearity will be exacerbated in any spatial fixed effects model. The results should thus be interpreted with caution; they are valuable to further our understanding of the relationship between formality of tenure and housing quality rather than a precise measure of the value of title. Nonetheless, it is worth noting that, contrary to the results observed, housing theory would predict that property age would have a negative relationship to housing values, particularly when we control for a potential 'vintage' effect (where older properties command a price premium, captured by the age squared variable). It is thus plausible that if such an omitted variable exists, the effect is of an upward bias in the estimation of the formality of tenure coefficient.

Finally, seen in light of the broader literature on informality, it is surprising that the relationship between formality of tenure and tenure insecurity is weak. As discussed in the main body of this chapter, the finding is supported by both existing qualitative evidence from Dar es Salaam as well as new data presented in this chapter. The survey data further illustrates that this insecurity is largely driven by concern over government expropriation; with only a handful of respondents mentioning concern over conflict with other people. Further details on the profile of households and property where owners feel insecure may thus shed additional light on households that perceive themselves to be a greater risk from government expropriation.

Table 21 compares the characteristics of households that are informal and insecure. It shows that a larger portion of insecure households are poor (57 percent, compared to 44 percent, significant at the 0.01 level) and lower educated. Interestingly, the proportion of migrants is eight percent *lower* among insecure households than those that are secure (and the difference is significant at the 1.01 level). The table also explores differences in the characteristics of properties across the two groups. Although most households in both groups lack mains water and sanitation, there is a clear difference between the groups, with a larger portion of those who are secure having mains connections (significant at 0.01 level). The variables DAWASCO, DAWASA and TANESCO indicate if households pay bills the public utility companies. A larger portion of those who are secure pay bills for water and electricity; although many insecure say they do as well, and it is not self-evident that being connected to the utilities improves perceived security.

The table also shows that there is little observable variation by types of documentation, with the exception of the proportion of households that have Certificates of Rights of Occupancy. Further analysis was also conducted to explore differences across the number of documents held. Among households with formal documents of tenure, 33 hold more than one document. Of these, 23 hold two documents, and a further 10 have either 3 or 4 documents. The differences in the proportion that are insecure across these groups is not significant.

Table 21: Characteristics of Secure Insecure Households and Properties Compared

	Secure	Insecure	Obs.
<i>Characteristics of household</i>			
Female	0.19	0.23	809
Migrant	0.76	0.68 ***	760
Wage	0.37	0.39	671
Age	46.62	48.62	809
Secondary schooling+	0.37	0.27 ***	796
Poor	0.44	0.57 ***	808
Asset poor	0.36	0.41 *	808
Years in house	20.45	15.52	756
<i>Characteristics of property</i>			
Mains	0.36	0.23 ***	811
DAWASA	0.15	0.08 ***	811
DAWASCO	0.01	0.01	811
TANESCO	0.61	0.45 ***	811
Inheritance letter	0.05	0.04	811
Trad. right of oc.	0.00	0.01	811
Settlement permit	0.16	0.13	811
Title	0.12	0.11	811
CRO	0.05	0.01***	811

*Note: data are survey weighted. Stars denote a significant difference between the groups. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0$*

Chapter 4. Making Room for Renters: How does Informality Shape Rental Housing Quality? Evidence from Dar es Salaam, Tanzania

Introduction

Informal rental markets are often depicted as either limited or exploitative. This is because the literature highlights two main routes through which landlords can mitigate risks associated with informal rental transactions. One, they can limit rental transactions to people they know well (Lanjouw and Levy 2002; Rakodi 1995). In this case, the supply of housing available for rent will be small. Two, they can enforce their property rights through extra-legal means, such as gang violence or political connections (Gulyani and Talukdar 2008; Chattaraj 2016). This is the stereotype of the ‘slumlord’; and tenants are thought to have little alternative but to accept high prices for unsafe and insecure conditions.

In practice, however, it appears that only a subset of informal rental markets match this description. Evidence from research into urban livelihoods shows that informal renting is common in developing country cities, and that it takes the form of cooperative agreements between landlords and tenants of similar socio-economic status who live in close proximity to one another (Gilbert 2016; Cadstedt 2010; Smith 2017; Kumar 2011). Since this literature has remained largely separate from that on informal markets, however, it is unclear how risks inherent in these transactions are managed, or what the implications are for the quality of housing available.

In this chapter, I seek to contribute new insight on the range of informal contract enforcement mechanisms that may underpin rental markets in practice. I also aim to extend the theoretical discussion about the role these arrangements play in shaping housing quality. Specifically, I distinguish between two different types of conflicts between tenants and landlords: those that arise if one or both parties end the rental agreement ('endgame' disputes); and those that arise when both parties wish to retain the relationship but alter specific conditions ('midgame' disputes). The claim that landlords will not rent out unless there is contract enforcement focuses on 'endgame' risks, yet I argue that it is also important to acknowledge that the balance of costs of ending a rental agreement has profound implications for the capacity of tenants to advocate for maintenance of quality of standards over the course of the tenancy (i.e. in 'midgame' disputes).

The chapter is divided into four sections. The first provides an overview of the theoretical relationship between rental tenure and housing quality. Section II draws on qualitative and quantitative data to describe the rental market in Dar es Salaam. It shows that, like many Sub-Saharan African cities, Dar es Salaam is a city of renters: close to 60 percent of households live in one or two rooms rented from a live-in landlord. There is no legal framework for renting, and, as theory would predict, the quality of this housing is very low. At the same time, however, the rental market is vibrant and rental prices respond to market forces.

In section III, I draw on qualitative data to explore how this informal market works. The analysis shows that there are informal institutions that exist to help mitigate risks of engaging

in rental transactions for landlords and tenants. The analysis draws on the IAD framework developed by Ostrom and others to unpack how institutions – rules, norms, or strategies that create incentives for behaviour (Crawford and Ostrom 1995) – shape the rental market despite the absence of formal contracts. It shows that a combination of factors, including advance payment strategies and informal dispute resolution processes, sustain mutual expectations around the end of rental agreements and thus allow the market to function relatively well. The effectiveness of these arrangements is underlined by the finding that contracts command a significant rental price premium, despite being informal and unregulated.

In Section IV I explore the implications of these findings for housing quality. It shows that there are strong financial incentives for landlords to both expand and improve the quality of rental housing on offer; and this suggests that lack of quality rental housing cannot be explained in terms of either misalignment of investment incentives for landlords or lack of demand from tenants that arises from the informality of the arrangement. In fact, and somewhat ironically, it may be the *strength* of the informal rental arrangements that underlines the pattern of rapid and irregular expansion of housing in centrally located areas, which ultimately traps housing quality in a low-quality equilibrium.

The chapter closes with a discussion of the conclusions in light of debates in the literature and policy. Since the chapter brings together the literature on livelihoods of renters and landlords with that of informal markets in developing country cities, it contributes new empirical insights and raises additional research questions for both bodies of knowledge.

The findings of this chapter also highlight the importance of clearer understanding of the institutional context of the market to design effective policy. Policy makers concerned with the low quality of informal rental housing may seek to regulate the sector. In the abstract, regulation can play an important role in balancing the interests of tenants and landlords, and therefore can have a formative impact on the quality of housing on offer. In the case of Dar es Salaam, however, I argue informal institutional arrangements are effective in providing both tenants and landlords with confidence that the agreement will be upheld. Rental prices in the city are nonetheless high relative to quality as a result of wider constraints on the supply of serviced housing in the city that is unlikely to be addressed by regulating rental agreements directly.

Section 1: Overview of the Literature on Regulation, Informality, and Quality of Rental Housing

Rental housing is affected by the same wider conditions that affect the broader housing market in a given city. In the literature on slums, however, renting is linked to housing deprivation in two main ways. First, renters are sometimes seen as intransigent and therefore less interested in investing in housing quality than homeowners (Kumar 2011; Campbell 2013). Second, slum landlords are thought to be violent and exploitative. In this section, I frame these insights in the broader literature on rental housing to highlight that what sets rental housing apart from home-ownership is that investment is a product of decisions by both landlords and tenants, and that the choices and constraints of these actors – including

the shape of their relationship with each other – lie at the heart of efforts to understand quality of rental housing.

In the formal sector, regulations that govern the relationship between landlords and tenants have a formative impact on the quantity and quality of rental units in a given market. Specifically, the rental arrangement involves risks for both landlords and tenants. Landlords risk losses resulting from tenants that damage their property or refuse to vacate it. Tenants risk that landlords accept payment and then refuse to honour the agreement. In order to mitigate these risks, rights and obligations of renters and landlords are defined in legal contracts. On top of this, regulations set broader conditions on what these contracts can stipulate. These regulations often aim to address market failures that arise from imperfect competition and asymmetric information between tenants and landlords, which can lead to low quality housing relative to price.⁹⁷ Although there is no consensus on what optimal regulation of rental markets looks like, most agree that it should balance the interests of landlords and tenants (Malpezzi 1999; Haffner, Elsinga, and Hoekstra 2008). Regulation that protects tenants from rental increases and eviction may dampen the quantity and quality of housing available on the market; regulation that protects landlords interests, in contrast, may force tenants to accept substandard and unsafe conditions (Peppercorn and Taffin 2013; World Bank 2015a).

⁹⁷ In broad terms, landlords have better information about the quality of their unit than tenants. In addition to this, if tenants associated property with ‘home’, they may feel reluctant to move out, giving landlords some degree of power to increase rents relative to market rates (Haffner, Elsinga, and Hoekstra 2008).

In developing countries, a large part of rental housing is informal. This means that there are no clear legal frameworks for renters, so contracts cannot be upheld in court (UN-HABITAT 2003a). How does this shape the quantity and quality of rental housing? The literature on slums is often remarkably silent on the topic of renting (Gilbert 2016; World Bank 2015a). Research has tended to focus on either informal homeownership or the failures of the formal rental system, such as unintended adverse effects of regulations such as rent control (Gilbert 2016; Gilbert 2008).⁹⁸ This may reflect the expectation that landlords would simply be unwilling to rent out property without the security of a contract.⁹⁹

There is evidence to suggest, however, that informal rental arrangements are very common in developing country cities. In Sub-Saharan African cities, renting may be the most widespread form of accommodation (Gilbert 2016; World Bank 2015a). How do these markets work? Insight from the broader property rights literature suggests that informal transactions are “only viable if the purchaser can rely upon some enduring extra-legal means by which the new ownership is recognized, such as sanction by the local community or the support of a gangland protection racket” (Collier 2017, 425).

The empirical literature on informal rental markets is small but provides some support for this hypothesis. As discussed in chapter 3, urban areas are often characterised by high levels of population turnover and anonymity and thus lower capacity for community sanctioning.

⁹⁸ These regulations are generally thought to be counter-productive; they protect individual tenants from price increases, but depress supply of rental housing and lead to deteriorating quality of existing units in the market (Malpezzi 1999; Rakodi 1995; Glaeser and Henderson 2017).

⁹⁹ Indeed it is notable that titling projects often anticipate that once titled, homeowners will be able to rent out their property. Given the high numbers of renters in slum areas, it does not appear that formal property title is a precondition for rental markets.

In this context, some researchers have suggested that landlords will only engage in renting out their property if they have a pre-existing relationship with tenants (Lanjouw and Levy 2002; Rakodi 1995; Shelter Afrique 2014). Others point to violence and power: well-connected or violent landlords can control land and extract high rents in cities like Delhi, Mumbai, and Nairobi (Chattaraj and Walton 2017; Sivam 2003; Gulyani and Talukdar 2008).¹⁰⁰

These insights are largely focused on landlords' ability to enforce the rental contract. Yet we can further hypothesise that – as with formal regulation – both the quality and quantity of rental housing available will be shaped by the balance of protection afforded to landlords *and* tenants. It is likely that the two different mechanisms discussed provide different degrees of assurance to tenants over the quality of the property rented, as well as their ability to remain on the premises for the duration of the agreement. Thus, for example, while pre-existing social relationships may provide assurances to landlords over the behaviour or of tenants, it is also possible that these ties provide tenants with some capacity to exert influence on landlords in return. They may thus be able to press for better quality housing or lower rents. Indeed, research from Lagos has found that landlords prefer to rent to strangers because they find it easier to collect rents from people that they do not have a close personal relationship with (UN-HABITAT 2003a). In contrast, where landlords enforce rental agreements with extra-legal violence or power, landlords' interests are likely to be well protected, but tenants may be particularly weak.

¹⁰⁰ Although Chattaraj and Walton do not directly look at house rents, they argue that a returns exceed those of a competitive market in a range of activities that result from the organization of access to land (i.e. land sales, informal vending), as a result of the political connectivity and relationships that control urban space in the uncertain legal environment of slums.

Research from Kibera, Nairobi (Kenya), provides some evidence to support this expectation. Specifically, Sandra Joireman notes that landlords enforce rental agreements through a combination of social ties and force, including use of ethnically organised gang violence (Joireman 2011). Although she does not directly trace the link between these arrangements and housing quality, recent research by Marx et al. (2016) finds that where the landlord and tribe chief share the same ethnicity, rents are between 6 and 11 percent higher than where they do not; yet where tenants and tribe chiefs share ethnicity, investment in infrastructure is higher (B. Marx, Stoker, and Suri 2016).

It is therefore likely that the informal institutional arrangements that mitigate risks to landlords and tenants in a given context will have important implications for the quality of housing available – just as formal regulations do. The usefulness of this insight, however, is somewhat limited by the fact that the typology of social ties and gang violence appears to only describe a small portion of the informal rental arrangements that exist in practice.

Indeed, research into urban livelihoods and poverty indicates that slumlords are rare: small-scale landlordism is the norm, and tenants and landlords often have similar socio-economic profiles (Gilbert 2016; Rakodi 1995; UN-HABITAT 2003a; Kumar 2001). At the same time, however, landlords and tenants do not appear to share social ties that pre-date the rental arrangement. Indeed, they are often matched through informal brokers.¹⁰¹ As will be shown

¹⁰¹ Although informal real estate brokers have received relatively little attention in the literature on rental housing, they are noted to be operating in a number of different cities across the world, including: Mumbai (Chattaraj 2016), Rio de Janeiro (Perlman 2016), a number of cities in Ghana (Obeng-Odoom 2011), and Bangkok (Rakodi 1995).

in Section II, this is an accurate portrayal of the rental market in Dar es Salaam as well. How are the risks inherent to rental transactions managed in these cases? The literature on urban livelihoods has remained largely separate from that of informal property markets, and thus does not directly explore these questions.

Part of the answer may lie in proximity. Across the developing world, tenants often rent one or two rooms from a live-in landlord (Gilbert 2016; UN-HABITAT 2003a). Reflecting on the north American context, Robert Ellickson argues that where landlords and tenants live in close proximity to one another, they can monitor and sanction each other's behavior at low cost, and are thus likely to reach informal cooperative solutions around issues such as maintenance of the property (Ellickson 1991). Yet cooperative dispute resolution relies on the continuation of the rental agreement; once the relationship is over and tenants move out, they are no longer proximate, and can no longer monitor and sanction each other's behaviour.

In his work on disputes between neighbouring ranchers, Ellickson applies the concept of 'midgame' and 'endgame' disputes. In this chapter, I use this concept to distinguish between two different types of rental disputes. I classify 'midgame' disputes as those where parties wish to continue to relationship but disagree over issues such as the level of maintenance required.¹⁰² 'Endgame' disputes, in contrast, arise once the relationship breaks down. This distinction allows me to differentiate between different bargaining contexts and provides

¹⁰² For example, let us assume that tenants and landlords' interests diverge over maintenance. The tenant wishes to maximise the landlord's spending on maintenance, while the landlord would like to minimize it. Each can draw on a range of strategies to bargain for the outcome that they desire, particularly where they live in close proximity to each other, and can thus closely monitor and sanction each other's behaviour. For example, as Ellickson highlights in the North American context, a tenant that is dissatisfied with the level of maintenance conducted by the landlord may respond by treating the property with less care. Ellickson argues that the outcomes of this bargaining is likely to be superior to any legally prescribed level of maintenance spending.

useful insight to understand behaviour observed in practice in both types of disputes. This is because it helps to clarify that although midgame disputes can be resolved through bargaining, the outcomes of these disputes are nonetheless shaped by risks of the relationship breaking down altogether. That is to say, the bargaining positions of both landlords and tenants will be shaped by the costs of ending the relationship. Some of these endgame costs are direct, such as financial and emotional costs of moving for tenants or vacancy or maintenance costs for landlords. Yet some costs relate to risks of the other party not fulfilling their part of the bargain.

In OECD countries endgame risks are mitigated by legislation that clearly establish consequences to breaking a contract and provides legal guarantees that rents will be paid and deposits returned and are therefore similar for both landlords and tenants.¹⁰³ How these endgame disputes are resolved in informal markets, however, remains unclear. A review of literature on rental housing in developing countries in the mid 1990s noted that little is known about mechanisms through which tenants and landlords resolve disputes (Rakodi 1995, 801). More than twenty years later, there have been few additions to the literature (of which Sandra Joireman's research in Kibera is a notable example).

Returning to the livelihoods literature, recent research in secondary cities in Ghana, Nigeria, Kenya, and Tanzania finds that tenants and landlords have close mutually dependent

¹⁰³ It is worth noting that the costs of breaking a rental agreement are spread fairly evenly across landlords and tenants in North America. This includes legal process to recover unpaid rent or unreturned deposits, as well as conditions that balance tenant and landlord capacity to end the contract (such as the contractual obligation to give 30 days of notice), and record keeping systems that can make information about landlord and tenants past history available to others (Ellickson 1991, 276). Although Ellickson does not elaborate on the point, this is likely to have important implications for the outcome of bargaining over 'midgame' disputes.

relationships, but tenants have limited capacity to resist rental increases and advocate for improved conditions (Arku, Luginaah, and Mkandawire 2012; Cadstedt 2006a; Smith 2017). The authors highlight lack of formal regulation to protect tenants' interests. Yet, as discussed above, some form of contract enforcement mechanisms must exist, or the market would be very limited. Could it be that informal tenants' bargaining position is weakened because the informal arrangements upholding agreements strongly favour landlords?

In this chapter, I argue that improved understanding of the institutional arrangements that underpin informal rental markets can yield new insights on constraints on quantity and quality of rental housing in developing country cities. I seek to understand not only what kind of protection exists that allows the informal market to work, but how this informal institutional framework shapes investment behaviour of both landlords and tenants, and what the consequences of these arrangements are for housing quality.

Section II: Overview of the Rental Market in Dar es Salaam

In this section, I provide an overview of the legal framework for renting and stylised facts on the informal rental market in Dar es Salaam. It shows that most households in Dar es Salaam rent one or two rooms from live-in landlords, in accommodation that classifies as slum housing. Rental values are low relative to the sales price of housing, but high compared with the costs of incremental construction.

2.1. Policy and Legal Framework for Renting

Private sector renting has never been a policy priority in Tanzania. Housing policy between the 1960s and 1980s was entirely focused on public rental housing, provided through the National Housing Corporation (Komu 2011). More recently, the focus has shifted to promoting homeownership (Cadstedt 2010; Campbell 2013). Indeed, even the mandate of the National Housing Corporation has shifted from housing ‘landlord’ to housing ‘developer’ (World Bank 2010).

The Government of Tanzania regards private sector rental arrangements as a ‘private matter’ between landlords and tenants (Cadstedt 2010). There has not been any specific legislation to shape rental market activity since the 1984 Rent Restriction Act was repealed in 2005.¹⁰⁴ This Act was primarily concerned with public sector rental property, as private sector landlordism was seen as rent seeking behaviour that did not align with the *Ujamaa* principles of President Julius Nyerere (Komu 2013; Cadstedt 2006b; Kiduanga 2003; Kironde 1992).¹⁰⁵ The repeal of the Rent Restriction Act was framed in light of concerns that rent control has negative impacts on both the supply and quality of rental housing (Kiduanga 2003; Komu 2011; CPCS 2015). There is some ambiguity about the impact of this repeal on private sector

¹⁰⁴ Rent control was first introduced under the British colonial administration (the 1941 Rent Restriction Ordinance limited rent increases to 10 percent of rent paid); historians argue, however, that it was not widely enforced (Brennan 2007). In 1962 the Rent Restriction Act was introduced. This was followed by the 1984 Rent Restriction Act.

¹⁰⁵ Furthermore, researchers have also proposed that the policy to nationalise buildings worth more than 100,000 Tanzanian shillings in 1971 may have had long-term impacts on the supply of rental accommodation in the city (Cadstedt 2006b).

rental practices, however, since it is not clear to what extent the Act actually shaped behaviour of the many small-scale landlords that operated in the city at the time.¹⁰⁶

Despite the private nature of rental arrangements, the majority of tenants in Dar es Salaam say they have a contract with their landlord. As shown in Table 22, 80 percent of tenants in Dar es Salaam say that they have a written contract with their landlords. The table also provides insight on differences in household characteristics across tenants with and without written contracts. It shows that migrants and higher educated households are over-represented in this group, but that the difference between the proportion of female headed households or poor households across the groups is not statistically significant.

Table 22: Most Renters have Written Contracts

	Written Contract	Verbal/No contract
All	0.80 (0.01)	0.20 (0.01)
Migrant	0.83 (0.01)	0.76 ** (0.03)
Female HHH	0.26 (0.02)	0.24 (0.03)
Poor	0.35 (0.02)	0.37 (0.04)
Secondary+	0.44 (0.02)	0.26*** (0.03)

*Note: data are survey weighted. Standard errors in parenthesis. Total observations 1056. Stars denote a significant difference between the groups using a t-test. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.*

¹⁰⁶ The Rent Restriction Acts of 1962 and 1984 only applied to public sector housing. It is worth noting however, that interviews collected by Dr. Juma Rashidi Kiguanda (University of Dar es Salaam) reported in his PhD thesis show that provisions in the law were perceived by small-scale private landlords to disadvantage them. In particular, provisions that prevented landlords from evicting tenants without finding them alternative accommodation – even in the event of missed rents – were highlighted (Kiduanga 2003).

The high proportion of written contracts may reflect a change in the market in the last twenty years: a qualitative study of rental housing in Dar es Salaam in the 1990s, found that written contracts were rare (Kiduanga 2003). It is surprising that so many engage in this practice when it is generally expected that informal tenancy contracts have no legal standing (UN-HABITAT 2003a). Indeed, it has been argued that these contracts are purely a “bureaucratic display”, as “without formal regulation...there are no repercussions for landlords if the contract is breached” (Campbell 2014, 153).

2.2. Snapshot of the Rental Market

Most renters in Dar es Salaam live in rooms rented from landlords in a shared house. This has probably been the dominant form of tenure in Dar es Salaam since the 1920s (Tsurata 2007; Brennan and Burton 2007b; Kiduanga 2003). Overall, 80 percent of renters said they lived in one or two rented rooms (60 and 20 percent respectively). Live-in landlords appear to be the norm. Of the 811 owner-occupiers interviewed in the MLSC survey 28 percent were landlords. Almost all of these landlords said that they rented out part of the house they live in to renters. Less than one percent (31 respondents) said that they rented a separate property out to renters.¹⁰⁷

¹⁰⁷ It is worth noting, however, that one real estate professional speculated that it was possible that non-resident landlord more common in areas of the city such as the neighbourhood known as ‘Survey’, which is near the University of Dar es Salaam and home to many university students.

Most households described the accommodation they rented as being in either a free-standing or attached house (59 and 39 percent respectively). It is likely that a large portion of these houses take the ‘Swahili’ form, with rented rooms organised around a central courtyard. Cooking is done outside, in a shared room, or on a stove in the rented rooms (CPCS 2015; Sheuya 2007). Less than two percent of renter households live in flats or apartments. Furthermore, the value of rents recorded for these apartments indicate that they do not have elevators, since this is a feature that sets high-income rental properties apart (CPCS 2015).

The majority of rental housing is slum deprived: 87 percent of renters classify as slum households, and 55 percent of renters live in slum areas. Renters differ from non-renter households in the type of deprivations they suffer. As indicated in Table 23, a larger portion of renters lack improved water and live in overcrowded conditions than non-renter households. Furthermore, although a slightly smaller portion of renters suffer from lack of improved sanitation, a larger portion of renters share their toilet with other households than non-renters. Only in terms of building material quality is it clear that a smaller proportion of renters are deprived than non-renters. Furthermore, it is worth noting that although rental tenancy is concentrated in the centre of the city (less than 25 percent of renters live in the consolidated ring or periphery of the city), there is little variation in these slum deprivations across these geographical strata.

Table 23: Breakdown of Slum Deprivation by Rental Tenure

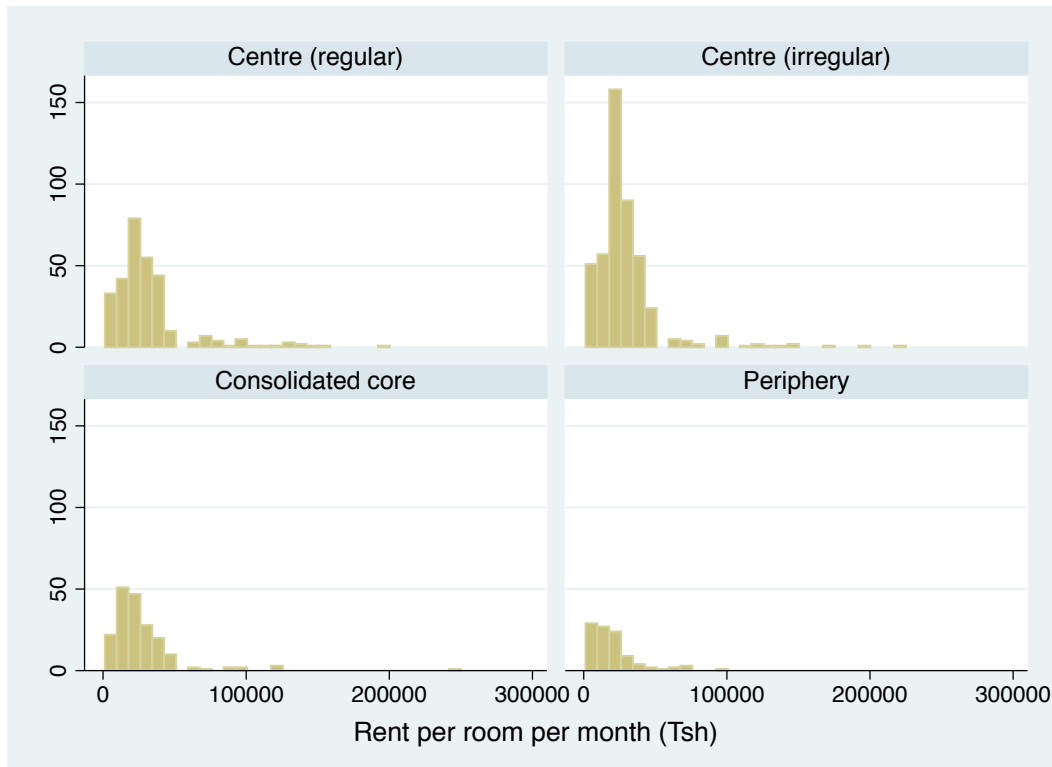
	Renter	Non-renter
Overcrowded	34.7% (1.6%)	19.1% *** (1.5%)
Lack durable materials	3.1% (0.5%)	8.6% (1.0%)
Lack water	68.4% (1.6%)	60.7% *** (1.8%)
Lack sanitation	48.2% (1.7%)	51.8% (1.9%)
Share toilet	86.2% (1.1%)	34.4% *** (1.8%)
Total Slum	87.2% (1.1%)	82.7% *** (1.4%)

*Note: Data are survey weighted. Standard errors in parenthesis. Observations: 1955. Stars denote a significant difference between the groups using a t-test. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0$.*

Reported rents ranged from 10,000 to 400,000 Tanzanian Shillings per month. This is approximately equivalent to a range from less than five US dollars to nearly \$200.¹⁰⁸ The median rent paid is 30,000 Tsh (approximately 14 USD) while the mean is Tsh 50,439 (23 USD). Figure 9 provides a histogram of monthly rents paid over the number of rooms rented, by geographical stratum of the city.

¹⁰⁸ Foreign visitors to Dar es Salaam may be familiar with a very different rental market to the one described in this chapter. Given tight restrictions on foreign ownership of land, most expatriates and international companies rent property in the city. These are large, fully serviced houses and apartments that often even have their own backup generators. These properties house only a tiny portion of renters in Dar es Salaam. They are not captured in the survey, and there is even an argument for viewing it as a separate market, as there is no movement across these bands of housing. Rents are likely to start at levels as high as ten times the upper limit of those recorded in the MLSC data. They are also paid in US dollars rather than Tanzanian shillings (Komu 2011).

Figure 9: Histogram of Rent per Room, Per month, by Geographical Stratum



Note: data is survey weighted. Total observations 1049.

Rental values are low relative to the estimated value of houses, but high relative to the costs of construction. The median value of houses recorded in the MLSC survey in centre of the city was 50 million Tsh. in regular areas and 52 million in irregular areas (the survey mean value was 91 million and 73 million respectively).¹⁰⁹ As discussed in chapter 2, there are many challenges to accurately estimating housing values, particularly in cities where the market for built houses is thin. Nonetheless, it is worth noting that in the UK real estate

¹⁰⁹ Of the 811 owner-occupiers captured in the MLSC survey, 353 live in two central stratum of the city: the ‘irregular’ and ‘regular’ areas. As discussed in chapter 2, there are challenges to identifying accurate measures of land and housing prices in Dar es Salaam. Yet it is worth noting that recent data from the Centre for Affordable Housing in Africa indicates that the cheapest housing built by a developer in Tanzania cost 17875 USD (approximately 40 million) for 50m². The National Housing Company’s affordable housing project produces housing of 2 to 3 bedrooms for between 40 and 95 million Tsh, and the Watumishi Housing Company (WHC) Real Estate Investment Trust’s public servant housing scheme aims to develop housing for between 27 and 85 million shillings (Centre for Affordable Housing in Africa 2017).

developers sometimes consider that housing can be profitably rented out if the gross monthly rent is equivalent to 1 percent of the sale price.¹¹⁰ It is unlikely that returns would be as high as this in Dar es Salaam.

Indeed, by some estimates 70 percent of households in the city earn less than 500,000 Tsh per month in total income (CPCS 2015). Of course, very few households rent an entire house. Yet the combined income from renting out each room in the house is still considerably less than 1 percent of the sale value. The median rent paid for one room varies by geographical strata in the city, ranging from 30000Tsh in the centre to 20000 Tsh in the periphery, as indicated in Table 24. If owners in the centre of the city were to rent out all six rooms of their house at this rate, the total rent would be between 150000 and 180000 Tsh, or less than 0.25 percent of the value they estimate their house is worth.

In practice, however, rental housing is produced through incremental building.¹¹¹ This is thought to be the case in many developing country cities (Gilbert 2016; Peppercorn and Taffin 2013). The cost of incremental building is hard to gauge. Even property owners that have direct experience of extending their property find it difficult to estimate how much the project costs – potentially because the projects start and stop according to availability of funds, and the price of labour and building materials may fluctuate over that time (Sanga and Lucian 2016; Precht 2005). Recent estimates provided by residents and labourers engaged in

¹¹⁰ This is a ‘rule of thumb’ (UN-HABITAT 2003a). Global trends suggest this ‘rate of return’ varies not only from city to city, but also across time and with by type of rental property (Rakodi 1995).

¹¹¹ Indeed, of 300 landlords interviewed in 1999, Kiduanga found that the majority (214) were owner occupiers that incrementally added rooms. Among the remainder, only 2 bought the rental property outright, while the others built the property incrementally with the purpose of renting out rooms (Kiduanga 2003).

incremental building are collated in Annex 2. They show a remarkable range, which may reflect not only changing costs over time but also different standards to which the houses are being built.

Nonetheless, it appears that rental housing is very profitable by this metric. A landlord who adds a room to their existing property can reasonably expect to earn 25,000 Tsh per month for this room (Table 24). This would add to a total of 650,000 Tsh in just over 2 years (26 months).¹¹² This income would comfortably cover the costs of the basic materials needed to build a room: nine bags of cement (90,000),¹¹³ 200 sand-cement blocks (205,000),¹¹⁴ and ten standard sheets of corrugated iron for roofing (200,000).¹¹⁵ Even if 30 percent is added for labour (148,500 Tsh), the total costs would reach 643,500 Tsh.¹¹⁶ In light of these figures, it is understandable that landlords sometimes even allow tenants to make improvements themselves in lieu of rent (Sheuya 2007).¹¹⁷ Indeed, Sheuya argues that there comes a point

¹¹² Landlords are unlikely to pay tax on this income. Although the law stipulates that landlords should pay 10 per cent of the rental fee in tax, in practice, none of the landlords interviewed were aware of this law. Overall rates of property tax collection are also low (see chapter 4). Recent press reports indicate that enforcement may increase in future (Lugongo 2016; Mwakyusa 2015). These articles assume, however, that the cost will be passed on to renters in higher prices.

¹¹³ CAHF assumes that 35-40 bags are needed for a 40m² house of bricks and mortar. 9 bags are therefore estimated to be sufficient for a 10m² room. According to their 2017 report, a bag of cement in Dar es Salaam costs 4.5 dollars (approximately 10,000 Tsh).

¹¹⁴ Sand cement blocks produced in Dar es Salaam measure 0.23m wide, 0.45 long, and 0.15 high, and cost 900 shillings per unit (Kruse and Torstensson 2011). Locally produced solid cement blocks cost 1,150Tsh each (CPCS 2015). For simplicity I have averaged the two prices

¹¹⁵ CAHF estimate that a standard sheet of corrugated iron for roofing costs less than ten dollars (approx. 20,000). I am assuming 10 sheets. Estimates from suppliers in 2015 indicated that a 'bundle' of iron sheeting costs 165,000 (CPCS 2015).

¹¹⁶ Survey of 90 owners in 1995 showed that on average labour costs for a 6 room house were less than 30 percent of total costs (Wells, Sinda, and Haddar 1998). More recent interviews with semi-skilled workers in Dar es Salaam also indicate that labour costs account for approximately 30% of total construction costs of a 6 roomed Swahili house (Kruse and Torstensson 2011). If we do not assume that rental prices increase with inflation, then the net present value of the 2 years of rent would be lower than the cost including labour.

¹¹⁷ Amongst my respondents, one tenant described how she came to an agreement with her landlord that she would rebuild the wall of her room instead of paying rent, after it was damaged by a flood.

in housing extensions where “an internal self-financing mechanism emerges, and when this point is reached, housing transforms itself” (Sheuya 2007, 449).

Table 24: Median Rent for a Single Room by Location

	Obs.	Median	Rent p.a.
Centre (regular)	158	30000	360000
Centre (irregular)	309	25000	300000
Consolidated city	107	25000	300000
Periphery	48	20000	240000

Note: only observations for single rooms are reported.

Despite this, supply of housing appears to be restricted. In qualitative interviews, renters complained about the difficulty of finding rental accommodation and expressed frustration at the quality level. As one tenant described, “*when I was looking for a place to shift [move to], I wanted one with water. The landlord lied. He said that there was water here. But it took one year and a half before the water arrived!*” (interview February 2017). It is further notable that among the 481 households that said would “definitely” or “possibly” like to move house in the next 3 years, 247 listed piped water as one of the top three “critical” services they would like to have in their next house.

The case of one respondent, Agnes, is illustrative.¹¹⁸ Over the course of eight years in Dar es Salaam Agnes has moved four times. Each move was motivated by a new job, as in each case she wanted to move to reduce her commuting time.¹¹⁹ Each move represented a step-

¹¹⁸ Not her real name

¹¹⁹ She has over the course of the years lived in four of the five municipalities of the city. With each new job, she moved to a location where she could get to work more easily.

up on the income ladder: through ongoing adult education, Agnes has managed to gradually transform herself from a domestic servant into a marketing professional and has tripled her income in the process.¹²⁰ Yet the quality of her housing has barely shifted at all over this period. She currently rents one room in a house with irregular water supply and one latrine shared between 13 people.

Of course, Agnes does not spend all of her income on housing. In addition to caring for her child, she financially supports the education of two younger siblings and has incrementally built a house for her mother back in the village that she comes from.¹²¹ Yet Agnes' story points to a broader trend visible in the data: households in the top quintile of consumption spend 150 percent more on rent than those in the bottom quintile, yet many still suffer from key slum deprivations. As indicated in Table 25, more than half (56 percent) of households in the top quintile of consumption expenditure lack improved water, 40 percent lack improved sanitation, and the vast majority continue to share these facilities (77 percent). Improvements in quality in terms of slum deprivations are restricted to adequate space: the number that qualify as living in overcrowded rooms falls to 12 percent.

¹²⁰ She first moved to Dar es Salaam to work as a house girl. Over the years, she has worked in a supermarket, various positions at a hotel, and now has a salaried marketing job at a downtown firm.

¹²¹ Research in Ghana has shown that the incremental building process can put strain on households, sometimes leading them to cut back on either consumption or present rental expenditure to complete their building project (Abedi et al. 2017). While this may be the case in Dar es Salaam as well, it is worth noting that overall households with second properties spend on average 20 percent more on rent than the mean (67706 Tsh., compared with 50439, significant at 0.01).

Table 25: Monthly Rent and Slum Deprivations by Total Household Consumption Expenditure Quintiles

Quintile*	Rent (mean, monthly)	Rent: Income **	Lack Water	Lack sanitation	Share toilet	Over- crowded
1	30751 (1625)	19% (1%)	73% (3%)	53% (4%)	92% (2%)	48% (4%)
2	36391 (2883)	13% (1%)	71% (3%)	49% (4%)	86% (3%)	46% (4%)
3	40259 (3455)	12% (1%)	68% (3%)	49% (4%)	87% (2%)	37% (4%)
4	48012 (3870)	12% (1%)	75% (3%)	51% (4%)	85% (3%)	30% (3%)
5	77126 (6515)	12% (1%)	56% (4%)	40% (4%)	77% (3%)	12% (2%)

Note: Standard errors in parenthesis. Observations = 1050

* per capita, adult equivalent, renters only

** mean monthly rent: mean household consumption expenditure within each per capita quintile

The overall picture that emerges from this overview is therefore of a large informal rental market, where rental prices are high relative to the costs of producing accommodation, and overall quality is low. It appears to be comparable to renting in the slums of Nairobi, where landlords can recover the investment of 12686 Ksh estimated to be needed to build an additional room in under two years (Gulyani and Talukdar 2008).¹²² In Nairobi, the high prices and low quality of rental housing in slums has been attributed to the privileged position that landlords occupy because of their extra-legal capacity to impose property rights (Gulyani

¹²² This would have been 9768 USD, based on an approximate USD:Ksh exchange rate of 0.77 for 2008.

and Talukdar 2008). In the following section, I explore the informal institutional arrangements that shape behaviour in the rental market in Dar es Salaam.

Section III: Informal Institutional Framework of the Rental Market

In this section, I draw on the IAD framework to explore how context, norms, and informal dispute resolution structures mitigate risks of informal rental agreements for landlords and tenants. The analysis shows that, despite some observable differences in landlord and tenant status, rental agreements can be enforced by either tenants or landlords by drawing on local dispute arbitration institutions over issues that break the rental agreement, such as unfair eviction. Due to features of the broader context, however, search costs are higher for tenants than vacancy costs for landlords, tenants are disadvantaged in disputes that arise over maintenance and rental value increases at the end of pre-arranged rental periods. These costs tip the balance in favour of landlords in disputes over maintenance and may allow landlords to increase rents over time without making proportionate improvements to quality. The higher costs to moving for renters, however, cannot be explained by lack of legally enforceable contracts; instead, it points to other constraints on the supply of housing.

3.1. Context, Actors and Action Situation

“My landlord, he is always saying ‘do this, don’t do that’ ...and his wife, she wants you to be a little bit down, because you rent his place. He is the boss....[but] when there is a problem we complain, demand him to do things...Like you can see there,

where the water is dripping through? He says he will fix it, but he never does. So you push and push ... you keep telling him and then he does it.”

(Tenant interview February 2017)

Landlords and tenants in Dar es Salaam live in close proximity to one another. As the quote above from a respondent who rents two rooms in a house with 7 other tenants indicates, tenants feel bound by social rules and obligations in their daily interaction with landlords: they must comply by their rules, and even adhere to a social hierarchy in which the landlord and their family occupy a privileged position. At the same time, however, tenants also place pressure on landlords to maintain the property. In order to analyse how these norms and strategies shape behaviour, it is important first to discuss the characteristics of these two actors as well as features of the context in which rental decisions are made.

The profile of landlords in Dar es Salaam does not conform to the stereotype of the slumlord. In fact, in general, tenants appear to be of slightly higher socio-economic standing than landlords. As indicated in Table 26, a smaller percentage of renters are consumption poor or unemployed, and they tend to be higher educated. Live-in landlords in the survey are relatively poor compared with owner occupiers and have lower assets (Table 26). This finding aligns with studies of informal landlordism in many other developing countries as well (Kumar 2011)

Landlords interviewed stressed that they relied on rents for subsistence. For example, one was disabled and relied not only on rental income to pay for his medications, but on the physical assistance of renters to get around. Another, an elderly woman, said that she needed the income generated from her three renters to support herself, her blind daughter, and two

grandchildren. This was also reflected in statements by tenants; as one explained, “*the landlord depends on the rent for daily life, so [if you fail to pay] he starts to hassle us tenants...[he will] even come and bang on my door to ask for the rent at night*” (interview February 2017). It is also notable that a third of landlords are female household heads, which is almost twice the proportion of female household heads among owner-occupiers.¹²³ In her research in Mwanza city, Jenny Cadstedt attributes this to constraints women face in other income generating opportunities (Cadstedt 2006b), which has been noted in other contexts as well (UN-HABITAT and Cities Alliance 2011).¹²⁴

Overall, however landlords have higher assets than renters, and may have greater standing in the local community. Many Tanzanians aspire to homeownership and regard it as an important mark of status (Andreasen and Agergaard 2016; Mercer 2014). They are also older and have lived in their current house for much longer than renters: on average renters have lived in their current house for between 6 and 8 years, compared with between 18 and 22 years for landlords. This could on the one hand mean that they are more able to draw on local support in the event of disputes; but on the other, it could also mean that reputational costs are higher than for tenants who may move to a different neighbourhood.

¹²³ There is some evidence to suggest this is a longer-term trend, as women were among the most high profile landlords when the practice of renting out rooms in owner-occupied houses ‘took off’ in the inter-ward period (Brennan and Burton 2007b).

¹²⁴ Globally, there is no consistent picture on female landlords. Research from Benin, Kenya and India suggest it is a male dominated area, while studies from Botswana, South Africa, and Mexico indicate that female landlords are relatively common (UN-HABITAT 2003a).

Table 26: Live-in Landlords, Tenants and Owner-Occupiers Compared

	Obs.	Age (head)	Poor	Assets (million Tsh.)	Female (head)	Working (head)	Salaried (head)
Renter	1056	34 (0)	35% (2%)	1.1 (0.1)	25% (1%)	71% (2%)	52% (2%)
Live-in Landlord	222	48 (1)	53% (4%)	2 (0.3)	28% (3%)	59% (4%)	37% (4%)
Owner occupier	589	47 (1)	44% (2%)	3.3 (0.3)	16% (2%)	53% (3%)	37% (3%)

Note: Data are survey weighted. Standard error in parenthesis. Employed means worked for income in last 12 months, salaried is as proportion of those employed.

Tenants and landlords appear to live in close proximity to one another. As discussed in section I, there is a strong reason to believe that close proximity between landlords and tenants facilitates cooperative problem solving over every day conflicts such as maintenance, as long as the costs of the breakdown of the rental arrangement are spread across landlords and tenants. In the absence of contract enforcement, landlords run the risk that the dispute escalates, and tenants leave without paying rent due or having damaged their property. Tenants, in turn, risk being evicted and losing any deposits or advance rent paid. In addition to this, even in contexts where effective contract enforcement exists, there are additional costs which may not be spread evenly across the two parties. These include costs directly associated with moving, such as search costs and transportation costs for tenants, as well as the emotional strain that leaving their home may entail. On the landlord side, it includes lost income of having a vacant property, but also the probability that they will have to undertake additional maintenance to attract a new tenant. The size of these costs is likely to vary significantly from one place to another.

With respect to the context, the qualitative data indicates that the rental market is anonymous, but tenants bear high search costs to find accommodation. Tenants and landlords interviewed indicated that they rarely knew each other before the tenancy agreement. Indeed, tenants often stressed that they did not even know people in the new neighbourhood before they moved in. The most common way of finding accommodation was through informal real estate brokers (*dalali*). Tenants explained that you can find a *dalali* either by approaching them directly in the area where you wish to find a room – it is not uncommon to see groups sitting in public spaces under a make-shift sign – or you can ask a *dalali* from another area to connect you to someone working in the neighbourhood you wish to move to.

Respondents indicated that *dalali* charge a fee for each property visited of between 5000 and 10000 Tsh., as well as a full month of rent if the tenant takes the property. The *dalali* are generally regarded as untrustworthy; many tenants interviewed expressed the view that *dalali* take advantage of renters by inflating rental values.¹²⁵ This view was also expressed by respondents in Kiduanga's research in the late 1990s; although notably, back then, they were generally avoided: 90 percent of landlords interviewed said they found tenants through personal contacts (Kiduanga 2003).

The costs of the *dalali* service is entirely born by tenants. Many described both the fee and time commitment required as onerous. As one tenant, who paid 100,000 Tsh to rent two rooms in a relatively well-located house, explained, "*If you want the house but there is*

¹²⁵ This is also noted by Claire Mercer in her research on the aesthetics of 'post-colonial suburbs' of Dar es Salaam (Mercer 2017).

problem you can say, 'can I keep searching?' No, you can't. Your rent from the old house has gone, and there is no way you can go to the hotel. So you agree in talks – the water will be here? They lie, they say yes, and you say OK” (interview February 2017).

In contrast, landlords and *dalali* interviewed indicated that an empty room can be filled within a week or two at most. For landlords, therefore, lost rent (vacancy costs) resulting from tenant turnover is likely to be low. They may incur increased maintenance costs with high turnover, however. Two tenants interviewed complained that they felt that despite the landlord's promises to attend to problems in the house, in practice, they would only ever spend money on maintenance if they had a room to fill a room.

Overall, these findings suggest that search costs are much higher for tenants than the costs of replacing tenants for landlords. It does not appear that this imbalance is so great that landlords do not take tenant complaints seriously, however. Indeed, Agnes, the renter whose experience was described in section II, was shocked when I asked if any landlord had ever told her that issues between tenants over cleanliness were not their problem. She exclaimed: *“a landlord would never say that!... If she did, I would leave the house and go to another place. She is doing business and receiving money, and if she doesn't care about customer complaints then I would find another house.”*

The power imbalance caused by differences in the costs of exit may, however, allow landlords to gradually increase the rent. As long as the increase is less than the cost of moving, tenants will probably comply. Those households that are least financially or even

physically able to move will be the most vulnerable to this pressure. This was evident in the account of one respondent, who has recurring medical problems with her foot and so finds it difficult to walk uphill. Her current place suits her in terms of its accessibility, but, as she explained, her *“landlord drinks. He is a drunk man. Sometimes he asks for more rent before 6 months have passed. I ask my friends, and they help me, but if they can’t and I say no [to him], he uses abusive language... But I am patient, I do not want to shift [move to another place] now... I have been doing research with my friends, but I need to find a place that is good for me, given my condition.”*

3.2. Dispute Resolution in Focus

Respondents described three main types of conflicts in interviews and focus groups. First, they stressed that it is most common for problems to arise around maintenance of common areas and payment for communal services, such as electricity, water, solid waste and toilet emptying fees. Of these, conflict over electricity bills – which are split between renters and the landlord – were most frequently cited. In particular, challenges arise because tenants suspect each other of using more than their fair share of electricity, either because they have more electronic appliances in their room or because they spend more time at home. In some cases, landlords are also suspected of inflating the electricity bill for profit.

The second main area of conflict was over payment of the rent. Most frequently, tenants and landlords described difficulties that arise when tenants are unable to make their rental payment. For example, one tenant explained that when his son broke his arm, he *“had to pay*

the medical bills, so I could not pay the rent. The landlord would not listen and tried to remove me from the house. He was hassling me all the time” (interview, February 2017). Yet instances of landlords attempting to charge more than agreed were also detailed. For example, as one respondent explained, *“my landlord, he is a good man, but his children are trouble. He gave the responsibility to collect rent to one son, but then another son started coming and asking for rent as well”* (interview February 2017).

The third form of conflict described related to instances in which landlords attempted to evict tenants. In some instances, landlords indicated that eviction was a means through which the first two kinds of conflicts were resolved. For example, one landlord explained that she evicted a woman who refused to clean the shared toilet. Yet tenants also described situations in which landlords tried to evict tenants for reasons that respondents considered to be unfair. For example, one young woman described how a friend of hers had been evicted because she rejected the romantic advances of her landlord.

As with the cases of property conflicts discussed in Chapter 3, respondents indicated that tenants and landlords first and foremost attempted to resolve disputes amongst themselves. Thus, for example, in the case of issues relating to keeping toilets and common areas clear, tenants often exerted strong pressure on one-another. Where necessary, they appealed to the landlord to intervene. As one respondent explained: *“If it is my neighbour’s turn to clean, I will keep watching. How did she clean? Is it comparable to everyone? If she didn’t do it right, then I will talk to her. But if it seems too hard to understand, then I will talk to the landlord”* (interview, February 2017).

Tenants also indicated that they would come to agreed measures to address conflicts over bills. In one house, a tenant explained, “*we set a limit. If it goes above our limit – in our house its 10,000 each, but it could be 12 or 20,000 – and if it goes over that, then we sleep without power [for fans]*” (interview, February 2017). These limits are imposed by the landlord, but they reflect discussion and compromise among tenants.¹²⁶ The agreements may even lead to curtailment on the behaviour of landlords; indeed, one landlord indicated that she delegated the job of collecting the electricity money to a tenant so that “*they can all see that I pay my equal share*” (focus group, February 2017).

Even rental payments are subject to discussion and informal resolution. Tenants explained that when they are unable to pay the rent, they speak with the landlord. In several cases, they described their relationship in familiar terms, and explained that the landlord is understanding of situations in which they cannot pay. As one said “*we live as relatives. Sometimes, if I cannot afford to pay right now, I tell her [the landlady] that I will pay at the time when I get money, and that is alright*”. One landlord echoed a similar sentiment, explaining that “*we solve these problems amongst ourselves. If someone cannot afford to pay, you take it as a favour. They are human beings, if they can’t pay, you wait*”. This suggests that conflicts are resolved through norms of reciprocal behaviour and trust dominate in dispute resolution. As one focus group respondent explained, when solving a problem, many people think “*today it’s me, tomorrow it’s you*”.

¹²⁶ It is interesting to note that in her research in Mwanza city, Jenny Cadstedt records the case of a tenant who is “not happy” that the landlord no longer shuts the water off during the day, because he “wants those who use more to pay more” (Cadstedt 2010, 49).

Yet given that the *only* ties that bind tenants and landlords are that they live together, this reciprocally is dependent on their continued rental relationship. What is to stop either party from breaking the contract entirely? As discussed above, there is no regulation governing rental arrangements, there are no formal arrangements specifying notice periods in Dar es Salaam. There is no official registration of landlords or tenants, and no formal association that advocates on behalf of renters.¹²⁷ There are, however, a number of factors which serve to mitigate some of the risks associated with either party ending the rental agreement. These are: advance rental payments, informal contracts, and semi-official local dispute arbitration mechanisms.

Today, it is standard practice that landlords charge rent in advance. Informal real estate brokers, focus group participants, and residents interviewed all agreed advance rental payment period is usually 6 months, but the better the room and the neighbourhood, the longer the advance rent period could be – ranging from one year to as many as two years.¹²⁸ Advance rental payment is a straightforward form of security for landlords, as respondents all agreed that tenants could not reclaim this rent if they left early. As one focus group respondent said, “*if you decided to live there, then you have nothing to say*”.

Interestingly, in areas where renters face higher risks that they may lose their pre-paid rental fees, the advance payment period is shorter. Specifically, during the two annual rainy seasons

¹²⁷ There used to be a Tanzania Tenants Association (TTA). This was a very small organisation. According to email communication with the International Union of Tenants, the TTA ceased to be active after its founder and sole employee passed away.

¹²⁸ This aligns with findings on the rental market in Mwanza city as well (Cadstedt 2010)

in Dar es Salaam, rainwater can frequently flood through the streets. The water usually dissipates within a few hours, but some houses are repeatedly flooded. If tenants have to move out as a result, respondents widely agreed that landlords will not reimburse renters for lost rent. As one focus group respondent put it, *“there will be quarrels, but the landlord will say: ‘but I did not make the flood happen!’”* Instead, however, landlords of houses that are exposed to repeated flooding not only charge considerably lower rents, but also shorter pre-payment periods: in these houses, landlords charge between one and three months advance rent.¹²⁹

The majority of landlords also sign contracts with their tenants. Interview respondents indicated that the content of these contracts will sometimes include issues relating to common areas and utilities, which as discussed above are often a source of conflict between renters. Thus, for example, as one renter explained, *“in some houses, when you read the contract, they are writing the things that you are allowed to use. In this house you are allowed fridge, iron, television, radio. They will not allow rice cooker or microwave”* as they use up too much electricity. As such, contracts serve to reduce uncertainty around cost of utilities, and mitigate the risk of conflicts between tenants that can escalate and result in the end of the rental arrangement.

¹²⁹ Even within one neighbourhood, not all houses are equally exposed to flooding. As one respondent explained, *“we do not have problems with rain water here, also because the house has good foundations. But see there, those houses that are near where the drain turns? They have many problems”* (Interview March 2017). These differences have a large impact on the rent that landlords can charge. As one informal real estate broker exclaimed: *“yes of course, the rent is much cheaper! Instead of 50,000 you pay 15000 or 20000”* (interview March 2017).

Thirdly, and most importantly, landlords are able to draw on support from local government in the event of breach of contract. It has previously been noted that landlords are able to take tenants who have failed to pay rent or utility bills to the Ward Tribunal (Cadstedt 2010; Cadstedt 2006b; Kiduanga 2003).¹³⁰ Yet both landlords *and* tenants indicated that they can also draw on support of local leaders for a wider set of issues.¹³¹ Indeed, Subward office officials interviewed stated that it is becoming increasingly common that renter contracts will be signed in their presence.

Many respondents provided examples of cases in which the Subward had become involved in resolving a dispute in the tenants favour. For example, the tenant mentioned above who struggled to pay the rent after his son broke his arm appealed to his Ten-Cell leader to speak “*with my landlord, who agreed that I could pay later*”. Reflecting on the experience he concluded that “*the leader resolved the problem in a good way. It made me feel comfortable to stay living there*” (Interview February 2017). Another tenant described a situation in which a woman she knew faced eviction 3 months into a 6 month pre-paid rental period. The woman appealed to the Subward chairman, arguing that although the landlord offered to return her the remaining 3 months rent, it would be insufficient to pay the 6 months rent she would need to find a new place. The chairman convinced the landlord to allow the woman to stay, by saying “*we have to use wisdom and be kind...I know she is trouble, but try to*

¹³⁰ This aligns with an observation that Tatu Mtwangi Limbumba makes in her PhD dissertation on residential choices in Dar es Salaam, that respondents were of the opinion that Subward offices were open to “community social matters such as family quarrels of landlord-tenant misunderstandings” (Limbumba 2010, 167).

¹³¹ This is also likely an institutional change. In her PhD research in Dar es Salaam, Patricia Campbell finds that rental contracts are not registered at the local government ward office and that there is no standard format (Campbell 2014). During my fieldwork, this was no longer the case. In fact, in one Subward, officials had even developed a standard template contract - although the Executive Officer admitted that few people had yet used it.

understand and let her stay for three months and then she will be gone” (Interview February 2013).

Subward officials interviewed provided a similar account of their involvement in conflicts. For example, a Subward Executive Officer explained that they often deal with cases such as the one discussed above where the landlord’s sons were collecting rent twice.¹³² Since it is relatively common that a house is inherited by a number of children, there can be ‘coordination’ problems in collection of rent or utility bills. In this event, he explained, the Subward will ask the siblings to appoint one family member to take control of the building. If that does not work, they will ask the renters to pay the utility money to the Subward office instead.

The system does not work perfectly. The Subward Chairman appears to have considerable persuasive power, but that may not always be sufficient. One tenant explained that she had been evicted after her landlord gave up his property to pay debts. The Chairman interceded on her behalf, arguing that the new owners should compensate the tenants with 6 months rent and help finding new accommodation. But, as the tenant explained, *“he failed. We were only given 3 months rent and no help [to find a new place], but we did not want problems, so we did not go back to the Mtaa”* (Interview February 2017). In the case of the woman whose landlord evicted her for refusing his sexual advances, the Subward Chairman successfully intervened, but in the end, it remained difficult for the woman to continue living in the

¹³² In the case mentioned above where the landlord’s sons were collecting rent twice, the situation was resolved by dialogue between the landlord, his son, and his tenants. As the tenant explained, *“he is a good person, so we wanted to resolve the problem without going to the leaders”*.

landlord's house. As the respondent explained, "*she did not stay long [after that]...She just wanted to show the man that what he was doing is not right*" (Interview February 2017).

Yet the strength of the norms around tenant rights are underlined by the account of a case a Subward Chairman described that he had dealt with the morning of our interview. The tenant had gone to Arusha some time ago, leaving his belongings in the room he rented. The advance rent period had now lapsed, and the tenant had not returned. The landlord came to the Chairman, as he was anxious to rent the room to someone else. The Chairman explained how he resolved the issue: "*I called the tenant, who told me that he would return to Dar es Salaam, and we agreed that if he had not returned by Sunday, then we would force the lock on his room and remove his property*" (interview March 2017). This example is remarkable, as it shows that even though the tenant was not physical present to resist removal from the premises, the landlord nonetheless chose to go through the Subward to deal with the problem.

Overall, the arrangements appear to create a relatively high degree of certainty that rental agreements will be upheld for both landlords and tenants, despite the absence of pre-existing social relationships or gangland force. It is likely that the arrangements detailed above provide a high degree of assurance to landlords that tenants will not remain on their property without paying rent. Tenants, in turn, can negotiate with landlords over maintenance expenditure without fear of losing their advance paid rent or being evicted before the end of the pre-paid period. Indeed, it is notable that many of these institutional features appear to have arisen in the last twenty years: in the late 1990s, when most landlords and tenants found

each other through social contacts, there were very few contracts and monthly rents were the norm (Kiduanga 2003).

Section IV: Implications for Housing Quality

The institutional arrangements described suggest that the rental market in Dar es Salaam is shaped by strong norms and informal dispute resolution arrangements. These arrangements appear to provide relatively high degree of certainty to both landlords and tenants that the conditions of the rental agreement will be honoured. At the same time, however, the costs of ending the rental agreement appear to be higher for tenants than landlords. As discussed in section I, this may undermine the capacity of tenants to successfully advocate for maintained rental standards and may push the price of housing up relative to its quality. This gives landlords a degree of monopoly power: knowing that it is expensive for tenants to move, they may be able to increase rent without making commensurate improvements to the property.

In this section, I probe these expectations by exploring rental values. As discussed in chapter 3, the hedonic price analysis is a method of uncovering implicit prices of composite goods. Housing theory would lead us to expect that the value of market-based housing will be strongly influenced by attributes of the house and location, such as size and amenities.

The hedonic regression employs the following log-linear equation:

$$\ln(P) = \beta_0 + \beta_1(H) + \beta_2(L) + \varepsilon$$

Where P is self-reported rental values.¹³³ On the right-hand side of the equation are house characteristics and amenity variables (H), and locational attributes (L). Housing characteristics include the property size and services it has, while location attributes refer to distance from the city centre, and a variable that indicates if the house is located in a visibly irregular neighbourhood.¹³⁴ A full definition of these variables is provided in Table 27. Given the nature of the variables included in the model, hedonic regression can suffer from problems of multicollinearity; this is discussed in annex 1, which shows that measures of covariance amongst the independent variables is relatively low.

The results are reported in Table 28, below. The model explains nearly 40 percent of the variation in rental values recorded. Overall, it shows that – like the housing values discussed in chapter 3 – rental prices are strongly influenced by neighbourhood and housing quality. Indeed, the effect of an additional kilometer from the city centre as well as an additional room on the rent is only a few percentage points different to the equivalent effect of on housing values. Each additional kilometer from the city centre is associated with approximately a 4 percent reduction in the value of rents, all other things being equal. Each additional room results in a 13 percent increase in rental value.

¹³³ In contrast to chapter 3, I do not employ a robust regression. This is because the rental values are reported by current tenants, and thus there is no reason to doubt that they are accurate – unlike in the case of estimated housing values used in chapter 3.

¹³⁴ The coefficients can be interpreted as the percentage increase in rent for a one-unit change in the variable of interest, controlling for all other variables in the equation. For a dummy variable, the estimates reflect the percentage increase in rent associated with having that amenity, all other things being equal.

The price premiums associated with housing quality are even more pronounced for renters than they are for owners (chapter 3). The rent for a property with concrete or stone walls, floor, and roof will be 65 percent higher than those made of non-durable materials, all other things being equal.¹³⁵ Access to mains water and/or sanitation is associated with a 73 percent increase in rental values, while electricity from the utility company is linked with 54 percent higher rents.

The results of the regression support the findings of the institutional analysis above in two key ways. First, the regression shows that having a written rental contract is associated with an 11 percent increase in monthly rents. This could suggest that tenants/landlords with pre-existing personal relationships may forgo formal contracts. They may trust each other more, but also, as a consequence, landlords may find it hard to charge market rents, as discussed in Section I. Yet it also suggests that contracts hold some value in themselves; more than mere bureaucratic displays, it is likely that they do shape behaviour in ways that are beneficial to tenants and thus associated with higher rents.

Second, each additional year lived in rented accommodation is associated with a small (less than 1 percent) increase in rents paid. In many places landlords offer discounts with longer length tenure, in order to reduce maintenance costs and vacancy costs associated with turnover (Haffner, Elsinga, and Hoekstra 2008). The increase in rent observed over time

¹³⁵ It is further worth noting that during semi-structured interviews three landlords indicated that they had in the past increased the price of rent after improving the quality of stone (for example, from sand bricks to cement blocks) or the height of walls. These distinctions in quality are too nuanced to be captured by the measure of durable materials used in the survey. This may explain the slightly muted effects of having one or two durable materials. In contrast, the effect of having all three concrete/stone, likely points to a more notable jump in housing quality among those that have concrete or stone roofs (the most common roofing material is metal, and there are no houses with concrete/stone roofs that lack durable floors or walls in the sample).

provides some support to the hypothesis that landlords have some degree of monopoly power, and that they use this to raise rents by a small margin at the end of each rental period.

Overall, the results therefore suggest that quality constraints in rental housing cannot be attributed to lack of investment incentives from landlords. We can, in fact, anticipate that landlords can earn higher rent by improving the quality of the housing on offer. With this in mind, it is worth noting that there is some evidence to suggest that the quality of rental housing in the city has improved over time. Less than 20 years ago a survey of 244 renters' accommodation in central unplanned settlements of Manzese, Temeke and Buguruni found that just over one third had at least one wall made from traditional materials such as poles and mud, and half had earth floors (Kiduanga 2003). Today, even in irregular enumeration areas in the centre of the city, 98 percent of accommodation has concrete floors and walls.

Furthermore, landlords and tenants interviewed indicated that improvements such as these are made in order to increase rents. Indeed, it may be that rental housing quality is *higher* in elements that landlords can control themselves than owner-occupied housing. Indeed, it is interesting to note that based on 33 interviews with owner-occupiers in central Dar es Salaam, Sheuya finds that incremental builders will use non-permanent materials in the earliest stages of house construction and replace these later with permanent materials. When it comes to housing extensions, such as to add rental rooms, they did not follow this same pattern. Instead, they use permanent materials from the offset (Sheuya 2007). This may be corroborated by the data presented in Table 23 in section II which showed that renters are less likely to be deprived in terms of non-durable housing materials than owner-occupiers.

Investment in basic services, however, lag. This may not reflect issues relating to landlord and tenant investment decisions specifically, however. The broader literature on the state of water and sanitation in Dar es Salaam suggests that there are large challenges in the provision of services in the city as a whole, regardless of neighbourhood level dynamics. Investment and delivery of services is undermined by poor coordination between urban planning authorities, infrastructure investment plans, and utility companies (Pastore 2015; de Waal and Cooksey 2008). Even government led development projects face major constraints in securing coordinated water and sanitation investment.¹³⁶

In the absence of public service provision, it may not be reasonable to anticipate that individual landlords will invest in improved private sources of water and sanitation. The costs of providing quality water and sanitation privately are very large. Indeed, the World Bank has estimated that private developers need to spend an additional 50 percent of the total development costs on trunk infrastructure for water, sanitation, and electricity (World Bank 2010). Only developers working at the most elite segment of the market can afford to take on these costs. Indeed, for this reason, water and sanitation are often seen as a natural monopolies (Malpezzi 1999). Furthermore, since there are strong positive externalities and spill overs associated with basic services, levels of private investment in them are often expected to be lower than optimal. Indeed, in many cities across the world, a combined

¹³⁶ For example, areas identified to benefit from World Bank financed slum upgrading initiatives failed to receive the full water infrastructure intended because of a discrepancy between the methodology to identify priority areas between the upgrading project implementers and DAWASA (Pastore 2015). An even more extreme case is that of the Kibada estate – a National Housing Corporation housing project in Kigamboni – which stood empty for at least two years after completion because the houses lacked connection to water and electricity (CPCS 2015).

approach of penalties and subsidies have been essential to ensuring adoption of higher quality sanitation (Ashraf, Glaeser, and Ponzetto 2016).

Furthermore, the hedonic regression results show that it is likely that the benefits of investments in these services are further dampened in irregular areas: as we observed with housing values in chapter 3, the value of basic services such as improved sanitation is dampened in irregular areas. The large premium associated with access to mains almost entirely disappears for households located in visibly irregular settlements, as indicated by the interaction effect.

Indeed, it is interesting to note that rental market values further underline the case that irregular housing construction may be a social dilemma. Rents in visibly irregular/slum areas are 18 percent lower than in non-irregular areas, all other things being equal. There is also a significant premium associated with municipal garbage collection, which qualitative interviews suggest may reflect the value of access to the road (since formal garbage collection trucks cannot access households that are far from passable roads).

Moreover, it is possible that the *strength* of informal rental market arrangements provides a strong incentive for households to ignore informal land use coordination. As discussed in section II, it is likely that landlords can recuperate the costs of building an additional room to rent within just over two years. This adds a strong profit incentive to expanding one's property to use as much of the plot area as possible, particularly in areas where there is little assurance that neighbours will not do the same. Indeed, in an interview with an official of a

local microfinance organisation, the respondent indicated that one of the most common ways of approving whether the borrower could repay a loan was to calculate increased rental income the owner would gain.

It is possible that rental market dynamics exacerbate land use coordination challenges in the city. Local politicians may not wish to stem the arrival of new renters to the area, since new renters are also new voters. As discussed in chapter 2, renters are expected to register with their local Ten-Cell leader when they move into a new house. While there is no legal obligation to register, they will need a letter of introduction from this Ten-Cell leader if they require any services from the local government. This may factor into local government decision making over continued expansion of plots in violation of land use coordination efforts; as one local leader interviewed put it: “*When you come and build in my Subward you are immediately a part of my Subward. Because I want your vote, I will have some politeness towards you*” (Interview, March 2017).

As discussed in chapter 3, irregular development makes it more costly and dampens the benefits of improved basic services, contributing to the deficit of higher quality rental housing. It may even put a ceiling on higher density housing development. Specifically, the vast majority of rental housing in Dar es Salaam is one storey high. There may be a number of factors that contribute to this, including increased attention that multi-storey building may attract from planning authorities, and the low skill set of construction workers.¹³⁷ Yet these

¹³⁷ The skill-set of construction workers is generally low in the city (Jason 2007), so completing a second storey may require working with one of the few professional builder/ developers that exist. Interviews conducted for an M.A. thesis in Civil Engineering show that both labourers and residents are concerned that they do not have

challenges also apply in Nairobi, where informal multistore rental housing exists. Indeed, in her research into informal 8 storey tenements in Nairobi, Huchzermeyer notes that the buildings follow a common plan of 9-14 individual rooms for rent per floor, plus one shared toilet (Huchzermeyer 2007). It is possible that sanitation is a constraint on the emergence of this type of housing in Dar es Salaam given that at present 91 percent of renters rely on pit latrines.¹³⁸ This form of sanitation would not support such high density.

the necessary knowledge to build a second storey (Kruse and Torstensson 2011). This perception may be compounded by recent high-profile cases of multi-storey building collapses in Dar es Salaam (2013 and 2008).

¹³⁸ Of these, 21 percent are unimproved or open without a slab, and 26 percent are pour flush to pit.

Table 27: Description of Variables

Name	Definition	Obs.	Mean	Med.	S.D.	Min.	Max
Ln(rent)	Log of annual rent in USD	1050	5.20	5.10	0.79	2.39	8.09
Contract	Dummy (0/1) if household has written contract	1057	0.79		0.41	0	1
House	Dummy (0/1) if free standing house	1057	0.59		0.49	0	1
Mains	Dummy (0/1) if household is connected to either piped water or sewage system	1057	0.08		0.27	0	1
Electric	Dummy (0/1) if household is supplied electricity by the utility company	1057	0.70		0.46	0	1
Garbage	Dummy (0/1) if household garbage is collected by the municipality	1056	0.70		0.46	0	1
Concrete	Number of roof, floor, and/or roof that is made of concrete.						
	1	1057	0.03		0.16	0	1
	2	1057	0.92		0.27	0	1
	3	1057	0.04		0.20	0	1
Rooms	The number of rooms the household occupies	1056	1.87	1.00	1.54	0	13
km_cbd	Measure of distance from the city center, rounded to 0.5 kilometers.	1050	11.12	8.50	7.65	0	33
Slum_area	Dummy (0/1) if the house is located in an 'irregular' EA, as identified by satellite imagery	1057	0.46		0.50	0	1
Yrslived	Years lived in property	1039	7.36	4.00	7.85	1	53

Note: Data is not survey weighted. Payment for utilities is not included in rent.

Table 28: Hedonic Estimates for Rental Value (Log)

	(1) Ln(rent)
Contract	0.1117691*** (0.0381317)
House	-0.0139736 (0.0383763)
Electric	0.5385469*** (0.0354035)
Garbage	0.0898036** (0.0416958)
Concrete	
1	-0.4366601* (0.261289)
2	0.3509334 (0.2244021)
3	0.6512346*** (0.2556719)
Rooms	0.133218*** (0.0191273)
km_cbd	-0.0227511*** (0.0036633)
Mains	0.7282275*** (0.1280184)
Slum_area	-0.1781652*** (0.0450668)
Mains#Slum_area	0.0326337 (0.2479119)
Yrslived	0.00844*** (0.002421)
_cons	4.277655*** (0.2332917)
R2	0.3867
Obs.	1026

Notes: Regression is survey weighted. Standard Errors are in Parenthesis.

*** Significance at the 1% level

** Significance at the 5% level

* Significance at the 10% level

Conclusion: Raising the Roof on Renting

The analysis presented in this chapter suggests that norms, strategies, and semi-official dispute resolution mechanisms provide a relatively high degree of certainty to both landlords and tenants that rental agreements will be respected in Dar es Salaam. Despite this, demand for rental housing is still greater than the housing supplied. As such, search costs for tenants outstrip vacancy costs for landlords, giving landlords some degree of power to raise rents at the end of each pre-agreed rental period without improving quality of housing.

The research indicates that the supply of quality housing is constrained in ways that at best is unrelated to informality, but at worse is exacerbated by the *effectiveness* of informal rental arrangements. That is to say, improvements in the provision of public services may be a prerequisite for greater investment in basic services and the emergence of multistory rental accommodation. Ironically, however, the strength of the informal rental market institutions may create strong incentives for housing to be developed even in the absence of these conditions, ultimately locking well-located areas into low quality and irregular development patterns.

The findings have implications for both the literature on urban livelihoods and informal property markets. For one, they suggest that improved understanding of the institutional framework of informal rental markets can yield useful insights for urban livelihoods. For example, researchers exploring rental livelihoods in secondary cities in Ghana, Nigeria,

Kenya, and Tanzania advocate for regulation to support tenants against rising rents and deteriorating standards (Arku, Luginaah, and Mkandawire 2012; Cadstedt 2006a; Smith 2017). In the case of Dar es Salaam, we can see that while tenants are vulnerable to rising rents, it is not clear that regulation to control price increases would lead to the improvements advocates anticipate. Even if we assume that regulation is enforced,¹³⁹ the overall challenge that supply is severely curtailed would continue to leave tenants in a weak bargaining position on issues of maintenance. It is also worth considering how the costs of enforcement would compare against the benefits of the change, especially given that many landlords are themselves poor.

The chapter also contributes to the literature on informal property markets, of which there is very little empirical research focused on rental housing. The chapter suggests that there are a wider range of institutional solutions to the challenge of contract enforcement in rental markets than previously highlighted in the literature. It also raises new research questions for this literature. Specifically, I have argued that the relationship between informal institutions and housing quality can be understood in similar terms to those of formal institutions. That is to say, housing quality is likely to be influenced by the extent to which institutions protect the relative interests of landlords and tenants. There is room to test this hypothesis further in different contexts.

¹³⁹ In many countries, legal provision exist but have little effect, as both the monetary and time costs of using the legal system are onerous (Gilbert 2016). Furthermore, efforts to ‘formalise’ the relationship between landlords and tenants is not straightforward. It could lead to resistance from the party that perceives it will be disadvantaged by the change. Indeed, in Kenya, there are accounts of landlords chasing enumerators with machetes, as they thought they were part of an effort to regularise rental arrangements (Huchzermeyer 2009).

The research also highlights that even institutional solutions that help support rental market activity can nonetheless have adverse impacts. In particular, in this chapter I highlight that the practice of upfront payment of rents has emerged in response to rising risks in rental transactions as the market has become more anonymous. It is worth considering, however, whether these arrangements have an adverse effect on behaviour in other ways. In particular, long advance payment systems may keep new migrants or any other low-income person that finds a better-paid job in low-quality housing for longer than their income alone may predict. In other words, it may introduce friction into the market that increases the time non-poor households spend in slum conditions.

The findings of this chapter raise a number of points that are relevant to housing policy in Dar es Salaam and across the world. More than one billion people across the world live in rented accommodation (Gilbert 2016). Many urban residents will rent at some point in their lifetime. The flexibility of renting may be particularly attractive for people undergoing life changes, such as recent migrants, young people moving out of the family home, and divorcees. An active rental sector is also associated with productivity gains, as it may support more flexible labour markets (Lonardonni and Bolay 2016; Peppercorn and Taffin 2013; Rakodi 1995).

Despite this, rental tenure is frequently thought of as a second-rate alternative for those who cannot afford to buy. It is largely neglected by policy makers, and the accommodation itself is often substandard (UN-HABITAT 2003a; Peppercorn and Taffin 2013; Gilbert 2016). There is an urgent need for improved understanding of the dynamics that contribute to rental

housing being such low quality. In this chapter, I have argued that improved understanding of the institutional framework of the rental market is needed to achieve this objective.

Annex 1. Additional details on Renters and Robustness Checks

As discussed in chapter 4, hedonic price regressions are often characterised by high degree of multicollinearity. This can inflate the standard error of coefficients and affect interpretation of coefficients. Table 29 thus presents the variance inflation factor (VIF) amongst the independent variables included in the model. The VIF provides an indicator of how much the standard error is inflated by multicollinearity. The VIF of 1.1 for the mains variable thus indicates that that the standard error is only 1 percent larger a result of multicollinearity. Overall the VIF measures are relatively low, with the exception of the variable concrete. This is not surprising, given that it is a categorical variable with four categories. In Table 30 presents the results of the regression excluding the variable of concrete (column 1). The results are consistent with the analysis presented in the main body of the chapter in terms of both the direction and significance of coefficients, and the magnitude of coefficients do not increase by more than a few percentage points.

Table 29: Variance Inflation Factor for Ln(Rent) Hedonic Regression

Contract	1.08
House	1.04
Electric	1.15
Garbage	1.25
Concrete	
1	5.55
2	12.67
3	8.46
Rooms	1.1
km_cbd	1.47
Mains	1.1
Slum_area	1.38
Yrslived	1.03

Mean VIF 3.11

Table 30: Hedonic Price Estimates

	(2) ln(rent)
Contract	0.1324591 *** (0.0395455)
House	-0.026519 (0.0393661)
Electric	0.5649417 *** (0.0348355)
Garbage	0.0900245 ** (0.0413006)
Rooms	0.1161577 *** (0.0188556)
km_cbd	-0.0233098 *** (0.0038088)
Mains	0.7226297 *** (0.1275116)
Slum_area	-0.195494 *** (0.0469148)
Mains#Slum_area	0.0470122 (0.2496579)
Yrslived	0.0085814 *** (0.0024889)
_cons	4.639143 *** (0.0866579)
R2	0.3867
Obs.	1026
Fixed effects?	no

Notes: Regression is survey weighted. Standard Errors are in Parenthesis.

*** Significance at the 1% level

** Significance at the 5% level

* Significance at the 10% level

Annex 2. Estimates for Construction Costs for an Additional Room

Table 31 provides a summary of estimated costs of construction from various recently published papers and reports. There is considerable variation in the costs, as discussed in the main text of this chapter.

The table indicates that construction costs likely escalate rapidly when basic amenities are included. It includes data from a recent survey of 44 government workers found that on average they spent 540,000 Tsh per square meter to build or extend their property. Given the employment status of these survey respondents, it is reasonable to expect that these estimates are indicative of costs of construction of housing in a middle-class area, including basic amenities such as electricity, sanitation, and water. In addition to material expenses, we may anticipate that rising costs reflect the wages of skilled labour such as electricians and plumbers, which are much higher than carpenters and masons (Jason 2007).¹⁴⁰

Yet *dalali* and tenants interviewed indicated that rent for a room in a middle-class area such as Sinza will be around 100,000 Tsh per month, charged one year in advance (1.2 million Tsh).¹⁴¹ At these rents, construction costs of a 10m² room (5.4 million) can be fully recovered in less than 7 years. In fact, the landlord can expect to have doubled their money within ten years.¹⁴²

¹⁴⁰ An ILO report recorded that while the latter charged approximately 2000 shillings per day, electricians may charge between 80,000 and 200,000 per job and a plumber will charge between 250000 and 600000 per house (Jason 2007).

¹⁴¹ Real estate brokers and respondents alike tended to use Sinza as a neighbourhood of comparison. Sinza is considered a middle-income area (CPCS 2015). It falls within the ‘center’ stratum of the city.

¹⁴² A landlord will be set to earn a profit of 6.6 million Tsh in ten years. This would be 5.4 million if we discount the present value of future rent/ do not assume rent rises with inflation.

Indeed, even the simple addition of private latrine to an existing rental room is likely to be profitable: two tenants and one *dalali* interviewed indicated that tenants who want a private toilet will pay an additional 50,000 Tsh per month to the rent. Research conducted in 2014 found that pit latrines cost between 350,000 and 500,000 Tsh in Dar es Salaam (Pieter et al. 2014). Landlords would thus start to profit from the inclusion of a private toilet within twelve months.¹⁴³

Table 31: Estimates for Construction Costs Compared

Source	Data	Cost per m2	Estimated Single Room Cost
Sanga and Lucian (2017)	Average construction costs of personal house building/extension projects of 44 government employees	544,190 Tsh	5.4 million Tsh
CAHF (2017)	Estimate of ‘standard’ 55m2 house in various main African cities. ¹⁴⁴	USD 358 (approx. 814,000 Tsh). ¹⁴⁵	8.1 million Tsh
Precht (2005)	Interviews with 27 landlords in Hananasif (central unplanned area of Dar es Salaam). Estimates for cost they incurred to add room ranged from 70 to 440 USD.		150,000 - 900,000 Tsh
Kiduanga 2003	Estimates of costs of construction of modern/permanent “Swahili” house of the size 1008 sq ft (93.6m2) in Tshs. Labour (500,000 Tsh), building materials (2 million Tsh).	26,709 Tsh	267,000 Tsh

¹⁴³ Two respondents indicated that a top-quality pit latrine would cost closer to 1.5 million shillings. At rental values of 50,000 shillings per month, the cost would nonetheless be fully recovered in 2.5 years.

¹⁴⁴ This generic house is composed of a 46m2 unit constructed with cement block and plastered walls, galvanized iron sheeting, concrete slab, with a 9m2 veranda, on a 120m2 plot of land. The total estimated cost including land, infrastructure, compliance and other costs is USD26750. The costs in Dar es Salaam are estimated to be among the lowest of cities included in the measure (such Nairobi, Dakar, Kampala and others).

¹⁴⁵ This is calculated by dividing the total construction costs (USD 18630) by 52 square meters. Construction costs include materials, labour, and other costs.

Wells. et al 1998	Survey of 90 house-owners in nine low-income settlements in the city. Estimate costs of 6 roomed house between 650,000 Tsh. And 2.5 million Tsh, depending on quality of materials	416,667 Tsh
Kironde (1997)	Cost of construction in sites and services areas	200,000 Tsh (12m2)

Note: the estimate for single room is based on 10m2. This is included to facilitate comparison across sources, it is not expected to be accurate of actual costs (given economies of scale). The cost per m2 is only reported where it was recorded directly by source.

Chapter 5. The Challenge of Slums: Poor People, Poor Housing, or Poor Policy? Insight from Dar es Salaam, Tanzania

Introduction

Slums and poverty are closely associated in language, theory, and policy. The words are used as though they were synonymous by researchers and policy makers alike. The terms are connected by multiple strands of theory, a web of processes through which poor people may end up in slums and those whereby slum households are confined to poverty. For international development organisations such as the World Bank and UN Habitat, slums and urban poverty are part of the same urban agenda.¹⁴⁶

Empirical evidence to connect slum deprivation and poverty, in contrast, is sparse. Efforts to map the extent to which these populations coexist across the world has been limited by data constraints. The ‘global enumeration of slums’ undertaken by UN Habitat in 2003 found a strong correlation between a country’s level of poverty and incidence of slums, but they were unable to analyse whether the slum households and the poor were the same population (UN-HABITAT 2003b). What is clear, however, is that many slum households are not poor, since

¹⁴⁶ For example, the World Bank’s 2009 urban strategy lists ‘Making pro-poor policies a city priority: reducing urban poverty and upgrading slums’ as one of its five core business lines (World Bank 2009). In a 2013 report on urbanisation in Africa, access to basic services and incremental housing is described as a social inclusion strategy of housing for the poor that would improve the productivity of the urban poor (World Bank 2013, 35). Similarly, for example, UN Habitat’s ‘Low-Income Housing Approaches to Helping the Urban Poor Find Adequate Housing in African Cities’ “focuses on well tried methods of improving the housing and living environments of people living in slums and informal settlements, and providing adequate housing for future generations of urban poor” (UN-HABITAT 2011b, 4).

the share of slum households across the world is considerably higher than urban poverty estimates. Indeed, in Sub-Saharan Africa, levels of slum deprivation are so high that households at every income level live in slum conditions (Lozano-Gracia and Young 2014).¹⁴⁷ In contrast, corrected data for all countries in 2012 indicates 18 percent of urban residents in the region were poor (Beegle et al. 2016).

UN Habitat has always been careful to caveat its reports with the reminder that “slums do not accommodate all of the urban poor, nor are all slum dwellers always poor” (UN-Habitat 2003c, xxvi). Yet these reports nonetheless assert that slums should be prioritised as a representation of urban poverty, and indeed that “the slum challenge remains a critical factor for the persistence of poverty in the world” (UN-HABITAT 2016a, 2). This reflects ideas about processes which link slum deprivation and poverty, which cannot be captured by high-level snapshots of slums in a particular moment. As many researchers have highlighted, we are missing key data about who lives in slums, why, for how long, or what these conditions mean for their life opportunities (Gulyani and Talukdar 2008; B. Marx, Stoker, and Suri 2013; Desai and Loftus 2013; Jha, Rao, and Woolcock 2007; Talukdar 2018).

This chapter looks at the relationship between slum deprivation and poverty at a more fine-grained level of detail. It asks not only whether slum households in Dar es Salaam are poor, but also looks for evidence of key processes thought to underpin the relationship between

¹⁴⁷ Lozano-Gracia and Young show that at least 84 percent of the richest 20 percent of the urban population in the region live in conditions that are deprived in at least one infrastructure or shelter amenity. This compares to 90 percent of those in the bottom quintile of consumption (Lozano-Gracia and Young 2014). This aligns with insight from earlier survey of Addis Ababa, which found 90 percent of the city lives in slum conditions (UN Habitat 2006/7).

poverty and slum deprivation. It then probes the implications of these findings for both theory and policy.

The chapter is composed of three parts. In Section I, I discuss the theoretical links between slum deprivation and poverty. I group the literature into three main categories: poverty as a cause of slum deprivation; slum deprivation as a cause of poverty; and literature that is agnostic about poverty – slum households may or may not be poor, but poverty is not central to the claim being made about the emergence and/or persistence of slums. In doing so, I highlight that although these are often seen as complementary accounts of the slum, they can be contradictory under specific circumstances.

In section II, I analyse new data from Dar es Salaam in light of these debates. This analysis pays particular attention to slum measurement: most of the existing case-study literature either relies on idiosyncratic government definitions of slum deprivation or fails to compare results to non-slum dwellers (e.g. Gulyani and Talukdar 2008; Jha, Rao, and Woolcock 2007; Bird, Montebruno, and Regan 2017). As such, it is difficult to evaluate how slum conditions differ from those of non-slum households within that city or to generalise the insights to slum deprivation more widely. This chapter, in contrast, draws on the MLSC survey which allows for comparisons across households living in and out of slum conditions, using measures of slum deprivation that are applied internationally.

The data shows that in Dar es Salaam most slum dwellers are not poor, and that there are few observable differences in health or sociological features that may predict differences in life

opportunities for residents that live in slum deprived housing/ areas and those that do not. Indeed, it shows that both slum and non-slum households have complex trajectories through the city, renting accommodation in the centre when young or recent migrants and eventually moving out to the periphery to build accommodation.

Section III explores the implications of these findings for theory and policy. It highlights the need for greater clarity in the theoretical motivation that guides both the aims and design of slum policies. Specifically, although the slum agenda is couched in the language of poverty, ‘best practice’ policy is designed and evaluated in light of theories that are at best agnostic about whether slum dwellers are poor. As a result, theorisation around the impact of these policies on the poor is fuzzy, and questions remain about whether these approaches align with the high-level slum objectives outlined in the Millennium Development Goals (MDGs) and Sustainable Development Goals (SDGs).

In contributing new empirical data, this chapter sheds light on slum deprivation in a given city. More broadly, the chapter helps to disentangle and clarify the tightly knit ideas about the relationship between slum deprivation and poverty, and highlights that caution is needed in generalising ideas that rely on restrictive assumptions to the global slum population.

Section I: Overview of the Theoretical Links between Slums and Poverty

Literature that spans from neoclassical economics to radical geography anticipates that slums house the poor. At the same time, many also believe that living in slum conditions can

undermine life-opportunities, and it has become increasingly common for the slum to be described as a cause of poverty. In this section, I provide an overview of the literature, dividing it into three groups, disentangling different accounts about the relationship between slum deprivation and poverty in order to examine the specific claims being made. The section concludes with a discussion of ways in which these theories complement and contradict each other, as well as tensions that arise when they are applied to inform slum policy.

1.1. Poverty as a Cause of Slum Deprivation

The conventional wisdom on housing in developing countries is that slums provide cheap accommodation for the urban poor (Gulyani and Talukdar 2008). This expectation is widespread in the literature on slums in geography, critical urban theory, and urban economics. In the urban economics literature, which is the focus of this thesis, the expectation that slum households are poor is often, but not exclusively, couched in a structuralist framework that can be termed the ‘modernisation theory’ of slums (Fox 2014; B. Marx, Stoker, and Suri 2013). This broader framework understands urbanization as arising with economic development and transformation from agrarian to industrialised economies.

The modernisation theory of slums is perhaps most completely set out in Frankenhoff’s 1967 economic model for slums. Frankenhoff’s model posits that new migrants are drawn to urban areas by employment opportunities that arise with industrialisation. Slums emerge in response to effective demand for cheap accommodation from rural migrants, who arrive in the city with little savings and an uncertain income. Once these migrants find jobs, they can

afford to move on into higher quality accommodation. The slum thus serves as a “staging area for the migrating poor” until they are integrated into the urban economy (Frankenhoff 1967, 27–28). It is simultaneously a product of poverty and a symptom of broader processes that will lead to poverty reduction.

Frankenhoff’s ideas were highly influential on policy, yet over time came to be seen to be at odds with the perception that slums were not disappearing in developing country cities (UN-HABITAT 2003c; Gulyani and Bassett 2007). Work highlighting government and market failures that may confine households to slum conditions over time became increasingly prominent. Some of this work rejects the foundations of modernisation theory, analysing slums from alternative frameworks of analysis. Influential critiques include John Turner, whose research from Peru called for housing policy to be designed on principles of the use-value of housing rather than market values, and advocated for the removal of impediments to squatter households improving their living conditions (Turner 1968a). More recently, critical urban theorists situate the slum in an understanding of the process through which capital flows through the built environment, pushing the economically weak into ever more marginalised and deprived conditions (Huchzermeyer 2011; Rao 2006).¹⁴⁸

Yet there is also a large body of research which explores government and market failures that may lead to the persistence of slums without rejecting the underlying framework of

¹⁴⁸ This is a broad and heterogenous research field united in an approach to analysis that engages critically with the capitalist system (Brenner, Marcuse and Mayer 2012). It is characterised by: critical engagement with the (evolving) capitalist system through largely theoretical, abstract arguments; rejection of market driven and technocratic analysis of the current condition of cities; emphasis on power-relations and historical specificity in analysis; and a commitment to the possibility of alternative forms of urbanism (Brenner 2009).

modernisation theory. This literature can be understood to provide explanations for the slum that help explain where modernisation may have ‘gone wrong’. Sean Fox suggests the term ‘disjointed modernisation’ (Fox 2014).

Specifically, there are accounts that explain why migrants may remain in slums over long periods of time, or even generations. For one, their incomes may not rise. They may be drawn to cities not by the allure of jobs but the push of very poor conditions in rural areas – war, famine, or simply very low agricultural productivity. Thus, in Sub-Saharan Africa, migrants are sometimes thought to remain in slums as a result of the absence of productive jobs in the cities (Collier 2017). Yet it may also be that their incomes do not rise *as a result* of living in slums. This is an influential body of research which argues that there are mechanisms through which slums can become poverty traps, discussed in section 1.2. Alternatively, slum dwellers may remain in slums *despite* rising incomes. For example, if they prioritise remittances over investment in improving their current living, or if market and government failures in place that drive up the value of housing and confine all but the richest to slum conditions. These ideas are discussed further in 1.3.

1.2. Slum Deprivation as a Cause of Poverty

In a recent review on the economics of slums, Marx et al. argue that “life in the slum might constitute a form of poverty trap for a majority of their residents” such that “millions of households find themselves trapped in slums for generations” (B. Marx, Stoker, and Suri 2013, 188). This claim echoes language found in the policy literature on slums, and reflects

a widespread belief that certain housing conditions or neighbourhoods can affect life opportunities. Indeed, Talukdar argues that “there is a growing recognition that slums essentially represent “poverty traps” for majority of its residents in developing countries with enormous adverse consequences for our society” (Talukdar 2018, 42).

There are two main theoretical channels through which slums are connected to the concept of a poverty trap: human capital development and ‘neighbourhood effects’. These are intuitive claims that draw on large bodies of literature on traps in rural or advanced industrial urban contexts. There are, however, very few examples of research that test these concepts empirically in developing country cities.

The idea of a human capital trap is theoretically straightforward. It applies mechanisms established in a broader literature on ‘poverty traps’ to the slum. This literature defines poverty traps as a specific self-reinforcing mechanism that keeps certain groups of people in long term poverty (Azariadis and Stachurski 2005; Barrett, Carter, and Little 2006; Barrett and Carter 2013). The human capital trap is the claim that if poverty results in low human capital accumulation – for example, through lack of school attendance and malnutrition – and if a certain level of human capital development is needed to access paid employment, then poverty can be self-perpetuating across generations. Marx et al. argue that this may apply to slums, given that overcrowding and water and sanitation deficits may impact health, affect human capital accumulation, and could thus confine slum households to low paid employment and slum deprivation over generations (B. Marx, Stoker, and Suri 2013).

Neighbourhood effects is a short hand used for a large body of literature which explores how how membership of a community – spatial or otherwise – shapes individual choices, such that individually rational behaviour can produce poverty across a community (Durlauf 2004). In the context of literal neighbourhoods, the idea of the poverty trap draws on sociological research into inner cities in the USA and Europe and has been formalised into models that explore factors such as role models and peer group influences behaviour (Bowles, Durlauf, and Hoff 2006; Durlauf 2004).¹⁴⁹ These ideas have been applied to the slum in a number of ways. For example, it has been suggested that peer effects lead slum residents to undervalue education or engage in crime, affecting future earnings; factors such as high crime and residential turnover in neighbourhoods may result in weak social capital, undermining economic opportunity or ability to cope with shocks; and high spatial concentration of poverty may render households unable to support one another in times of hardship, even if there are strong bonds of mutual aid (Grant 2010; Parks 2014; UN-HABITAT 2008).

There are, however, two challenges to applying the idea of neighbourhood effects to the slum. First, the possible mechanisms of neighbourhood traps mentioned above draw loosely across theories from economics, sociology, and psychology (Ioannides and Topa 2010). It is difficult to test these theories directly, given that neighbourhood choice is not exogenous to the characteristics of households that live in them. Major advances in this literature have exploited a randomised voucher experiment in the USA known as ‘Moving to Opportunity’, including recent work by Chetty, Hendren, and Katz. This provides valuable evidence that

¹⁴⁹ Social geographers may call these ‘interactions’ that keep certain people and areas poor (Grant 2010). It should be noted that a number of researchers have questioned the extent to which these theories are useful for understanding urban poverty in the global south (Nijman 2010; Rao 2006).

neighbourhoods matter for children's future earnings, but it is difficult to pinpoint which processes are driving these results and which, if any, can usefully be applied in the developing country context.¹⁵⁰

Indeed, it is notable that in drawing conclusions from the only known evaluation of a comparable housing voucher experiment in a developing country city (Ahmedabad, India), Barnhardt et al. propose that the results are influenced by sociological dynamics that differ from those found in OECD country cases: reflecting on both lack of observable differences in outcomes across the groups in the experiment, as well as the fact that two thirds of voucher 'winners' either did not take up the voucher (34%) or moved back to their original neighbourhood within ten years (32%), the authors speculate that the benefits of the intervention are offset by disruption to informal risk-sharing arrangements created by geographical distance (Barnhardt, Field, and Pande 2017). Similarly, in a rare study that explores a potential underlying sociological theory behind neighbourhood effects directly in a developing country city, Parks finds that residential stability in Nairobi (Kenya) is correlated with *higher* incidence of violence, in direct contrast to the expectations of social disorganization theory developed in light of inner city poverty in the USA (Parks 2014).

Second, and even more pressingly, there is no straightforward theoretical link to tie neighbourhood effects to *slums*. In the neighbourhood effects literature, neighbourhoods are

¹⁵⁰ Chetty et al. show that children under the age of 13 whose families moved to lower-poverty neighbourhoods have earnings in their mid-twenties that are on average 3477 USD higher than those whose families did not move (Chetty, Hendren, and Katz 2016). In later papers, using national level data on mobility within the USA, Chetty and Hendren find evidence to support that a number of different neighbourhood characteristics matter for outcomes, including levels of inequality, segregation, and educational attainment, yet note that there is a need to better understand the mechanisms through which these variables impact outcomes (Chetty and Hendren 2018a; Chetty and Hendren 2018b).

classified according to data on key variables of interest, such as poverty, educational attainment, employment, and/or crime. Slums in contrast, are categorized in terms of either individual housing deprivation or spatial features of the neighbourhood (discussed in chapter 2). It remains unclear whether households classified as slum also live in neighbourhoods that are characterized by the kinds of dynamics associated with neighbourhood effects, such as low education, distinct residential mobility patterns, or weak social networks.

One attempt to resolve this is to further subdivide slums by neighbourhood features, with the expectation that this allows insights into the sociological dynamics that characterise them. Thus, in their flagship report on slums, UN Habitat suggested that slums could be usefully divided into four categories: squatter settlements, illegal subdivision, old city centre slums, and new slum estates. Of these, the first two were classified as ‘progressing’ or ‘slums of hope’, while the latter were deemed ‘declining’ or ‘slums of despair’ (UN-HABITAT 2003c, 80). This distinction draws on the work of Charles Stokes, John Turner, Alejandro Portes and others, which distinguished between ‘good’ slums located in the periphery of the city and characterised by organised settlement layout and ‘bad’ inner-city slums (Stokes 1962; Turner 1968b; Portes 1971). A key factor in distinguishing these areas is the attitude of residents themselves to improving the slum; and as such, the slums of hope is often thought to be populated by owner-occupiers who take a long-term interest in the neighbourhood while slums of despair are inhabited by renters, who are anticipated to have lower levels of trust, social solidarity, and community orientation (Mukhija 2012).

Yet whether these are useful categories to subdivide slums in order to capture different neighbourhood effects remains an empirical question. It is notable that in a study of slums in Mexico, Susan Eckstein upends the dichotomy established by Stokes and others and argues that the advantages of the central location makes inner-city slums ‘slums of hope’ while periphery slums stagnate (Eckstein 1990). Jha et al., in turn, find that while there is observable difference in the types of coping strategies pursued by slum households in Delhi (India) depending on the type of settlement they live in, they do not fit neatly into a ‘hope’ and ‘despair’ dichotomy as slum households in all cases can draw on an extraordinary range of strategies (Jha, Rao, and Woolcock 2007).

1.3. Agnostic theories about Slums and Poverty

Slums may also persist *despite* rising incomes. A large body of research stresses that housing policies and regulations may drive up the costs of adequate housing, keeping it out of reach for all but the wealthiest. Cross-national data shows that there are notable differences in the quality of living conditions across cities with similar income levels; and this difference is attributed to the effect of different policy decisions and supply-side constraints or ‘bottlenecks’ that drive housing prices up (Mooya 2011; World Bank 1993).

Key factors include features of the political economy that may lead to underinvestment in infrastructure (Feler and Henderson 2011; Fox 2014), as well as underdeveloped mortgage and construction finance markets (B. Dasgupta and Lall 2006; Collier 2017). Some authors also point to challenges that arise in areas where exploitative slumlords can demand high rents, such that tenants pay ever larger portions of their income for units that remain sub-

standard, discussed in chapter 4. Gulyani and Talukdar also propose that high levels of migrants that do not intend to settle in the city but instead return to their place of origin, may also result in underinvestment in housing (Gulyani and Talukdar 2008).¹⁵¹ Others highlight the role of land use regulations that set inappropriately high standards for development (Mooya and Cloete 2007; Henderson 2009; Brueckner and Lall 2015). These policies are thought to raise the costs of formal housing and thus confine large portions of the population to low quality, informal accommodation (discussed in chapter 3).

What role does poverty play in these accounts? Although slum households are often depicted as poor in this literature poverty itself does not necessarily play a causal role in the theories presented. Of course, given that many anticipated that slum dwellers are informal, they may also believe that they are unable to capitalise on the value of their land and may thus be seen as *poorer than they need to be* (De Soto 1989; De Soto 2000; World Bank 1993). Alternatively, it may reflect a loose use of the term ‘poor’ to signal low income; that is to say, the expectation that even if poverty is not the binding constraint on investment in housing, these households are nonetheless at lower-ends of the income scale.

In some instances, however, claims about informality and political economy are explicitly presented using the language of poverty traps.¹⁵² Marx, Suri and Stoker propose that slums can be poverty traps as a result of factors that lead to investment inertia among both public

¹⁵¹ There is a long tradition, not specific to these broader theoretical frameworks, which regards urban migrants in Africa as ‘temporary’ urban dwellers (Cadstedt 2006b)

¹⁵² This is also common in policy documents. For example, the UN Habitat 2014 State of African Cities report argues that persistent informality in East African cities results in inequalities that compound over time and “indicate that a poverty trap is in operation” (UN-HABITAT 2014a, 158).

and private bodies. They argue that slums can become poverty traps because “[w]ithout formal land titles, slum dwellers lack the incentives to improve the quality of their homes and neighbourhoods” (p194); and as a result of neglect from governments, since this leads to low public service provision, which in turn dampens returns on investment in housing in slum areas. Yet I argue this entails a subtle shift in the concept of the trap being employed. Rather than presenting mechanisms through which poverty is self-perpetuating, these traps explain mechanisms through which *low-quality housing* may persist over time. There is no specific new claim to link this low-quality housing to income poverty.

1.4. Poverty and Slum Deprivation: Competing or Complementary Claims?

Whether or not people live in slums because they are poor, or are they poor because they live in slums has been seen as an important unresolved empirical question (UN-HABITAT 2003c, 68). Uncertainty over these dynamics have direct implications for policy; as Gulyani and Basset put it, “[e]fforts to design ameliorative actions are at least partly confounded by the fact that there are few concrete studies and datasets that shed light on the demographics, living conditions, and dynamics of slums in Africa...Not surprising then, ideas about how to fix the slum problem – or achieve related MDGs – in Africa remain a source of much contention and debate” (Gulyani and Bassett 2007, 487). In addition to this, the evidence that does exist can be confounding: rare ethnographic studies that explore how livings standards in slums change over time, such as Janice Perlman’s 40-year study of *favelas* in Rio de

Janiero, are widely cited *on both sides of the debate*.¹⁵³ This is because the work provides evidence of both stagnation and improvement in living standards among respondents that stayed and moved out of the settlements between 1969 in 2001 (Perlman and Cardoso 2010).

To what extent can these different accounts of the relationship between slum deprivation and poverty be understood complementary rather than competing claims? We can imagine a situation in which a poor rural migrant settles in a slum, is gradually assimilated into the urban economy, yet remains in slum housing either because she sends home a large portion of her income in remittances, is reluctant to invest in her informal property, or simply because inappropriate land use regulations make formal (non-slum) housing unaffordable to anyone other than the wealthy. There are two conditions, however, under which the idea that slums can be home to both poor and non-poor households might be seen as contradictory expectations. One, if we consider poverty to be a binding constraint on housing investment, and two, if the underlying theoretical framework of modernisation theory is rejected.

This point can be most clearly illustrated in debates around the impact of slum policies. International development organisations have promoted a remarkably uniform approach to slums since the 1990s. This approach aims to improve conditions of existing slum households while preventing the formation of new slum housing, through: formalisation of

¹⁵³ For example, in a review of World Bank shelter lending, Buckley and Kalarickal cite this study and a survey of Mumbai that shows growing numbers of second generation slum households, as evidence that “slum dwellers are no longer temporary participants in a demographic transition process” (Buckley and Kalarickal 2006, 12). UN Habitat’s ‘State of the World’s Cities 2016’ cites the same study as evidence that “there has been considerable movement both physically out of these settlements, and into better serviced neighbourhoods, as well as upwards socially and economically” (UN-HABITAT 2016b, 14).

property rights (titling),¹⁵⁴ upgrading of infrastructure (slum upgrading),¹⁵⁵ and improving access to new housing (UN-HABITAT 2018). These policies can be understood as broadly complementary if analysed from the perspective of key explanations for ‘disjointed modernisation’ in the literature discussed above. All three policies are grounded on a central assumption that there is some form of constraint to housing investment which, if lifted, will stimulate households to improve their living conditions. Titling addresses investment inertia that results from informality; slum upgrading speaks to ideas about the need to stimulate a ‘big push’ that can set a positive cycle of investment in motion (Gulyani and Bassett 2007; UN-HABITAT 2003c); and homeownership provides an alternative to exploitative renting and increases incentives to spend on housing. Indeed, it is notable that the impact of both titling and slum upgrading is generally evaluated by measuring whether real estate values have increased as result of the project (Field and Kremer 2006). A simplified account of this understanding of the relationship between theory and policy is summarised in Table 32.

What is notably absent, however, is the idea that there may be people who are simply too poor to pay more for housing, whether that be to improve the amenities of the informal house they own, or to pay for higher amenities in a newly upgraded area, or simply to afford a downpayment on even the cheapest house. Indeed, the one theory in which slum households are explicitly anticipated to be too poor to pay more for housing has fallen out

¹⁵⁴ Titling projects have been a continuous feature of the portfolios of organizations such as the UN and World Bank, as well as bilateral aid agencies such as DFID since the mid 1990s (Locke and Henley 2014; Buckley and Kalarickal 2005; Payne and Durand-Lasserve 2012). A 2016 review identified 25 ongoing DFID land programs, “many of which” involve registering land titles (Henley and Hoffler 2016).

¹⁵⁵ Slum upgrading is a spatially focused intervention to improve the physical, social, environmental aspects of slum neighbourhoods (Field and Kremer 2006). It has been promoted as a ‘best practice’ response to slums by international development organizations such as UN Habitat and the World Bank for at least 15 years. It is also highlighted as a tool to achieve target 11 of the Sustainable Development Goals.

of policy vogue: the idea of slums as temporary housing for poor migrants. Indeed, these ideas are associated with three radically different policy responses, none of which feature in current ‘best practice’: ‘benign neglect’ of slums, efforts to prevent rural to urban migration, and/or large-scale public housing provision for the poor (UN-HABITAT 2003c).¹⁵⁶ Indeed, there is a tension between these policies and theories that understand slum deprivation principally in terms of income constraints – whether from rural migrants or any other reason that is *not* the result of the housing they live in (e.g. informality or traps). In reducing the stock of low-quality housing, they risk displacing these poor households and stimulating the creation of new slums. This expectation underpins Alan Gilbert’s assertion that slum upgrading is a ‘myth’ and that “the only way in which we can rid the world of slums is to remove the underlying cause, which is poverty” (Gilbert 2011, 725). I discuss these tensions further in Section III.

It should also be noted that these policies may also be seen as contradictory if read from alternative theoretical frameworks. As discussed above, one influential account for the persistence of slums comes from critical urban theory. It is possible to make a claim for slum upgrading and other policies to support access to housing from this framework: they can be understood as an act of resistance and hard won exception to neoliberal capitalism that secures a space for the slum in the city (Huchzermeyer 2011). Yet this conceptualisation is at odds with emphasis on private property rights and enabling markets, since the broader framework understands the ‘right to exclude’ and a prioritisation of private property rights

¹⁵⁶ Demand side subsidies have rarely been implemented. South Africa and Chile are notable exceptions. In the case of South Africa, however, building standards remained very low among new buildings stimulated by the policy (UN-HABITAT 2003c).

and exchange value as being at the core of the unequal urban order that exists today, and if conceived in this light, these projects are part of the very alienating forces that drive the production of slums in capitalist systems in the first place (Roy 2005).¹⁵⁷ In short, the idea that neoliberal policies can help improve living conditions for those confined to slums as a result of the neoliberal system is incoherent.

This thesis focuses on understanding of the slum that is grounded in a broadly market-orientated theoretical framework. It is important to acknowledge, however, that policy documents from international organisations are ambiguous about the theoretical assumptions that guide policy design. Reports cite a range of literature that spans from urban economics to critical urban theory. For example, titling and slum upgrading is sometimes framed in light of John Turner's ideas about removing obstacles to households improving their own housing, even though Turner's ideas are profoundly at odds with market-orientated approaches that treat housing as a commodity (Burgess 1977). Key ideas from critical theory – such as the right to the city – are also highlighted.¹⁵⁸ I argue this leads to often-overlooked tensions in the debates about the impacts of these policies: these disagreements are not simply a question of limited empirical understanding of slum deprivation, but can also reflect different reading of the objectives of the policies.

¹⁵⁷ In the words of David Harvey, even where the consolidation of inalienable rights of private property and profit appears beneficial to the urban poor, they “can have negative, even deadly, consequences” (Harvey 2003, 940).

¹⁵⁸ The concept of the ‘right to the city’ is attributed to Lefebvre but popularised by Harvey as a “an active right to make the city different” (Harvey 2003). The concept is grounded not only on ideas of rights to inhabit and participate in decision-making in the city, but also a right to the creation of space itself. There are serious tensions between the ‘right to the city’ as thus conceived and the ‘right to exclude’ entailed in private property. Nonetheless, it has been widely adopted by social movements and NGOs working in urban areas. Un Habitat even made the ‘right to the city’ one of its themes at the 2010 World Urban Form.

Table 32: Simplified Taxonomy of the Role of Poverty in Market-Orientated Slum Theories and Policy

Theory	Simplified claim about why people live in slums	Role for Poverty	Role for Policy
1. Modernisation theory	‘Effective demand’ for slums from households that are temporarily unable to afford better quality accommodation; they will improve their housing or move to better housing when integrated into the urban economy.	Cause: once incomes rise, expected to move out of the slum (unless prioritise remittances and returning to place of origin).	None Dominant theory of slum deprivation until 1960s, associated with ‘laissez-faire’ policies (UN-HABITAT 2003c).
2. Slums as Poverty Traps	<p>Poor households live in cheap, low-quality housing; this housing in turn undermines income earning potential (through various mechanisms), confining the next generation to the same poor-quality housing.</p> <p>There is also a portion of claims about poverty traps that should be understood as ‘slums as traps’ e.g. claims about investment inertia from lack of public investment or lack of property rights.</p>	<p>1. Cause, although, with the exception of the human capital trap, not always clear how these theories relate to slum housing or slum areas.</p> <p>2. Agnostic ‘investment inertia’ ideas of slum as trap centre on reasons why households do not invest that are not directly linked to poverty.</p>	<p>Unclear. Slum upgrading improves housing but poor may no longer afford to live there.</p> <p>Slum upgrading to overcome investment inertia (slum as trap, rather than slum as poverty trap)</p>
3. Informal Ownership	<p>Lack of formal property rights linked to insecure tenure and increased risks in property transactions; as such little incentive to invest in housing and values are dampened.</p> <p>Informality often linked to inappropriate regulations which drive up the costs of formal housing.</p>	Agnostic underinvestment results from insecurity of tenure (although can be seen as ‘poorer than they could be’).	Titling to overcome investment inertia

4. Renting and Slumlords	Renters do not invest in housing because temporary accommodation and/or slumlords do not invest in housing quality because they can charge exploitative high rents.	Agnostic slum housing is not cheap. High rents could in theory result in renters being poor (i.e. consumption falls below threshold to afford rent), but this is not central to the claim about why they live there.	Improve access to homeownership/land for incremental building to overcome investment inertia of renters / given renters alternative to exploitative rents
---------------------------------	---	---	--

Section II: Slum and Poverty in Practice

This section provides stylized facts about slum dwellers in Dar es Salaam, drawing on data from the MLSC survey as well as insights from semi-structured interviews with residents, real estate experts, and local government officials. It focuses on empirics relevant to theories about the emergence and persistence of slums that clearly ascribe a role to poverty, either as a cause or consequence of slum deprivation.

The data reveals that in Dar es Salaam most slum households are not poor and that there are remarkably few observable differences between slum households and non-slum households in key characteristics associated with different life-opportunities. Indeed, it shows that slum and non-slum households alike follow a complex trajectory through the city, renting near the centre when they are young and/or recent migrants, and, if possible, incrementally building a house in a more peripheral location. In annex 1, I complement this analysis by looking at

conditional relationships between these variables and slum deprivation through a logistic regression on the probability of living in slum conditions.

2.1. Are Slum Households Poor?

Most households in Dar es Salaam live in slum conditions, according to the UN Habitat criteria. As discussed in chapter 2, I measure slum deprivation using two approaches. First, I employ the UN Habitat slum index, which is widely used in the academic and policy literature. It is a binary measure that classifies slum households on the basis of whether they suffer from any of the four slum deprivations: lack of durable materials, improved water, sanitation, and sufficient living space. Secondly, I also measure households living in slum areas, as identified by satellite imagery. Using these measures, 85 percent of households are slum deprived, and 44 percent live in slum areas. As indicated in Figure 10 (A) slum households can be found throughout the city, where as households living in slum areas are strongly concentrated in the centre of the city.

There are a number of different ways to identify who is ‘poor’ in a city, region, or country. As discussed in section I, the assertion that slum households are poor is largely meant in terms of economic weakness: households are hypothesised to live in slums because they cannot afford to live in better quality conditions, and/or they have low incomes because they live in slum conditions. As such, a monetary measure of poverty is appropriate. There are, however, a number of different ways to construct monetary poverty measures, each of which has its own challenges and weaknesses. As discussed in further detail in chapter 2, I classify

the poor as those who fall into the bottom 40 percent of consumption for the city as a whole.¹⁵⁹ As indicated in Figure 10 (A), the distribution of the poor is relatively similar across the different geographical areas of the city, although it is a few percentage points higher in the centre.

I also include a second relative measure of poverty, which classifies those who fall into the bottom 40 percent of asset ownership as poor. Asset approaches to wealth measurement are rare in the analysis of urban poverty, arguably because the list of assets collected in standard modules are more appropriate for rural areas than urban areas (Satterthwaite 2014). Despite this, asset ownership provides an interesting additional source of information on wellbeing within the city that may be central to understanding persistent poverty and vulnerability to shocks (Barrett and Carter 2013).

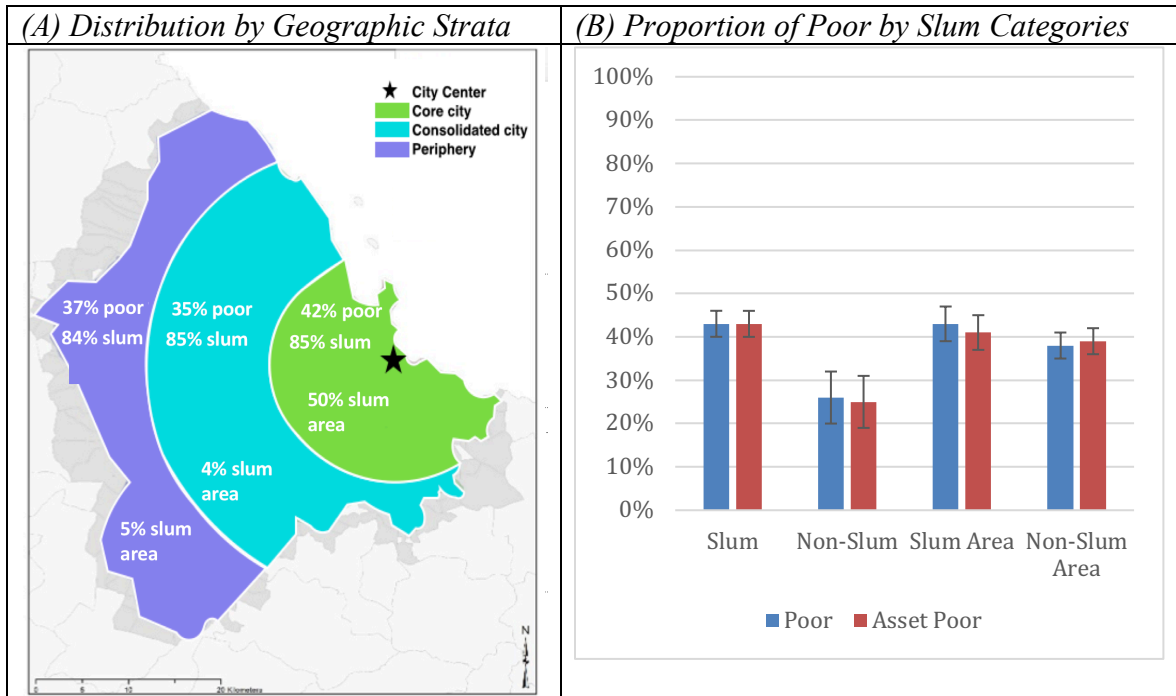
The majority of slum households in Dar es Salaam are not poor, regardless of the definition of slums applied or whether we measure poverty in consumption or asset terms. As indicated in Figure 10 (B), approximately 40 percent of slum households and households in slum areas are poor in consumption and asset terms.¹⁶⁰ The proportion of poor is higher among slum households than non-slum households, but poverty and slum deprivation are far from synonymous. Indeed, there is only five percentage points difference between the proportion

¹⁵⁹ As discussed in chapter 2, the primary motive for using a relative line is that I am interested in understanding how slum households compare to other households within the city. It is worth noting that if we restrict the definition of poverty to the bottom 20 percent of adult equivalent consumption, the broad patterns observed in this chapter hold (see annex 1 for further details).

¹⁶⁰ The exact proportion of slum dwellers that are poor will be sensitive to changes in the definition of poverty applied. Slum deprivations are so widespread, however, that if either the national or international poverty line were applied, the proportion of poor overall would fall, and an even larger of portion of slum households would be non-poor.

of poor households living in slum areas and non-slum areas (and in the case of asset poverty, the difference is not statistically significant).

Figure 10: Distribution of poverty and slum households across the city



Note: Data are survey weighted. Irregular EAs were included in the sampling strategy within the centre of the city (see Chapter 2 for additional details). 95 percent confidence intervals indicated in (B).

Table 33 shows the proportion of migrants living in slum conditions across the two definitions of slum used. It indicates that the proportion of migrants is similar among slum households and non-slum households, and actually slightly higher in non-slum areas (82 percent, compared with 75 percent in slum areas). In addition to this, non-slum households across both definitions of slum deprivation send higher remittances on average, suggesting that slum households are not simply sending remittances rather than investing in their current living conditions.

Indeed, slum deprivation in Dar es Salaam cannot be explained in terms of demand for housing from poor migrants alone. Less than one third of slum households and households in slum areas are poor migrants. Although there are more poor migrants among slum households than non-slum households, the proportion is very similar across the two groups if we apply the spatial measure of slums. Slum areas do, however, appear to attract new migrants: migrants that are still living in the first house they moved into upon migrating to the city make up a larger portion (25 percent) of households in slum areas than those in non-slum areas (20 percent). This is discussed further in annex 1, which shows that all other factors being equal, migrants in their first house in Dar es Salaam have lower odds than other households of living in slum conditions, but higher odds of living in slum areas.

Table 33: Migration and Slum Deprivation

	Overall	Slum	Non-Slum	Slum Area	Non-Slum Area
Migrant	0.79 (0.1)	0.78 (0.1)	0.81 (0.3)	0.75 (0.2)	0.82 *** (0.1)
Poor migrant	0.30 (0.1)	0.32 (0.1)	0.21 (0.3)	0.31 (0.2)	0.29 (0.1)
Migrant still in first house	0.20 (0.1)	0.20 (0.1)	0.22 * (0.3)	0.25 (0.2)	0.17 ** (0.1)
Remittances sent (last 12m)	124311 (7370)	115145 (8018)	177635*** (18816)	106265 (10103)	138276 * (10474)

*Note: data are survey weighted. Standard errors in parenthesis. Stars denote a significant difference between the groups. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.*

Most migrants initially rent in centrally located areas before moving out towards the periphery to incrementally build a house. Most migrants (60 percent) rent their

accommodation, and of this group, 79 percent live in the centre of the city. The longer that migrants have lived in the city, however, the larger the portion that say they own the house they live in. This is depicted visually in Figure 11 (A), which divides migrants into cohorts according to the year they say they first migrated to Dar es Salaam. The number of observations per cohort is shaded in grey and charted on the secondary axis. The figure shows that the proportion of migrants that are owner occupiers increases from 11 percent among the most recent cohort to 79 percent of those that migrated before 1975.

These trends were confirmed by data from semi-structured interviews. All of the landlords interviewed for this research had initially rented rooms while they built their house incrementally on plots found in areas they described as largely agricultural or undeveloped – although today they have become central and densely populated settlements.¹⁶¹ A number of renters also expressed the desire to build their own house one day, stressing that they would move out to the periphery where they could buy a large plot, build a house and grow vegetables.¹⁶² Indeed, just over one fifth of renter households in the survey (229 households) said they owned a property somewhere else, and in half of these cases, that property was located in Dar es Salaam.¹⁶³

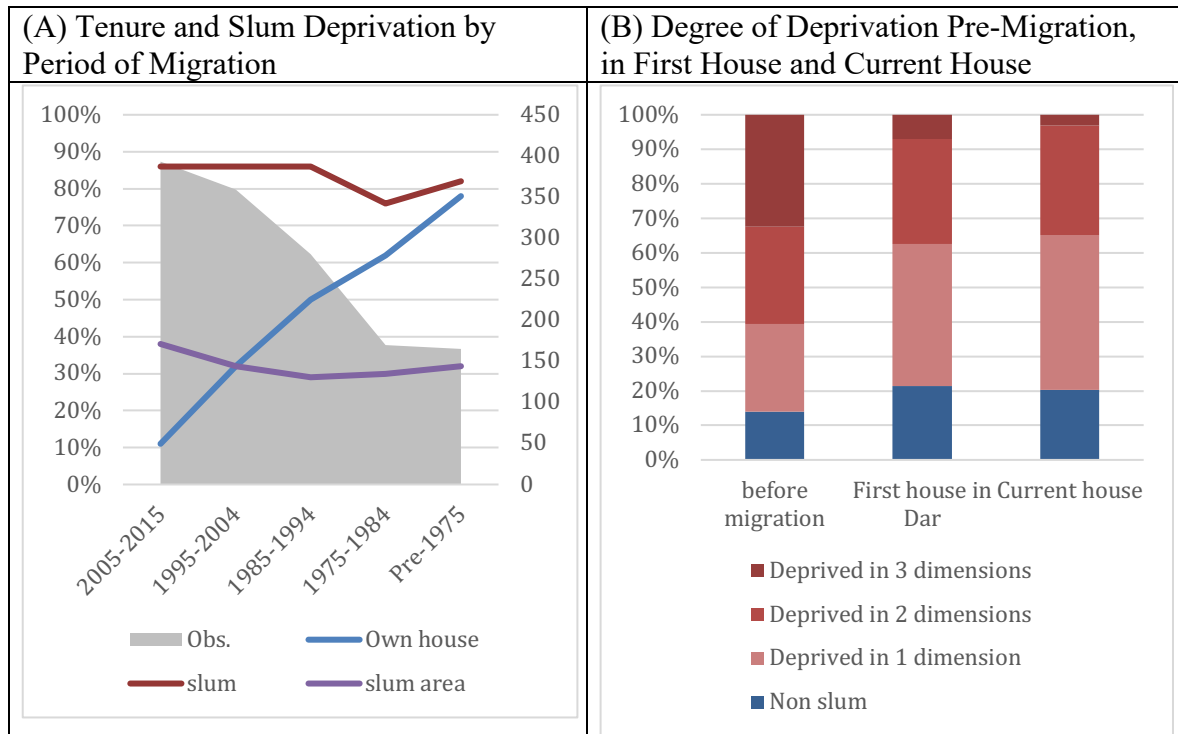
¹⁶¹ There is a clear trend in the average age of houses by location in the MLSC survey. Among owner occupier households, the average number of years since they first built their house in the centre of the city was 16 years in regular areas and 23 in irregular areas, compared with 8 years in the consolidated city and 10 years in the periphery. Moreover, it is worth noting that in a recent study of two peripheral areas of Dar es Salaam, Andreasen and Agergaard argue that peripheral expansion is driven largely by intra-city movement of migrants from rental accommodation in the centre out to the periphery motivated by desire for homeownership (Andreasen and Agergaard 2016).

¹⁶² This can be interpreted as an aspirational statement. Claire Mercer highlights the centrality of small urban cultivation of vegetables and crops in her account of middle-class aspirations in the periphery of Dar es Salaam (Mercer 2017; Mercer 2014).

¹⁶³ It is likely that many of these are plots where the household is incrementally building a house for future habitation. Only 7% of those who have another property say they rent out this property. And nearly 2 thirds of the properties are vacant land or buildings.

There is evidence to suggest that despite this move into owner-occupied housing, migrant living conditions remain slum deprived. Figure 11 (A) shows that the number that remain in slum deprived conditions diminishes much less over time than changes in tenure. Figure 11 (B) breaks this down further by the number of slum deprivations. It shows that there is some reduction in the number that are deprived in multiple slum dimensions. It also shows that despite only modest gains in living standards within the city, migration does nonetheless appear to lead to improvements in migrants living conditions overall: a larger portion of migrants described having lived in conditions that were deprived in two or more slum dimensions before migrating than once they arrived in Dar es Salaam. Although the graph does not account for overcrowding, it aligns with findings from recent research indicates many amenities increase with density in Sub-Saharan Africa (Gollin, Kirchberger, and Lagakos 2017).

Figure 11: Migrant Tenure and Slum Deprivation over Time



Note: Data are not survey weighted. Figure (B) draws on data from the residential history module, and thus relies on recall. Since information is not available on the number of residents per room in past houses, this graph instead measures deprivation in water, sanitation, and building materials only.

Lack of improvement in living standards once migrants move into owner-occupied housing may be indicative of the kinds of policy and institutional failures that constrain households' ability to improve their own housing highlighted in the literature in section I. Indeed, it is notable that even among households in the top quintile of consumption and top quintiles of asset wealth, more than half (61 percent) are deprived in at least one slum deprivation.

Overall, renters living in slum conditions pay less in rent as a proportion of their consumption expenditures than those that do not. Table 34 compares monthly rents to household consumption expenditure. It shows that rents fall relative to consumption expenditures as the number of slum deprivations rise. This holds even if we restrict the analysis to households

that are in the bottom 40 percent of per capita income.¹⁶⁴ This should not be interpreted as a sign of affordability of housing.¹⁶⁵ It could, however, suggest that households make trade-offs between housing quality and consumption.

Table 34: Rent as a Proportion of Household Consumption

	Rent: Consumption	R:C only	Poor
Non-slum	20.9% (1.7%)	25.5% (5.1%)	
1 deprivation	14.8% (0.7%)	19.4% (1.4%)	
2 deprivations	11.8% (0.5%)	14.2% (1.1%)	
3 or 4 deprivations	9.8% (0.7%)	12.5% (1.1%)	
Slum area*	13.5% (0.5%)	16.0% (0.1%)	
Obs.	1017	361	

Data are survey weighted. Standard errors in parenthesis.

** the difference between slum areas and non-slum areas is not significant*

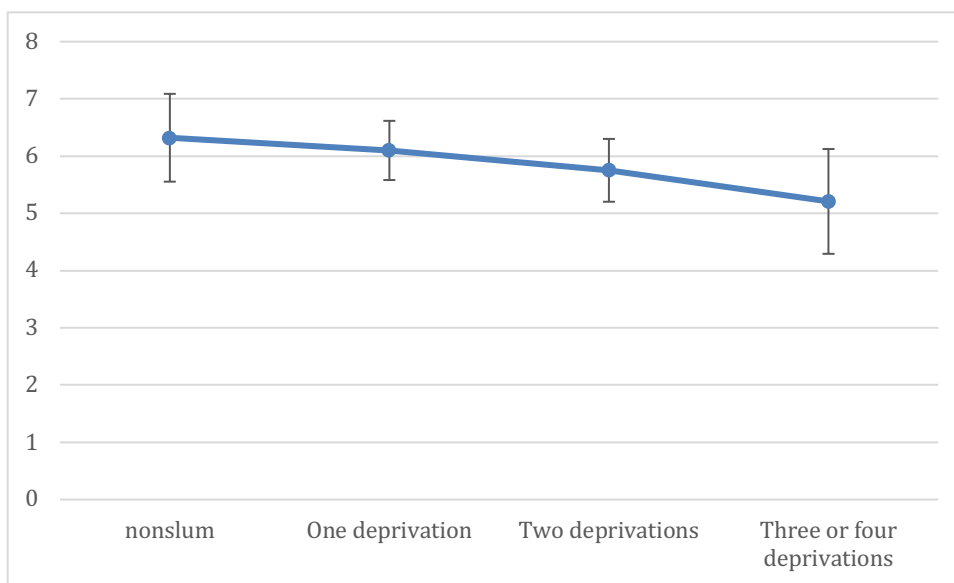
Indeed, this underlines the importance of understanding the range of choices that poor households have to understanding whether poverty is a driver of slum deprivation. One

¹⁶⁴ It is worth noting that the proportion is higher for poor households at all levels of deprivation. This aligns with data from across the world which suggests that this is not uncommon for the share of rent to decrease as a proportion of income as incomes rise, although there is considerable variation in what this proportion may be from country to country and even between cities within the same country (Mayo, Malpezzi, and Gross 1986; UN-HABITAT 2003a).

¹⁶⁵ Some countries use a ‘rule of thumb’ to identify what is ‘affordable’ housing. For example, in the UK and USA this figure is 25% and 30% of income, respectively (UN-HABITAT 2003a). I do not use any such measure for two main reasons. First, the measure is sensitive to differences in measurement of income. For example, the consumption aggregate includes utilities expenses, but these could equally be counted as housing expenses (in this case, the proportion of income spent on rent would be considered much higher). Secondly, the measure is sometimes used – misleadingly – to imply that those who pay less than the rule of thumb can ‘afford’ to pay more for housing (Hulchanski 1995). For example, if households are paying less than any ‘affordable’ rule of thumb, but their total household expenditures are below a given poverty line, the idea that they can afford to pay more makes little sense.

component of consumption expenditures is transportation costs. Could it be that slum households have different preferences to non-slum households in their commuting patterns? As indicated in Figure 12, there is a slight downward trend in the distance to work of employed household heads by the level of slum deprivation. The difference is more pronounced between heads living in slum areas, who on average commute 4.5 km to work, compared with 7 km among non-slum area households (significant at 1% level).

Figure 12: Household Head Distance to Work (mean KM)



Note: data is survey weighted. Error bars indicate 95 percent confidence interval. As discussed in chapter 2, distance to work was estimated using landmarks. Total observations: 1607

Yet understanding trade-offs in housing choices is complex. For example, UN Habitat has recently sounded the alarm about growing numbers of female headed households living in slums, as they are identified as a particularly vulnerable group (UN-HABITAT 2014b).¹⁶⁶

¹⁶⁶ It should be noted however that data from across the Africa region indicates that the experiences differ by subgroups (widows, single mothers, etc) and that it is hard to generalise about the welfare of these subgroups across countries (Beegle et al. 2016). In Dar es Salaam, their overall profile is similar to that of male-headed households in terms of education, age, work, migration status, and poverty.

This reflects the perception that slum conditions place a particularly high burden on women (Chant and McIlwaine 2015; Asiyanbola 2006).¹⁶⁷ In Dar es Salaam, female household heads make up a similar proportion of slum and non-slum households. Overall, 23 percent of households are female headed, and the proportion varies by only a few percentage points across poor, slum, and slum area households (and the differences are not statistically significant). If anything, they appear to be less likely to live in slums: holding other household characteristics constant, annex 1 shows that female headed households have a lower probability of being slum households than male headed households.

This may reflect both stronger preferences for non-slum conditions and different constraints on residential choices. On average, female headed households spend more on rent relative to their consumption: they spend equivalent to 16 percent of their consumption expenditures on rent compared to 12.9% for male headed households.¹⁶⁸ At the same time, insight from qualitative interviews suggests that the most vulnerable female households may be invisible in the data. Five of the female respondents in the semi-structured interviews I conducted were female household heads living in slum conditions.¹⁶⁹ All five of these women migrated to the city as adolescents. Notably, when talking about their pasts, four of them described

¹⁶⁷ For example, lack of sanitation may increase vulnerability to sexual assault; responsibility to collect clean water may fall to women; and poorly ventilated buildings may lead to high exposure to cooking fumes. Literature on residential location decisions largely models decisions at the household level. Female headed households may have more say in location decisions - there is only a small literature which explores this decision making within the house. In the developing country context, Asiyanbola finds that in Ibadan (Nigeria), women only participated in residential choice decisions in only approximately half of houses interviewed. Single women had a much more active role in location choices than married women (Asiyanbola 2006).

¹⁶⁸ While this could reflect discrimination, there is no indication that female headed households pay higher rents than male-headed households once levels of slum deprivation/ housing quality are controlled for.

¹⁶⁹ Of these, two were single women. The others had either children or relatives living with them. I did not purposefully sample female household heads, and my interview guide did not set out to explore gendered dimensions of housing choice and mobility.

periods in which they were forced by economic circumstances to live and work as unpaid labour in the house of relatives or acquaintances. As Mary, who had been widowed some years prior, explained:

*“I came to Dar es Salaam after finishing Standard 7 school. I did not plan to move, but my father did not want to pay for me to continue with my education – he wanted to force me to get married... I found work as house girl in Ilala. I lived there for three years. I was not paid any salary during this time. It was a difficult situation... I left when I found someone to marry me. I moved with him to his house.”*¹⁷⁰

It is thus possible that female headed households that are very income constrained may be ‘subsumed’ into other households, and thus be less visible in the data. This example underlines the difficulty of anticipating that poverty will result in households living in slum deprivation, without clear additional information about the range of choices and constraints that shape their location decisions.

2.2. Are Slum Dwellers Trapped?

The data suggests that most slum households in Dar es Salaam have not been trapped in poverty over generations by slum conditions: the majority of slum households are not poor and, given that most household heads were born outside of the city, cannot be said to have lived in slums for more than one generation. In this section I therefore explore dynamics that may be associated with the reproduction of poverty over time rather than attempting to identify and test for traps. The objective is to probe whether we can identify broad patterns or processes that may be indicative of poverty traps emerging over time in slum areas. The

¹⁷⁰ Mary is not her real name. Standard 7 is the last year of Primary School, approximately age 13.

analysis is concentrated on slum areas, since, as discussed in section I, the literature on traps and ‘slums of despair’ draws strongly on socio-spatial theories of poverty.¹⁷¹

Slum areas in Dar es Salaam are concentrated in the centre of the city. These centrally located slum areas meet the broad criteria of inner city slums that UN Habitat proposes may be ‘slums of despair’ (UN-HABITAT 2003c, 80). As the following analysis shows, however, they are not marked by notably different patterns in health, employment, or residential mobility than non-slum areas. Furthermore, the data indicate that while improved understanding of social networks and risk sharing activities could provide important insights on life opportunities in the city, there is little indication that slum measures are helpful for generalizing about differences in the kinds of networks that residents rely on. What is notable, however, is that there are a much higher proportion of renters in slum areas than non-slum areas.

As discussed in Section I, it is widely anticipated that slum households are exposed to health risks from living in slum conditions. This has been linked to lower life opportunities through the negative effect illness has on human capital accumulation, and is sometimes hypothesised to be the cause of a poverty trap (B. Marx, Stoker, and Suri 2013). In practice, however, there are many challenges to isolating the effects of specific housing or neighbourhood characteristics on health outcomes in urban areas. In dense urban areas, diseases such as

¹⁷¹ Slum households are fairly evenly distributed across the city and were sampled in all but three of the 200 Enumeration Areas surveyed. In fact, as discussed in chapter 2, 92 percent of the city would classify as living in slum neighbourhoods if we applied UN Habitat’s definition of an area where 50 percent or more of households are slum deprived.

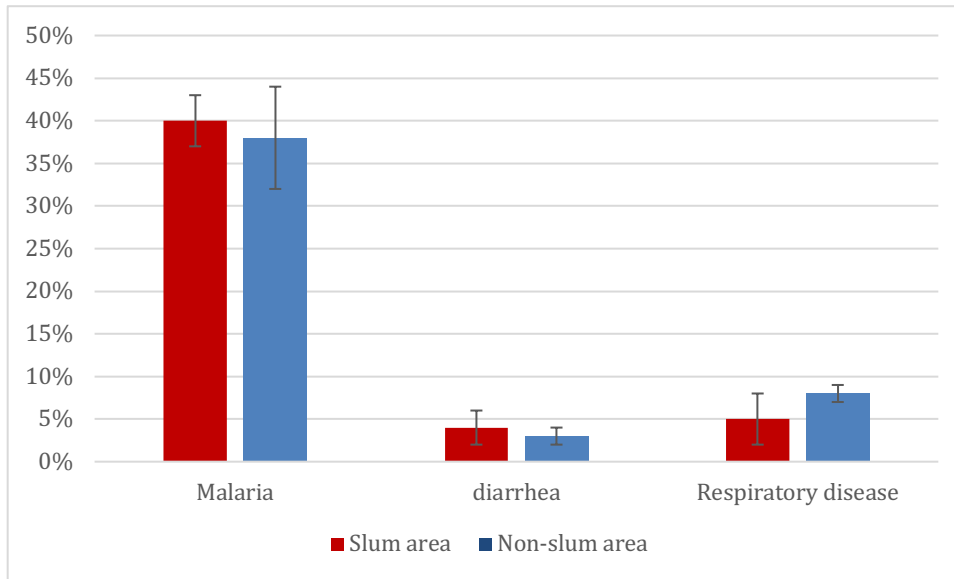
malaria and diarrhoea are not contained to neighbourhoods. Exposure to illnesses may also occur at work or in public places.

It is thus notable that there are few statistically significant differences in the proportion of households that report at least one incidence of malaria, respiratory disease, or diarrhoea in the last month across slum and non-slum areas, as shown in Figure 13.¹⁷² The difference is less than the confidence interval (also shown in the figures) in all cases other than respiratory disease, where, counter-intuitively, the incidence is slightly higher in non-slum areas than in slum areas. Furthermore, we do not see a clear indication of differences in access to healthcare across the two groups: in both slum and non-slum areas ten percent of households reported a member having been hospitalised in the last month, and 2 percent a member having seen a faith or traditional healer. The data does not contradict the idea that slum housing is bad for health; but it does caution against any generalised expectation that slums are human capital traps for their residents in particular in a city where basic service deprivations are so widespread.¹⁷³

¹⁷² The difference in the incidence of these diseases is also small and insignificant across slum households and non-slum households.

¹⁷³ It is worth noting that Marx et al. point to evidence that health outcomes are worse in slums than in *rural areas*. It is much more challenging to prove that slums households have worse health outcomes than similar households living in better conditions within the same city. Indeed there is surprisingly little empirical research on this topic (Ezeh et al. 2017), and even the evidence from developed countries is surprisingly weak (Thomson and Petticrew 2005; Tunstall et al. 2013). While it is likely that cities with higher rates of slum deprivation have higher incidence of diseases such as diarrhoea as a whole (UN-HABITAT 2006), the claim that slums are traps anticipates that the health consequences of these deficits are born by slum households alone. A more important factor may be differences across neighbourhoods in access to medical facilities, but it is not clear that this would be correlated with slum deprivations.

Figure 13: Slum Deprivation and Disease between Slum Areas and Non-Slum Areas



Note: data are survey weighted. Error bars depict 95 percent confidence interval. Total observations: 1951

Household heads living in slum areas tend to have less education than those in non-slum areas. Just over one third of household heads in slum areas have secondary schooling or higher (35 percent), compared with 40 percent in non-slum areas.¹⁷⁴ Furthermore, as discussed in annex 1, households with tertiary education have one third of the odds of those that are illiterate of living in a slum area, all other things being equal. Yet despite this lower educational attainment, household head employment is higher among slum area households (69 percent, compared with 62 percent, significant at 1%), and among the employed, a similar portion appear to be salaried (48 and 45 percent respectively, but the difference is not

¹⁷⁴ The difference is more pronounced between slum households (34 percent) and non-slum households (60 percent), but I focus on differences between slum areas given that the focus of the poverty trap theory is on socio-spatial processes.

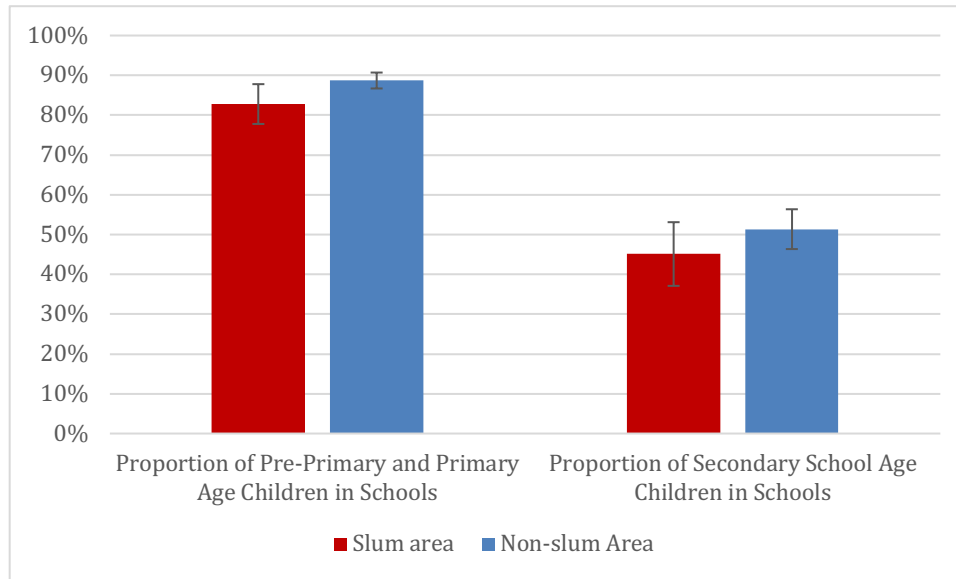
significant).¹⁷⁵ The conditional relationship between wage employment and slum areas is insignificant (annex 1).

As discussed in section I, under certain conditions, lower levels of attainment could be indicative of trends that may lead to widening spatial inequality overtime. There are a number of potential avenues through which this could occur, including the absence of accurate information or role models which leads individuals to underestimate the benefits of education. It is thus notable that educational attainment among children in slum areas appears to be slightly lower than their non-slum peers. As indicated in Figure 14, a smaller portion of primary school aged children per household are in school. The difference among secondary school aged children is not significant. Caution is needed here, however. One of the strongest predictors of children's educational attainment is parental educational attainment. It is not straightforward to separate out the effect of peer effects on educational attainment from the direct effect of parental influence, particularly if parental education is correlated with neighborhood choice.¹⁷⁶

¹⁷⁵ This highlights a further challenge with the slum as a poverty trap mechanism: both the human capital trap and peer-effects of education mechanisms rely on a link between level of education and employment above a certain income level. This is likely to vary from city to city.

¹⁷⁶ In Tanzania as a whole poverty is negatively correlated with the education level of the household head (World Bank 2015b). It is thus important to disentangle the effect of education as a poverty trap independently from spatial effects specifically associated with the slum.

Figure 14: Mean Proportion of Children per Household in School by School Age



Note: Mean number of children in school, as a proportion of total children of that age group per household. Total of 870 households with primary age children and 588 with secondary age children. Data are survey weighted, error bars depict 95 percent confidence interval.

Data from qualitative interviews supports the general assertion that some neighbourhoods of the city were known to be characterized by distinct sociological dynamics, such as high crime and low education. Frequently cited examples were Tandale and Manzese. Respondents that lived in these and other similar neighbourhoods complained that they were full of “bad people”, “thieves”, people who “use abusive language”, and used drugs, when asked to discuss features that they disliked about the area.¹⁷⁷ They also often highlighted lack of space for roads, open sewage in the drains, crowding, noise, and feeling insecure at night in narrow passages between houses. Ward level officials interviewed stressed that many of the challenges they faced in working in these areas arose because of the low education level of residents.

¹⁷⁷ When asked to talk about things they like about their neighbourhood, residents tended to highlight locational attributes – such as access to work, markets, and either mosques or churches – as positive features.

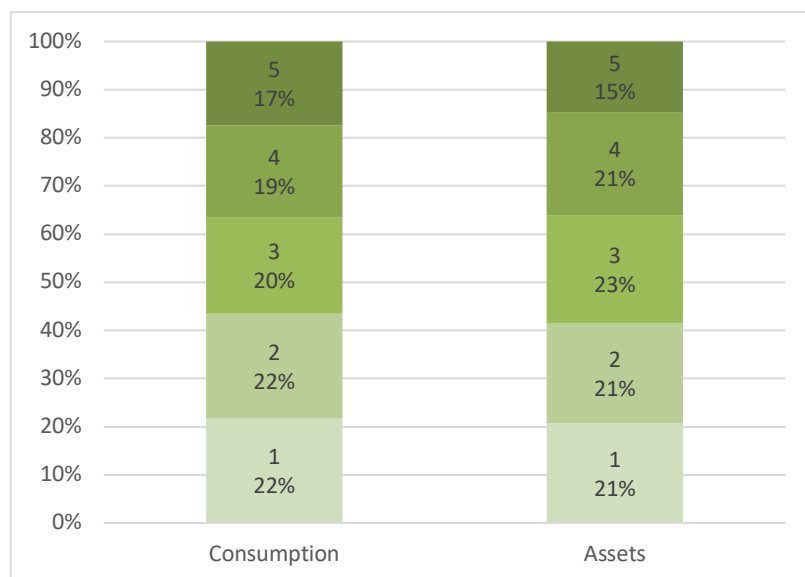
Yet the interviews also highlighted that there was considerable diversity among the neighbourhoods captured by the satellite slum area measure. Along with Tandale and parts of Manzese, the measure captures pockets of irregularity in the old colonial centre (Kisutu) and Msasani, which is the upmarket residential district home to most expatriates (Smiley 2013). It is difficult to generalise about socio-spatial dynamics across this group or within a specific area over time. Indeed, one day when walking with a respondent I passed through an alleyway that was only slightly wider than my shoulders. The respondent told me that thieves used to rob people in the passage by blocking either exit as soon as they entered. Today, he assured me, it was a much less common occurrence. He had a number of theories about what had led to this change over time; but it is notable that the physical layout of the area has remained the same.

Of course, this does not negate the likelihood that social dynamics are influenced by the geographical layout of settlements, nor indeed that these dynamics are harmful for life opportunities. It does however raise questions about the usefulness of slum measures to identify the neighbourhoods of interest. Indeed, it is notable that all of these areas are located within 5 kilometers of the city centre, and thus would all fall into UN-Habitat's category of 'declining' or 'slums of despair'.

The qualitative data further underlined a trend that is visible in the survey data: slum areas attract a diverse population. Real estate experts interviewed widely expressed the belief that residential settlement patterns are mixed in terms of ethnicity, religion, and income. As

indicated in Figure 15, households from every quintile of consumption expenditure and asset values can be found living in slum areas. Although the highest quintile is under-represented relative to the city as a whole (17 are in the top consumption quintile and 15 percent in the highest asset ownership quintile), it suggests that there is a considerable spread of income in these areas.

Figure 15: Slum Areas by Per Capita Consumption and Asset Value Quintiles



Note: Data are Survey Weighted. Observations: 1951

This socioeconomic mix is likely to have implications for social networks and risk sharing. Subward and Ward officials interviewed indicated that informal saving groups and other forms of mutual aid associations were common in their areas. Although there is no reliable data on how widespread these groups are, one official estimated that in most households in

his Subward at least one member would be part of one type of group or another.¹⁷⁸ Many, but not all, of these groups are formed at the neighbourhood level. As such, they may include residents of a range of consumption and asset wealth levels.

In addition to this, groups were also described as operating through networks that extend beyond neighbourhoods. Savings groups and mutual aid associations through religious groups and work associations were also described; and historical research has shown that even football clubs play this role (Tsurata 2007).¹⁷⁹ Two respondents further suggested that it was not uncommon to approach employers for informal loans. Longer distance networks are also likely: 60 percent of households in slum areas either sent and/or received remittances in the 12 months prior to the survey.¹⁸⁰ This is similar to households in non-slum areas (62 percent) and indicates that many slum households are tied into larger networks within Dar es Salaam, across the country, and even into other countries.

Further research on the functioning of social networks and mutual aid groups could provide revealing insights on the capacity of households to cope with shocks and patterns in longer-

¹⁷⁸ These range from more organised savings and loans groups (known as VICOBA, which stems from Village Community Banks), to informal rotating credit associations (*upatu*), and neighbourhood groups (*ujirani mwema*, literally, good neighbour). In the case of VICOBA, these might be termed indigenous insurance associations – in keeping with De Weerd et al.'s findings in rural Tanzania, members described forming these groups spontaneously and drawing up written agreements about the specific ways and defined events in which they help each other (De Weerd et al. 2007)

¹⁷⁹ Tsurata describes mutual aid functions of membership of Simba and Yanga football clubs between the 1940s and 1970s. He notes that members not only helped each other in finding jobs and housing, but also that the club would contribute to funeral expenses of members (Tsurata 2007)

¹⁸⁰ 22 percent of households received remittances in the last 12 months. Overall, of remittances received, 58 percent are sent from people within Dar es Salaam, 38 percent from someone elsewhere in Tanzania, and 4 percent come from abroad. Half of households send remittances. Of remittances sent, 34 percent go to people in Dar es Salaam, 66 percent to people in other locations in Tanzania, and less than 1 percent go abroad. The proportion is similar across slum and non-slum areas for both sending and receiving remittances. Nationally, most remittances originate from urban areas. Overall, however the proportion that receive remittances is similar (23 percent) (World Bank 2015b)

term life opportunities. Yet there is little to suggest that slum measures are a good indicator to help identify areas where effective groups are either more or less likely to operate, or that we can generalize about the likelihood of social networks including a mix of incomes based on classification of slum deprivation alone.

In fact, data from the MLSC survey underlines that, in general, the social composition of slum and non-slum neighborhoods alike is changing quite rapidly: more than half of respondents in both areas have lived in their current house for less than 10 years. Many interview respondents stressed that they were drawn to the area they live in because it was close to their place of work. Indeed, owner-occupiers, tenants, and informal real estate brokers all described location choices in stark terms. All the owners interviewed had purchased plots and built their housing incrementally. They described weighing up price and location in deciding where to buy this plot.¹⁸¹ Renters interviewed described a longer list of factors that they looked for when they moved to a new house, often stressing concern over access to water, the number of people that they would have to share a latrine with, and the size and quality of the room they would rent. They stressed that the key advantage of the neighbourhood was proximity to work, however. This ties in with findings discussed above that slum household heads have shorter commutes to work.

That said, the literature on slums anticipates that high rates of residential mobility may in itself be indicative of dynamics that result in persistent slum deprivation. Specifically, one

¹⁸¹ These findings broadly align with other qualitative research in the city. In her PhD thesis, Tatu Mtwangi Limbumba sets out to explore social and cultural drivers of residential choice in three different case study areas of Dar es Salaam. Her findings identify the primary drivers of residential location choices to be price, access to work, and proximity to family/ friends in all three areas (Limbumba 2010).

common claim behind the idea that some areas are ‘slums of despair’ is that they are populated by households that are not committed to improving their current housing and neighbourhood (Mukhija 2012). In Dar es Salaam there is little to suggest that residential mobility patterns differ in slum areas to non-slum areas. In annex 2, I draw on data from the residential history module, which shows that mobility patterns broadly align with what we would anticipate from housing theory, and that there is very little discernible difference between either the number of past moves, motivation for moving, or intention to move in the next three years across slum and non-slum households. This aligns with a recent study in Nairobi, which found no difference in mobility patterns across households living in areas designated as ‘slum’ by the government and those that live in ‘formal’ areas (Talukdar 2018).

What is notable, however, is that there are a higher portion of renters in slum areas. Renters make up 71 percent of households in slum areas, compared with 45 percent in non-slum areas. All over the world, renters tend to be more mobile than homeowners (Clark 2013; Dieleman 2001). This pattern reflects that many are often younger and at different life stages compared to owners. This is also the case in Dar es Salaam: the average age for renter household heads is 34, compared with 47 for owner-occupiers, and the mean household size is 3 and 5 respectively. Similarly, renters tend to have relatively high disposable incomes: in Dar es Salaam they are under-represented among the poor (35 percent), although on average have lower value assets.¹⁸²

¹⁸² Mean asset value for renter households is 1.1 million shillings, compared with 2.9 for owner-occupiers.

There are observable differences in residential mobility between owners and renters that lends some support to the hypothesis that renters may invest less in their housing as they have less long-term commitment to improving the quality of their housing and the area they live in. Renters are more likely to consider moving: 40 percent of renters said they may possibly or definitely move in the next three years, compared with only 4 percent of owner-occupiers. Furthermore, looking back over their past residential history, we can see that less than 2 percent of current renters say they owned in the past (excluding the house they were born in). In addition to this, as discussed in chapter 4, renters do not appear to have any prior social ties to the area they live in. There is no indication that ethnicity or religion are guiding factors in residential choice either.¹⁸³ Homeowners in contrast, not only show low intention to move, but may retain interests in the neighbourhood if they do relocate: in their research in the periphery of Dar es Salaam, Andreasen and Agergaard find that owner-occupiers tend to regard property as a permanent possession that will always be kept in the family, even if they were to move again (Andreasen and Agergaard 2016).

At the same time, however, the data discussed in chapter 4 also challenges the idea that renters are disconnected or disinterested in the quality of their housing, as both landlords and tenants stressed that tenants pressed landlords to make improvements to the housing on a daily basis. Furthermore, among renters interviewed, five described the landlord-tenant relationship in terms of kinship bonds, saying that they live ‘as relatives’, ‘like a family’, or

¹⁸³ Local real estate experts interviewed stated that regional and religious bonds were not a guiding factor in location decisions. This aligns with insight from a survey of 300 Dar es Salaam landlords conducted in 1999, which found that in all cases Muslim and Christian landlords had both Muslim and Christian tenants (Kiduanga 2003). It is further notable that even among very poor, network based informal employment, such as plastic bags sales in markets, ethnicity does not appear to be a salient form of social organisation (Burbidge 2013).

that they call their landlady ‘mother’. Two mentioned needing to take time off work to participate in funeral preparations of neighbours, as examples of typical daily interactions with neighbours.

Section III: Reconciling Rhetoric, Theory, and Policy

Although slum deprivation and poverty are often treated as though they were synonymous, the previous two sections have shown that this can be both theoretically and empirically misleading. In this section, I explore what these insights mean for the apparent paradox that lies at the heart of current policy approaches to slums: that policy is motivated by a rhetoric of poverty yet does not account for the possibility that slum households are too poor to pay more for housing. I argue that this paradox can be explained by the lack of clarity in use of the language of poverty and in articulating the objectives of slum policy. This results in confusion around two points: (i) that income poverty is not the only basis for the policy imperative to intervene in slums; and (ii) the possibility that ‘well-functioning’ markets can produce slums.

Slums have been the subject of public policy discussion since the 19th century. At the start of the 21st century, however, they made a dramatic ‘return’ to the centre stage of international development discourse with the development of the Millennium Development Goals (MDGs) and the publication of UN Habitat ‘Challenge of Slums’ Report (Huchzermeyer 2011; Gilbert 2007).¹⁸⁴ The slum has continued to dominate international development

¹⁸⁴ MDG Target 11 (sometimes termed 7b) aims to improve the lives of slum dwellers.

advice and lending in cities, and their importance was consolidated through inclusion in the UN's Sustainable Development Goals.¹⁸⁵

Slum targets emerged out of the Habitat II agenda.¹⁸⁶ Habitat II and its successor Habitat III recognise housing as a right and stress the importance of inclusive, safe, resilient and sustainable cities as a development objective (UN-HABITAT 2016b). They are part of an agenda that calls for specifying development targets to ensure sustainable living conditions in urban areas.¹⁸⁷ This is further underlined by the inclusion of the target as part of the MDGs, which mark an important changing point in development policy objectives from a more narrow focus on economic growth and income poverty reduction to a broader conceptualisation of human development (Addison 2004). Indeed, the goals are strongly rooted in the capabilities approach, which critiques welfare economics and emphasises the role of development in expanding freedom for people to lead flourishing lives (Fukuda-Parr 2011; Hulme 2007).

We can therefore understand inclusion of the slum in the MDGs is an attempt to claim that a minimum standard of durability of materials, living space, and basic services (the

¹⁸⁵ These include basic services (1.14.1) and tenure security (1.4.2) as targets under Goal 1 (Poverty), as well as highlighting slum upgrading as a tool to achieve Goal 11, which calls for making “cities inclusive, safe, resilient and sustainable”.

¹⁸⁶ The specific formulation of these targets has been criticised. For example, for being arbitrary in the number of beneficiaries (100 million of a total of 900 million slum households), ambiguous in wording (what is a ‘significant improvement’?), and for being too narrow an indicator given that it is the only ‘urban’ MDG (Cohen 2014).

¹⁸⁷ There is a longstanding claim that the presence of specific urban social and environmental hazards mean that what is considered ‘the good life’ in urban areas is different to rural areas (Baker 2008; Wratten 1995; Moser 1998; Mitlin and Satterthwaite 2013; Lemanski and Marx 2015). Although there is little agreement over what a multidimensional urban poverty measure would look like in practice, it is worth noting that when Mitlin and Satterthwaite refer to ‘urban dwellers living in poverty’, they specify this to mean those living in “in poor quality, overcrowded and often insecure housing lacking adequate provision for water, sanitation, drainage etc” (Mitlin and Satterthwaite 2013 p21).

components of the slum measure) is necessary to have a fulfilling life in urban areas. The idea that slums are harmful to human development is of course a contentious claim. Gilbert and others have objected to the idea of setting a normative standard of living conditions, pointing out that what may be perceived as slum accommodation in one context may be considered adequate in another (Gilbert 2007; Simon 2011).¹⁸⁸ Neoclassical economists may argue something similar, albeit from a different starting point: welfare will be maximized when individuals are left to determine acceptable housing standards within free exchange and use of property. After all, as long as there are clear and enforceable property rights, this exchange will maximize the social value of land (Malpezzi 1999; World Bank 1993). Even in the tradition of welfare economics – central to many of the claims discussed above about market and government failures that may drive up the prices or constrain investment in housing – there is no need to establish a normative minimum housing standard.

Yet if we take seriously the claim that slum deprivation hinders the capabilities of humans – as embodied in the MDGs and SDGs – then slum deprivation must be judged by a different set of standards than the limited account of welfare embodied in mainstream economic analysis. In effect, we may see it is a call to evaluate land market activity not only by efficiency of allocation, but also by a set of normative values on outcomes. That is to say, that housing which lacks basic water, sanitation, space, and durable materials is normatively bad.

¹⁸⁸ While this is undeniably true, the same challenge applies to all measures of wellbeing. Indeed, even poverty itself is a relative concept (Laderchi, Ruhi, and Stewart 2003, 5). Indeed, international poverty measures date back to the same group of 19th century English researchers that are attributed with first attempting to measure the concept of the ‘slum’.

What does this mean for the policy rhetoric-theory paradox? The MDGs and SDGs provide a clear policy imperative for intervention to address slums that is not reliant on the idea that slum households are poor in income terms. Formalisation, upgrading, and improved access to ownership should thus be evaluated on the basis of whether or not they stimulate improvements in housing values for slum households, regardless of whether or not those households are poor. Yet the MDGs and SDGs also imply a policy imperative to address slum conditions for the poor. This situation is not fully covered by the current ‘best practice’ triptych, which does not account for the possibility that – even if the housing market meets otherwise standard definition of ‘well-functioning’ – households may be too poor to afford non-slum housing.

How important is this omission? In other words, how likely is it that some slum households simply cannot afford higher quality housing, and will be harmed by interventions? The answer to this question will vary by context as it depends on a number of factors including whether or not households in upgraded areas are owners or renters. This is discussed in greater depth in the concluding chapter of this thesis. Yet it is important to note that the idea that those who are income poor are poor as a *consequence* of living in slums – and that slum upgrading therefore tackles the root cause of income poverty – is unlikely to be generalizable to many slum households across the world, as it relies on assumptions about the characteristics of slum households and their neighbourhoods that are quite restrictive.

With this in mind, it is worth returning to Alan Gilbert’s critiques of slum policy. There is strong reason to doubt Gilbert’s assumption that *all* slum household are income poor. Yet,

in failing to acknowledge that *some* slum households may be very poor, these policies do ignore potential harm to the most vulnerable. The irony, however, is that in failing to acknowledge that *many slum households are not poor*, Gilbert's critique is at risk of undermining interventions that aim to address structural features that confine households to slum conditions. Even though these policies are not necessarily interventions that target the poorest, they may nonetheless address important constraints to a dignified life in urban areas. As one interview respondent in Dar es Salaam exclaimed to me as a gust of wind carried potent smells from the drain outside into her room, "*you smell that shit? It's disgusting. I hate living this way*".

Conclusions and implications

This chapter aimed to untangle and clarify the relationship between slum deprivation and poverty with new evidence from a case study city. In doing so, it highlights important theoretical challenges that make it difficult to generalise about the relationship between slums and poverty across the world in practice. As such, poverty may not be a useful predictor for why people live in slums; and it is not evident that slum deprivation is a helpful indicator for identifying households exposed to either the health costs or socio-spatial dynamics that undermine life opportunities. In terms of the former, the spatial nature of externalities associated with basic service deficits are not easily confined to slum households alone. In terms of the latter, research focusing on neighbourhood effects should instead focus on identifying areas characterised by the particular variables of interest rather than relying on slum measures.

The chapter also shows, however, that the foundations of slum policy are much wider than income poverty alone. When we contextualise the slum in the Habitat II agenda, the MDGs and SDGs, it becomes clear that the slum is not only the subject of development focus because of the anticipated link to poverty. Instead, eliminating slum deprivation is a development goal in itself, central to fulfilling and dignified lives in urban areas. Yet in failing to clearly articulate these different goals, slum policies fail to acknowledge that there can be any tension between the agendas. The use of the language of poverty to describe policies which aim to reduce the cost of adequate housing produced by the market is unhelpful. It obfuscates the potential tension that some households may simply be unable to afford this housing at almost any cost, and therefore risks hiding the harm caused by these policies. At the same time, it may underestimate the benefits of the policies, by discounting the improvement in living standards among households who are not income poor yet nonetheless live in conditions that are harmful to human flourishing.

Annex 1. Additional Insight on Poverty and Odds of Living in Slum Conditions

In the following annex I explore the conditional probability that a household will live in slum conditions using logistic regression methods. The objective is to further describe the differences between households that do and do not live in slum conditions.

The results are presented in Table 36. Column (1) reports the odds ratios for the regression in which the dependent variable is a binary definition of slum households (UN-Habitat index); while column (2) reports the results where the dependent variable is the binary definition of slum *areas*. An odds ratio of 1 can be interpreted as no effect of the independent variable on the dependent variable. The definition of variables is provided in Table 35.

Table 35: Description of Variables

	Definition	Obs.	Mean	S.D.	Min.	Max.
Slum	Dummy variable that takes on value of 1 if house is deprived in any of the 4 UN Habitat slum index criterion	1954	0.84	0.37	0	1
Slum Area	Dummy variable that takes on value of 1 if house is located in slum EA	1955	0.35		0	1
Dist_cbd	Measure of distance from the city center	1931	13.08	8.36	0.2	34.7
Female	Dummy variable – 1 if household head is female	1951	0.23	0.42	0	1
Send_remit	Remittances sent in the last year in thousand Tsh.	1955	134.25	386.94	0	10000
Salaried	Dummy variable that takes on value of 1 if head is employed in salaried job	1955	0.40	0.49	0	1
Education	Categorical variable for highest level of education attained by household head(0, Illiterate; 1, kinder/primary; 2, secondary; 3, tertiary)	1934	1.41	0.67	0	3

First_dar	Dummy that takes on the value of 1 if head is migrant still living in first house in Dar es Salaam	1955	0.21	0.41	0	1
Poor	Dummy that taken on value of 1 if in bottom 40% of consumption	1951	0.41	0.49	0	1
Tenure	Categorical variable for tenure (0, formal owner; 2, Informal owner; 3, Renter; 4, Free)	1955	1.52	0.84	0	3

Overall, the results align with the insights discussed in the main text of the chapter. In terms of model (1), the results show that – all other things being equal – poor households have a higher probability of being slum deprived (1.7 times the odds of non-poor households). Female household heads have 0.6 times lower odds than male household heads of living in slum conditions. The probably of salaried and sending remittances is similar to those that are not salaried/ send remittances, and not significant. The effect of distance from the city centre and slum deprivation is also weak and insignificant, in keeping with expectations in light of the descriptive statistics described above that slum deprivation is found throughout the city.

With respect to model (2), the effect of poverty on odds of living in slum areas is small and not significant (column 2), all other things being equal. In contrast, new migrants have 1.7 times the odds of other households of living in slum areas. This aligns with the discussion in the text above that migrants live in central areas when they first arrive in the city, but that this housing is not necessarily deprived in terms of UN Habitat slum criteria.

The relationship between education and slum deprivation is negative in both models. The odds of those with higher education being either a slum household or living in slum areas are low, relative to those that are illiterate. Households whose heads have tertiary education have less than 2% of the odds being a slum household, and less than a third of the odds of living in a slum area, relative to an illiterate household head. In contrast, however, the difference in odds across households whose heads are in wage-employment relative to those who are not are small and insignificant; as we would expect in light of the discussion in the main text and further underlying the need for caution in anticipating that slums may have a causal impact on inter-generational wage-earning capacity.

The regression also explores tenure characteristics. Relative to formal owner-occupiers, informal owner-occupiers have 1.8 times higher odds of living in slum conditions, but half the odds of formal households of living in slum areas. Renters' odds of living in slum deprived housing are 2.6 times higher than formal owner-occupiers, and their odds of living in a slum area is 1.8 times higher. The analysis presented in chapters 3 and 4 provides some guidance on how to interpret these results. In terms of tenure formality, the weakness of the relationship between tenure formality and security, as well as tenure formality and housing value, suggests that it is unlikely that this reflects a causal link through household investment incentives. Similarly, analysis presented in chapter 4 suggests that the relationship between rental tenure and slum deprivation does not reflect poor investment incentives that arise when landlords have the power to exploit tenants. In both cases, a plausible explanation is that both informality of tenure and rental tenure covary with other housing features that make slum deprivation likely (such as age and location), but also, in the case of rental tenure, with factors

that make irregular development patterns more likely. In chapters 3 and 4 I argue that this could reflect informal institutional arrangements for land use coordination, which may be weakened by strong rental markets.

Table 36: Odds Ratios of Living in Slum Conditions

	(1) Slum Household	(2) Slum Area
Dist_cbd	1.013026 (0.0121413)	0.7509416 *** (0.0121693)
Female	0.6459995 *** (0.1088337)	1.154527 (0.1644206)
Send_Remit	0.9999037 (0.0001558)	0.9996473 * (0.0002082)
Salaried	0.7784477 (0.1197775)	1.038171 (0.1348979)
Education		
Kinder/primary	0.0817743 *** (0.0836334)	0.7842403 (0.2535478)
Secondary	0.0428976 *** (0.0439151)	0.5857308 (0.1988018)
Tertiary	0.0193313 *** (0.0202126)	0.292817*** (0.1327555)
First_dar	0.8671645 (0.1447452)	1.686476 *** (0.2663568)
Poor	1.678772 *** (0.2903969)	1.146853 (0.153043)
Tenure		
Informal Owner	1.774925 *** (0.3959197)	0.5768127 *** (0.1221914)
Renter	2.636539 *** (0.5198351)	1.782349 *** (0.2996719)
Free	2.388632 *** (0.8459196)	1.035986 (0.3096402)
_cons	46.00177 *** (47.37484)	11.96696 *** (4.840393)
Pseudo r2	0.0766	0.3003
Prob > chi2	0.0000	0.0000
Obs.	1910	1911

Note: Standard Errors are in Parenthesis.

*** Significance at the 1% level

** Significance at the 5% level

* Significance at the 10% level

It is further worth noting that if we restrict the definition of poverty to the bottom 20 percent of adult equivalent consumption, the broad patterns observed in this chapter hold.¹⁸⁹ The majority of slum households and households in slum areas are not poor. The proportion of poor households living in slum conditions (22 percent) is higher than those not living in slum conditions (11 percent, significant at 0.01 level), but not all the poor live in slums. Moreover, the difference in the proportion of poor households among households living in slum areas and female headed households is not significant, and the poor are under-represented among migrants.

Table 37: Profile of Households in the Bottom Consumption Quintile

	Slum	Non-Slum	Slum Area	Non-Slum Area	Migrant	Non-Migrant	Female HHH	Male HHH
Bottom 20%	0.22	0.11 ***	0.21	0.19	0.19	0.25 **	0.20	0.20
	(0.01)	(0.02)	(0.02)	(0.01)	(0.01)	(0.02)	(0.02)	(0.01)

*Note: Data are survey weighted. Standard errors are in parenthesis. Stars denote a significant difference between the groups *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.*

¹⁸⁹ The bottom 20 percent of consumption is roughly equivalent to consumption expenditures of 2 dollars a day. In 2012 the national basic needs poverty line was equivalent to approximately 1 dollar a day (World Bank 2015b). Doubled and adjusted for inflation, the approximate 2 dollar line for 2014 would be Tsh 78918. The line of the 20th percentile is Tsh 78809.

Annex 2. Past Residential Mobility across Slum and Non-Slum Households

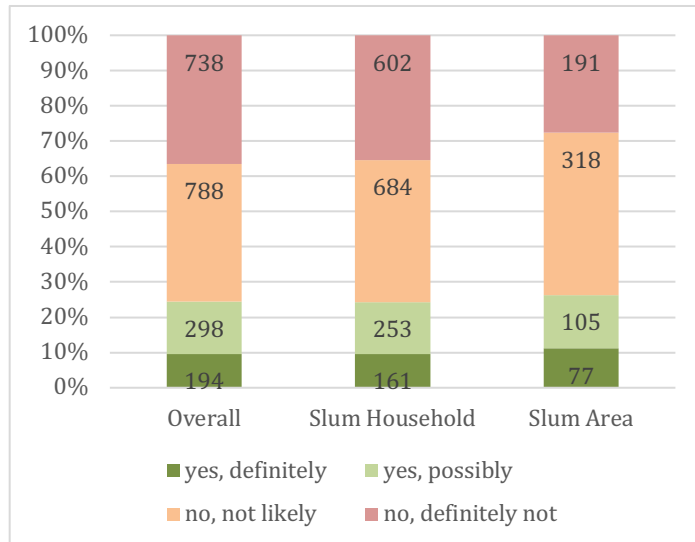
Very little is known about residential movement in developing country cities in general, and the challenges are exacerbated in slum areas (B. Marx, Stoker, and Suri 2013; Desai and Loftus 2013; Andreasen and Agergaard 2016). The data from the MLSC survey provides some new insight on residential mobility in Dar es Salaam. The survey included a module which collects information on all the houses that household heads have lived in over their time in the city.¹⁹⁰ Caution is needed in interpreting the result of this module, not only because it suffers from recall biases, but because the module was challenging to field and was fatiguing for both interviewers and respondents. The combined effect of these two factors makes it likely that the number of moves recorded within the city are underestimated. It is nonetheless interesting to compare residential mobility of households across different levels of slum deprivation, as there is no indication that this potential error may affect any one of the two groups differently.

On average, household heads have lived in three different houses in the city (mean 3.1, median 3), and have been resident in their current house for 11.2 years (or 7 years, median). There is no observable difference in the number of past houses between households currently living in slum conditions and those that are not, although slum households have lived in their current house for a few years less than non-slum households (10.9 years, compared with 12.7 for non-slum households, significant at 0.01). Households living in slum *areas* have also on average lived in three houses in the city and have lived in their current house for 11.9 years

¹⁹⁰ For migrants, all houses until the house they lived in prior to migrating were collected. For those born in Dar, all houses were collected.

on average. As indicated in Figure 16, there is little observable difference in the likelihood that household heads perceive that they will move in the coming three years.

Figure 16: How Likely Are You to Move Out in the Next 3 Years?



Note: Data is unweighted. Number of observations per category listed

The residential history module also asks household heads what motivated the decision to move out of each of the past houses they lived in. Of the 4,124 past house observations, 45 percent are either the house that the respondent was born in or was the house they lived in immediately prior to migrating to Dar es Salaam. Of the remaining 2258 houses, the respondents provided a reason for moving out of this past house in 1818 cases. Life events, such as getting married, starting a new school, or a new job account for just of half of the moves (53 percent of cases). Desire to improve on neighbourhood factors (safer, closer to work/ transport/ family) was cited in 17 percent of cases, while improving the quality or size of the house, or purchasing land was also important (13 percent). In 8.5 percent of cases, however, the move occurred in response to stress: a disaster, eviction, or the need to move

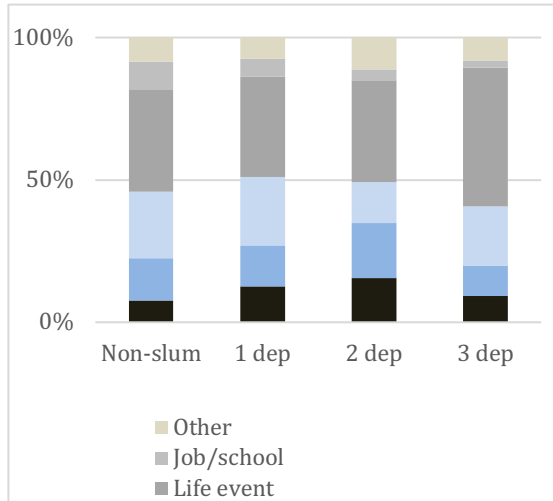
to a smaller or cheaper house. Overall, the data aligns with expectations from data on movement within cities around the world (Clark 2013).

It is notable that there is little difference in reasons given for moving across levels of slum deprivation. Figure 17 plots the reasons given for moving out of past houses, by the level of deprivation in the house left (graph A). It shows that movements out of slum conditions are motivated by similar factors to movements out of non-slum conditions. In the second graph (B), the reasons for moving out of the house prior to their current house are graphed according to the number of deprivations in the current house. This shows that there is little observable difference in factors that motivated *into* slum conditions.

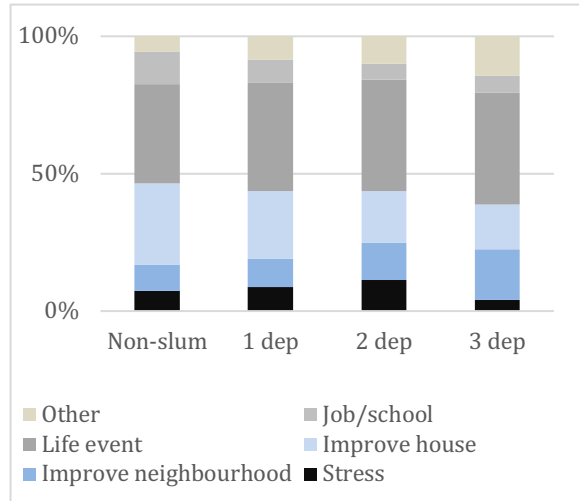
Figure 17: Reasons for Moving, by Present and Past Housing Characteristics

(A) Reason for leaving house, by level of deprivation of the house left

(B) Reason for leaving prior house, by level of deprivation in current house



Observations: 1818



Observations: 1555

Note 'stress' is composed of: eviction, natural disaster, or a move to a cheaper or smaller house. 'Improve neighbourhood' refers to desire to move to an area that is: safer, better, or closer to work/transport/family/kin. 'Improve house' combines: larger, better quality or better serviced house, or the opportunity to buy land. 'Life event' is being old enough to move or a change in family situation. 'Job/school' applies to moves that were motivated by a new job or schooling. There are only three levels of slum deprivation in these figures as the number of inhabitants per room is unknown for past houses.

Chapter 6. Conclusions and Policy Implications

Introduction

This thesis set out to reexamine the slum. It untangles and probes three highly influential hypotheses about why slum deprivation emerges and persists, drawing on new evidence from a case study city. The three empirical chapters shed light on slum deprivation in Dar es Salaam, showing that it is not easily accounted for in terms of tenure informality, exploitative rental agreements, or income poverty. Moreover, in exploring the processes that underpin these results, the thesis highlights key limitations of the theorisation in each case that likely undermine their usefulness in other contexts as well.

Thus, chapter 3 explores a topic often thought to be self-evident – that informality of tenure causes slum deprivation – and shows that the relationship is in fact contingent on other context-specific institutional arrangements. Chapter 4 challenges the idea that informality in the rental markets necessarily results in restricted housing supply or exploitative landlords. Instead, it shows that the quantity and quality of housing is shaped by a range of institutions that shape the bargaining power of the two actors in day-to-day negotiation as well as end-of-relationship disputes. Chapter 5 weighs in on a long-standing debate about whether slums are the cause or consequence of poverty. It shows that arguments on both sides rely on restrictive assumptions that suggest they can only usefully be applied to a subset of slum households in any given city. As such, the findings presented indicate that it is very hard

to argue that any of these three theories can usefully be applied to predict slum deprivation in general.

The three chapters also, however, signal a possible way forward to refine these hypotheses and make them more useful. Specifically, in this concluding chapter, I draw across the claims made in the three empirical chapters to argue that if we reinterpret hypotheses about tenure informality, rental arrangements, and even poverty through an institutional lens, we can reformulate them to present a more coherent picture of slum deprivation that can be more usefully generalised. I further argue that such an approach could help to close the gap between objectives and outcomes that has marred slum policy for decades.

The chapter is divided in two parts. Section I argues that bringing institutional analysis and slum literature together provides a way forward to advance the analysis of the slum. It also highlights that research into slums can contribute to ongoing debates in the institutional literature. In section two, I discuss policy implications of these findings. It shows that not only do the issues identified in this thesis undermine the design of effective slum policy, but that current approaches draw on a set of competing theories. This leads to potential theoretical incoherence and self-contradicting policy. The section concludes with reflection on ways in which an institutional approach to slums could lend greater clarity to policy design.

Section I: Making Sense of Slums

The literature on slums in developing countries is marked by a web of claims about the relationship between poverty, property rights, and housing quality. This thesis takes a number of steps to untangle and examine the individual threads of this web. First, it identifies four main radial strands in the urban economics literature. These are the ideas that: (i) slums emerge in response to ‘effective demand’ for cheap housing by poor, rural migrants; (ii) that people remain stuck in slums over generations because there are features of the housing that trap them in poverty; (iii) slum households underinvest in their housing because they do not have formal property rights; and (iv) high numbers of renters depress housing quality, either because they see their housing situation as temporary – and are thus reluctant to invest in improving it – or because there slumlords charge exploitative rents for very low quality dwellings.

Second, it examines how these fit with a number of circular strands in the web. That is to say, each of the four radial theories make different assumptions about the constraints that households face to investing in better-quality housing, in turn anticipating that slum households are poor, informal, or renters. Chapter 5 highlights that these claims may intersect and can be seen as complementary accounts of the slum. On the other hand, the links are sometimes made through literature that otherwise makes very different foundational assumptions, such as critical urban theory. Failure to clearly acknowledge implications of the different foundational assumptions can lead to deadlocked debate: for example, while both may agree that slum households are poor and informal, disagreement as to whether market integration will ameliorate or exacerbate slum deprivation results from very different foundational assumptions about broader economic processes that result in slum deprivation.

The thesis then examines these four radial stands of theory in light of empirical evidence. It finds that in Dar es Salaam, there are surprisingly small differences in the proportion of slum households that are poor, migrants, and/or informal owners and renters. Moreover, in probing the processes that underpin these observations, the research highlights weaknesses in the theories that apply more generally. We cannot expect that poor people will always choose to live in slums without some knowledge of their choice set; the link between socio-spatial dynamics associated with neighbourhood traps and slum deprivation are fuzzy; formal property rights are not necessarily the most secure and/or easily transferred; and informal rental arrangements are not always exploitative. More pressingly, the existing formulation of the theories cannot tell us when the expected relationships are likely to hold and when they will not; as such, they are likely to have very low predictive power to explain when and why slums emerge more generally. Put starkly: the results suggest that the theories themselves are not very useful.

The analysis presented in this thesis also, however, indicates that it is possible to refine these hypotheses. Specifically, in the section that follows, I argue that market-orientated theories about the slum need to be situated in improved understanding of the institutional framework of urban land markets. This approach would introduce a much higher degree of theoretical consistency to the analysis of slum, while also providing a coherent explanation for situations when specific hypotheses do not apply.

1.1. Towards Coherence: An Institutional Analysis of Slums

Most of the literature discussed in this thesis is market-orientated. More specifically, it is steeped in welfare economics, in the sense that slum deprivation is largely understood in light of perceived government and market failures. This literature does not closely examine market institutions, beyond the assertion that property rights are foundational. As is often the case in research that employs neoclassical models, the specific institutional requirements for these rights to exist in practice – from a police force to judicial courts – are neither clearly articulated nor interrogated (Rodrik 2000).¹⁹¹ This is perhaps surprising, because institutions that shape market transactions are increasingly one of the largest areas of focus in development economics (Chang 2011).

The findings presented in this thesis suggest that institutions – norms, strategies, and rules – play a central role in explaining why housing and land market behaviour differs in practice from the theoretical expectations established in the literature. Beyond this, it indicates that we could improve the usefulness of housing market models for the analysis of slum deprivation if we bring institutional frameworks into clearer focus. In order to do this, however, we must also reconsider the theoretical division made between ‘foundational’ institutions of the rights to own and transfer property and a number of other key regulations and strategies that are currently considered ‘interventions’ in the market.¹⁹²

¹⁹¹ Furthermore, as discussed in chapter 5, assumptions such as perfect information and zero transaction costs further eliminate the need to include other institutions to support market activity in the real world (North 1993; Bardham 2010; Platteau 2008).

¹⁹² A theoretical distinction is frequently made between a government intervention and government action to ‘set the rules of the economic game’ – such as protecting private property rights (Stiglitz 1998). As discussed in chapter 4, urban economics textbooks stress that in the absence of government intervention, they are likely

Market institutions shape the payoffs to market behaviour. As such, it is theoretically difficult to separate them from questions of allocative efficiency (Platteau 2008; Keogh and D’Arcy 1999). In order to demonstrate this, it is helpful to consider the social dilemma described in chapters 3 and 4 as a strategic game. Imagine two neighbours, each of which is considering making improvements to their 6 room Swahili house in a central, regular area of Dar es Salaam. Drawing on the data presented in chapter 4, we can assume that both neighbour (A) and neighbour (B) currently rents out two rooms in their house to tenants at market rates of Tsh 30,000 a month. If they were to connect the house to mains sewage and water, we can estimate that they can increase rent by 73 percent or Tsh 43,200 a month for both tenants combined. If they extend their house and build two additional rooms, they will gain Tsh 30,000 a month from each new tenant (Tsh 60,000 in total).

Yet sewage is a (semi)public good; the benefits to the individual are small relative to the non-excludable benefits to neighbours. Furthermore, if neighbours do not connect, the benefit of sewage to individual households are depressed because they remain exposed to diseases from their neighbours. Therefore, we can assume that if one household connects to the mains but the other does not, the benefits are muted. In the hedonic regression presented in chapter 4, mains connection in an irregular area are only associated with a 3 percent rental price premium. Using this as a guide, we can describe the payoffs to connecting to the mains in a neighbourhood where others remain unconnected as Tsh 1800.

to lead to under provision of public goods and result in uninternalized spatial costs (Cheshire and Sheppard 2004; Malpezzi 1999).

Finally, if both neighbours choose to extend their houses, the quality of the neighbourhood as a whole suffers. To simplify, we will say the neighbourhood becomes visibly irregular. In this event, the rent of all of their own rental rooms as well as their neighbours' rooms will be depressed by Tsh 5000 per room (the median rent in irregular areas is Tsh 25,000). As such, the payoff will be Tsh 50,000 per month for the two new rooms, minus lost income of 10,000 on their existing rooms. These payoffs are set out in Figure 18.

Figure 18: Simplified Payoffs to Urban Land uses in a Two-player Game

		A	
		Extend house	Mains
B	Extend house	40000 40000	1800 60000
	Mains	1800 60000	43000 43000

Putting aside the issue of the different costs of these reforms for the moment, the payoffs are such that neither player has a dominant strategy; what they choose depends on the action of the other player. The outcome where both players choose to invest in mains (M,M) is the outcome that makes both best off. Yet the outcome where both extend (E,E) will occur unless some institution exists that can allow the two to credibly coordinate their action. This is because, neighbour (B) has every incentive to extend their house if they see that neighbour (A) has invested in sanitation, just as neighbour (A) has the same incentive if (B) connects to the mains.

Outcome (E,E) is pareto efficient but it is not optimal by other standards. Indeed, in judging allocative efficiency we must consider the large spatial externalities to sanitation that are not

fully internalized in the private rent tenants are prepared to pay for mains in a fully serviced area. Indeed, sanitation is often thought to be vital for economic density, agglomeration economies, and the very economic benefits of urbanisation. This is a particularly acute challenge because urban form has a very long life-span: as discussed in chapter 4, once a neighbourhood develops in an irregular fashion, there is likely to be very strong resistance from those that would have to be relocated as a result of efforts to improve housing quality levels in the neighbourhood as a whole.

In addition to these challenges of separating institutions from questions of allocative efficiency, it is also important to acknowledge that outcome (E,E) is suboptimal by other standards. As discussed in chapter 5, the MDG/ SDGs are grounded in a much wider understanding of development than economic welfare and can arguably be interpreted as a claim that slum conditions are a barrier to living a fulfilling life in urban areas. In this light, given that sanitation is a key component of the slum index, all outcomes other than (M,M) can be understood as normatively bad.

Yet the institutions needed to ensure that all housing has basic services go beyond even land use coordination. As discussed in chapter 3, basic services are generally underprovided by the market. Returning to the simplified game set out in Figure 18, let us assume that some form of effective land use coordination is now in place. The option of extending the property is no longer available to either neighbour A or neighbour B. They can now choose between connecting to the mains or they can keep their money with their savings group, which offers

5 percent interest per month. As with the previous game, the benefits of sewage are contingent on *all* members of the area adopting sewage.

This exercise helps to show that costs of basic services are a key consideration. In Figure 19, a connection fee of Tsh 200,000 is assumed based on estimates from East Africa and a recent project in Arusha that subsidized connections.¹⁹³ At this costs, if neighbours can coordinate, the outcome will be (M,M) as the return in increased rent will exceed the return on saving with a savings group. Yet in practice, the real costs of connection to the sewage in Dar es Salaam is much higher: the World Bank's Doing Business 2018 report indicates that it currently takes 30 days and Tsh 3 million to get a water and sewage connection from Dawasco. At 5% interest from a savings group (Tsh 150000), this payoff would far exceed the private benefits of connection. The problem is further exacerbated where households only have the option of private provision. If there is no public sewage, improved infrastructure requires investment in a septic tank, as well as fees to pay a truck to periodically empty the tank.¹⁹⁴

¹⁹³ In Arusha in subsidized scheme of the Tanzanian Federation for the Urban Poor set the connection fee at 200,000 (ODI 2016). Connection fees in Zimbabwe were set at \$120 dollars (Satterthwaite, Mitlin, and Bartlett 2015)

¹⁹⁴ Cost estimates for a toilet with Septic tank in East African cities ranges from US\$ 800–3,000 (Satterthwaite, Mitlin, and Bartlett 2015)

Figure 19: Game with Land Use Restrictions and Subsidised Connection Costs

		A	
		Savings group	Mains
B	Savings group	10000	1800
	Mains	1800	43000

This discussion serves to illustrate that a land market that does not produce slums relies on the existence of either effective incentives or constraints to ensure adoption of basic services. Indeed, this aligns with the claim that there are few examples of sewage systems from across the world that were not adopted without the support of some combination of government led penalties or subsidies (Ashraf, Glaeser, and Ponzetto 2016). Yet the cost at which these goods are produced will have a direct effect on housing costs. Even if these goods are produced at the lowest sustainable price, it is likely, as discussed in chapter 3, that this may raise the cost of the cheapest housing on the market (even if it reduces the overall cost of non-slum housing). If we take seriously the importance of the policy target of ‘cities without slums’, then a conceptual shift is needed in thinking about the consequence of such regulations or subsidies. As effective demand cannot be a justification for the production of slum housing, then the market should not be ‘enabled’ beyond this point, and ‘pro-poor’ slum interventions must focus on alternative means to provide low-income households with access to housing.¹⁹⁵

¹⁹⁵ A comparison could be child labour restrictions, which Ha-Joon Chang highlights the example of commonly accepted constraint on the ‘free’ market (Chang 2011). Child labour laws are restrictions on the operation of the labour market that reflect both moral values and claims about the broader functioning of the economy. They may in the short term, however, make certain families poorer.

Even with this conceptual shift, a challenge still remains in ensuring that slum theories are more generalisable. Specifically, the broader literature on institutions highlights the importance on shifting focus from institutional *forms* to institutional *functions*. It has been widely argued that institutional design does not map onto institutional outcomes in a straightforward way (Rodrik 2000; Rodrik 2007). We cannot assume that institutional forms perform the same institutional functions from one context to another. This is because institutions do not exist in a vacuum; behaviour is shaped by the *combined* effect of the norms, strategies, and rules that operate in a given context. Each institutional framework is specific, and combines a number of interacting components which may be complementary or competing (Brousseau and Glachant 2008).

As such, the impact of a given institution on behaviour may be very different from one context to another, and the functions associated with a particular institution may be performed as effectively by other institutions that look very different. This indicates that we can reformulate the claims about formal property rights to be more useful by focusing on function rather than form. For example, the claim that a degree of tenure security is necessary for housing investment can usefully be generalised; the claim that legal property rights are needed to perform this function cannot.

Similarly, the claim that land use coordination plays a vital but overlooked role in slum deprivation should not be confused with advocacy for a particular form of land use coordination. The same land use regulation laws, for example, may be ineffective or actively harmful in different contexts. Indeed, in chapter 2, I discuss how formal land use

coordination laws were deliberately used by the British Colonial administration of Dar es Salaam as a tool to ensure racial segregation of the city. Equally, effective coordination mechanisms may not be limited to laws. For example, it is possible to reinterpret some of the slum-as-trap arguments discussed in chapter 5 as claims about land use coordination norms. That is to say, a portion of the neighbourhood effects literature can be understood as claims about ways the behaviour of neighbours can depress overall housing value, which in turn undermines individual investment.¹⁹⁶ There is a diverse range of institutions that shape this behaviour in practice; for example, in some cities in the USA there are legal codes which enforce maintenance of front gardens, while in others, standards are enforced through informal community pressure.

The same principle applies to analysis of the rental market. Chapter 4 indicates that in many OECD countries there are a set of institutions that help to mitigate transaction costs and risks in the rental market, such as informal reputational mechanisms to public records of rental contract disputes.¹⁹⁷ To generalise this claim, however, we must isolate the key functions performed by these institutions. In chapter 4, I argue that the key function is to balance the costs of ending rental contracts for tenants and landlords. This could be tested through

¹⁹⁶ That is to say, in chapter 5 I argue that despite the language of poverty employed, some claims about slums as 'poverty traps' are in fact claims about contexts in which low-quality housing can become self-reinforcing. The neighbourhood effects literature highlights factors such as high crime rates or residential turnover that undermine social trust. Crime may depress neighbourhood value, while social trust may create a credible commitment that each house will maintain a certain standard level of individual property and even behaviour in the neighbourhood.

¹⁹⁷ Trust often performs the institutional role of providing certainty in transactions. Where there is no trust or no basis on which to base trust (e.g. reputations are not reliable), alternative mechanisms are needed. Thus, for example, even in the most sophisticated markets such as modern banking, reputation matters and is formalised into the institution of credit ratings (P. Dasgupta 2003, 27).

comparative analysis, but any specific claim about the type of regulation needed to achieve this is unlikely to stand up to empirical interrogation.

Indeed, the broader literature on institutions also highlights that it is important to consider the *combined* effect of institutional arrangements. Critics of land titling have argued that policy designed to enhance tenure security may not result in reduced transaction costs and risks if other institutions are missing (Mooya and Cloete 2007; Mooya 2011). We can extend this further, as insights from chapters 3 and 4 suggest that it is the strength of ownership and transfer rights that may undermine use rights. Similarly, the arrangements that have arisen to cope with uncertainty in tenant-landlord contracting, such as long pre-payment periods, may have the negative effect of reducing the ease with which people can move ‘up and out’ of slum accommodation as their incomes rise.

A more nuanced approach to understanding of the institutional framework of land markets is one which considers a wider range of institutional functions as foundational to the market. In expanding the range of institutions considered ‘foundational’, this approach can reconcile tensions between market-orientated approaches to slum and the broader poverty and SDG agenda. In focusing on institutional functions rather than forms, the approach can help to bring coherence and improve the generalizability of slum theories. We can reorganise the hypotheses about specific situations in which slum housing may emerge into widely applicable ideas about the basic institutional functions that need to be in place to prevent market transactions from producing slums. This approach also has potential advantages for shaping the design of policy, which will be discussed in section II.

1.2. New Frontiers: What Can the Slum Tell us About Institutions?

In this thesis I draw on institutional literature in economics to reexamine the slum. Yet in bringing these literatures together, the research also raises insights that are relevant to ongoing debates in the study of institutions. In particular, it is interesting to reflect on the results in light of ongoing discussion about formal versus informal institutions.

As discussed in the introduction, theorization about developing country cities is dominated by a formal-informal dichotomy. This dichotomy is also employed in the study of institutions. Broadly, a distinction is drawn between informal institutions thought to emerge ‘spontaneously’ and formal institutions that are deliberately created by state authorities.¹⁹⁸ The distinction is given prominence in two main bodies of work. On the one hand, it is considered to be analytically useful by those who stress that the coercive power of the state gives primacy to formal laws in shaping behaviour. On the other, there is a body of work that argues that informal institutions provide a cheaper, better, or in some other way preferable solution to collective problems than state institutions.¹⁹⁹

¹⁹⁸ It is worth noting that there are visible tensions on both sides of the debate between a view of institutions as responses to transaction costs and concern over the ways in which either powerful elites or the state can co-opt institutions for their benefit.

¹⁹⁹ It is worth noting that a small number of researchers specifically argue that this is the case with informal urban land management (for example, Mooya and Cloete 2007; Antwi and Adams 2003), while others highlight a range of informal institutions that respond to challenges in emerging markets, including information flows, access to credit, and contract enforcement (Rakodi 2006a).

There are features of the property rights system in Dar es Salaam that provide some limited support to the latter view of institutions; ultimately, however, I would argue that the findings presented in this thesis point towards a third view, which is that formal and informal institutions are part of one joint institutional context that shapes behaviour (Guha-Khasnobis, Kanbur, and Ostrom 2006; Fafchamps 2010). This is because effective formal institutions are those that are supported by norms of compliance (Haldar and Stiglitz 2013); and effective informal arrangements are often those that are integrated with the formal system. As such it is more useful to analyse these institutions together, even if we continue to analytically distinguish between the two.

The evidence presented in this thesis clearly indicates that caution is needed in assuming that formal laws trump informal institutions in shaping behaviour. If this were the case, we would expect that there were more observable differences in housing market behaviour between informal households and those that are officially subject to property rights laws. Instead, chapter 3 indicates that even formal households are likely to draw on informal dispute resolution processes, as they believe them to be faster and less expensive than formal legal process.

Indeed, there is some indication that it is informal institutional arrangements that have evolved in light of changing conditions. They have evolved as densification and increased land scarcity, increasing demand for tenure security. As one respondent explained, reflecting on the rising reliance on Subward Chairman to witness tenancy agreements, *“people are faithful here in Tanzania. But as we go along, our world becomes challenging, things*

change....in some cases, where the landlord wants to be safe, they bring the contract to us for witnessing” (interview February 2017).²⁰⁰ This contrasts with the expectation – discussed in chapter 3 – that formal property right will emerge in response to demand that arises with urbanisation.

At the same time, however, there is little to suggest that informal institutions will *necessarily* arise or be adequate to resolve challenges for the market to work well. For one, it is misleading to characterise this property rights system as entirely ‘informal’. The institutional framework for land and rental markets described in this thesis appear to rely strongly on the sanctioning capacity of local government officials, who go beyond their official remit to take on ‘informal’ roles. Yet their capacity to sanction is undoubtedly tied to their official functions in other dimensions of urban life. As discussed in chapter 3 and 4, Dar es Salaam is not an outlier in this case; other researchers have noted that local government officials behave in this manner in other cities in Tanzania, as well as in Brazil, India, and South Africa (Perlman 2016; Chattaraj 2016; C. Marx 2009; Kombe and Kreibich 2001).

Secondly, we can also see that informal institutional solutions are not always effective. In Dar es Salaam, they have failed to respond to rising need for land use coordination that also increases with density. In fact, there is some evidence to suggest, as discussed in chapter 3, that informal arrangements to ensure some degree of coordination in land sales are *weakened* as urbanization accelerates. This suggests that formal and informal institutions alike can work well or poorly, or work for some of the population but not for others (Hoff and Stiglitz

²⁰⁰ Another noted a similar transition towards increased witnessing land sales. As he explained, “*before there was no Mtaa, so we just had to trust each other*” (interview, March 2017).

2004). As Joireman argues in the context of property rights across Sub-Saharan Africa, customary institutions, new private institutions, or formal reforms may or may not arise for altruistic reasons, and they may perpetuate either because they perform a social function well or because they protect the interests of an elite (Joireman 2011)

Despite this, it is worth considering whether we can generalise about the types of activities that informal solutions are more or less likely to be adequate to resolve. As discussed in chapter 3, land use coordination challenges are complex. They require forward thinking behaviour, as many challenges arise only once a certain level of density is reached. There may be a tension between this and the idea of an informal institutions arising ‘spontaneously’ or in response to coordination challenges. Even if we imagine constantly evolving institutional arrangements to address new dimensions of land use coordination challenges, it is unlikely that ‘responsive’ solutions will be effective. As discussed in chapters 3 and 4, once an area has developed in an irregular manner, regularization is likely to face strong resistance from those individuals that would suffer as a result.

In addition to this, monitoring and sanctioning of land uses is complex, given that the costs of transgressions can be diffuse across a large population. As described in chapters 3 and 4, it may not be immediately obvious to neighbours that the extension of a house or construction of a wall will exacerbate flooding challenges when the rainy season comes. Furthermore, it may not be close neighbours that suffer most; construction that interrupts the natural storm water drainage path may not cause flooding to immediate neighbours but could instead have catastrophic effects on residents some distance downstream. While we cannot assume that

state institutions will necessarily be effective in this capacity either – after all, state land use regulation is also widely ignored, or can be used to protect the interests of an elite – it may be a factor that makes adequate rules particularly unlikely to emerge ‘spontaneously’.

A similar argument may apply to basic goods provision. Indeed, it is worth noting that under provision of basic services and poor land use coordination have historically been features of privately organized housing systems all over the world (Whitehead 2012). Decisions around urban settlement and infrastructure often require forward thinking action as well as consideration of long-term and sustainability benefits which private individuals may undervalue. Countries that make less use of government powers to manage decisions about urban infrastructure investment “tend to find it difficult to provide and maintain these types of infrastructures” (Whitehead 2013, 22).

These are, however, empirical questions which could be tested through further investigation. For example, the urban settlement pattern in Dar es Salaam is notably different to Nairobi (Kenya) and Lilongwe (Malawi). The three cities are governed by similar formal land use rules, as a result of their shared history of British Colonial rule. Informality is widespread in all three cities, as is rental tenure. Yet, as described in chapter 4, multi-story informal rental accommodation have arisen in Nairobi (Huchzermeyer 2007). This is not a form of development that appears to be feasible in Dar es Salaam. In Lilongwe, in contrast, is low density, but there are relatively high levels of water provision and settlement patterns may be more regular (UN-HABITAT 2011a). Might different informal basic service and land use

coordination arrangements explain these outcomes? This is a potential avenue for further research.

Section II: Policy Implications

Slums have dominated the research agenda of international development organisations for decades. As discussed in chapter 5, policy builds on insight from a wide range of literature and is ambiguous about the theoretical foundations of key policy interventions. It is possible that this ambiguity shields practitioners from criticism, as it helps to make slum policies sound worthy to a broad base of stakeholders. Yet in this section I reflect that lack of coherence may also account for the poor track record of slum policy, as it sets conflicting objectives that cannot be met. I also discuss how the institutional analytical approach discussed in Section I could help clarify objectives and improve policy outcomes.

2.1. Slum Policy: Simple Solutions to Vague Problems

There is remarkable coherence in urban policy advice applied across the developing world. As discussed in chapter 5, governments across the world have implemented policies that follow the advice of international organisations by focusing on three main policy responses to slums: slum upgrading, property formalization, and improved access to homeownership. Combined, these policies aim to improve the quality of existing slum housing and to reduce demand for new slum housing. Details of the policies and the tensions between them are summarized in Table 38 and discussed in the paragraphs that follow.

All three policies approaches have been pursued in Dar es Salaam. As detailed in chapter 2, projects have included mortgage market reform, the '20,000 plot' project to bring serviced land to market, and numerous rounds of slum upgrading and titling pilots. They have met with limited success. Seen in light of the analysis presented in this thesis, I would argue that this policy formula is marred by lack of clarity over the 'problem' of slums, as well as reliance on a number of highly questionable assumptions in project design. Specifically, there is considerable ambiguity about what the problem these projects aim to address is, as well as whether the tools proposed are appropriate for these objectives.

For one, clear evaluation of the benefits of these projects is obfuscated by tangled theory about what the 'problem' of slums is. This is evident in the debate discussed in chapter 3 about conflicting ideas about slum upgrading that result from competing conceptualisations of the role of the market in causing slum deprivation. Yet even if we were to assume that the market-enabling approach as the main theoretical grounding for slum upgrading, there are startling contradictions in policy design. For example, the influence of claims around informality of tenure are so influential that policy design for titling and slum upgrading generally assumes that all residents are informal owners. As such, the benefits of slum upgrading are also measured in terms of rising real estate values that result from the intervention. Renters are ignored. Indeed, Erica Field and Michael Kramer's guide on impact evaluation of slum upgrading only mentions rental markets as a source of income generation for participants (Field and Kremer 2006), and two recent reviews of World Bank slum

upgrading projects do not mention renters at all (Gulyani and Bassett 2007; Buckley and Kalarickal 2006).²⁰¹

Alan Gilbert has termed this ‘blindness to the obvious’, as he and others point out that it fails to account for the pejorative impact that the projects will have on poor renters, who will likely be displaced by rising real estate prices (Gilbert 2008; Desai and Loftus 2013; Payne, Durand-Lasserve, and Rakodi 2009). It is perhaps, however, better understood as *selective* blindness to the obvious, as the same policy documents sometimes identify large numbers of renters as a *cause* of slum deprivation. Indeed, emphasis on promotion of homeownership as a solution to slums is shaped by a longstanding belief that renters have less incentive to invest in their housing and neighbourhood, as well as a pervasive idea that rental arrangements are exploitative (Kumar 2011).

Evidence from Dar es Salaam highlights the gulf that can emerge between project objectives and outcomes as a result of these jumbled assumptions. On the one hand, for slum upgrading, it leads to a failure to appreciate that a potentially sizable portion of people living in the project area will be harmed by the intervention. Renters and informal real estate brokers interviewed confirmed that rents rise with housing and neighbourhood improvements, and that this resulted in tenant turnover.²⁰² This is supported by the survey data: as discussed in chapter 4, the poorest quintile of renters in Dar es Salaam spend an equivalent of 19 percent

²⁰¹ It is interesting to note that critical theorists who advocate for slum upgrading as a hard won exception to the neoliberal planning order also tend to assume that slum residents are owner-occupiers, as indeed Turner’s work on self-help for periphery squatters anticipated.

²⁰² As one explained: “*some time ago we improved the house by changing the roof and increasing the height of the building. The renters had to shift while we improved the house, and then new renters came in. The old renters wanted to come back, but because we improved the house, we improved the rent, and they did not have the money to pay*” (interview March 2017).

of their monthly consumption expenditures on rent.²⁰³ It is likely that even a small increase in rents would be untenable for this group.²⁰⁴ Moving house, however, also entails high costs. They are thus likely to be worse off as a result of slum upgrading.

On the other hand, the idea that renters are poor is also misleading for policy design. Not all renters are poor, and not all renters will be harmed by slum upgrading. As discussed in chapter 4, many respondents interviewed in Dar es Salaam expressed frustration at the lack of availability of housing with amenities; and basic services feature prominently as priorities for households who say they intend to move in the next three years. It is also therefore questionable whether we can assume these renters wish they were homeowners. Renting offers the advantage of flexibility, which may be very appealing to certain groups (Peppercorn and Taffin 2013; Gilbert 2016). Indeed, it is notable that renters in Dar es Salaam are younger than homeowners and often have higher levels of consumption.

Furthermore, even if all renters could be provided with access to a formal plot of land, it is unlikely that they would stop renting in the city centre or even that the housing they built would be non-slum. Incremental building often takes place over a very long-time frame, stopping and starting as funds allow. These plots are located in the periphery of the city, so owners may continue to rent while they build. Indeed, it is notable that just over one fifth of

²⁰³ Data from across the world suggests that this is not uncommon for the share of rent to decrease as a proportion of income as incomes rise, although there is considerable variation in what this proportion may be from country to country and even between cities within the same country (Mayo, Malpezzi, and Gross 1986; UN-HABITAT 2003a).

²⁰⁴ The mean monthly rent for the poorest quintile is Tsh 30751 which is almost equivalent to the entire consumption expenditure used for the basic needs poverty line (Tsh 36,482 per month in 2012).

renter households in the survey (229 households) said they owned a property somewhere else, and in half of these cases, that property was located in Dar es Salaam.²⁰⁵

The evidence from Dar es Salaam helps to highlight the pitfalls of a policy approach that pulls together a set of hypotheses about slum deprivation that each draw on conflicting assumptions about who slum dwellers are and what motivates them to live in slum housing. In addition to this, no component of the titling-upgrading-access triptych addresses the main constraints on housing quality that emerge from this research: lack of credible land use coordination. They also do not address the underlying constraints in public service delivery that have to date undermined policy aims of providing water and sanitation for all in the city.

As such, even if all slum upgrading, titling, land surveying and housing credit projects are successfully completed, there is little basis for optimism that the development pattern will differ in any notable way from the past. That is to say, if policy continues to be applied on the basis on assumed problems rather than diagnosis of binding constraints that exist in practice, Dar es Salaam will likely continue to grow as a ‘slum city’.

²⁰⁵ It is likely that many of these are plots where the household is incrementally building a house for future habitation. Only 7% of those who have another property say they rent out this property. And nearly 2 thirds of the properties are vacant land or buildings.

Table 38: Summary of Slum Policies and the Problems they Aim to Solve

Intervention	Details	‘Problem’ solved	Tensions
Slum Upgrading	Spatial intervention to improve physical, social, and environmental amenities.	Improve condition of current slum households (neighbourhood level improvements)	Unclear if slum is consequence of market forces or exclusion from markets, and therefore whether rising values are mark of success or failure of project; failure to explore whether different households (e.g. renters versus owners) are affected differently.
Titling	Formalisation of property rights, either in targeted spatial area but also often as wider reform effort.	Improve condition of current slum households (individual housing improvements)	If ownership is unclear, titling will be complicated; if ownership clear, titling has little impact?
Home ownership	Reduce the cost of housing by improving access to credit (for households and construction), deregulate housing, and survey land.	Reduce demand for slum housing (provide alternative to exploitative rental arrangements).	Do renters live in slums because can’t afford to own? Or is the challenge constrains on quality rental housing?

2.2. Towards a New Approach: Problems before Solutions

In calling the challenge of slums ‘multidimensional’, international development organisations tie a neat bow around a dizzying array of competing theories about what causes slum deprivation. These explanations are not entirely coherent or complementary. In the case of Dar es Salaam, they do not appear to address key factors that depress the quality of housing in the city and are therefore unlikely to ‘solve’ the ‘problem’ of slums.

This thesis raises a number of insights that can be used to help improve slum policy. In this subsection I outline two steps that could help clarify the objectives and outcomes of existing slum policies. The first two could help refine current slum policies, without challenging the broader approach adopted. The third step is one based on a different approach, which draws on institutional analysis, and could help to fundamentally re-orientate slum policy towards identifying binding constraints on housing quality.

Be Cautious Generalising with Slum Data

Policy makers – and academics – are guilty of misusing the slum index. The idea that the program or policy being developed is important because nearly a billion people across the world live in these conditions, is tantalising. The prospect that a particular policy solution that has proven successful in improving the lives of slum households in one area can then be developed and applied to this whole population is undoubtedly difficult to resist. Particularly in light of the pressure to develop projects that can deliver value for money and can be scaled across the world.

On its own, however, the slum index tells us little more than the number of people across the world that live in conditions of overcrowding, non-durable materials, and/or inadequate basic services. The fact that so many people live in slum conditions is not unimportant: as discussed in chapter 5, these are people that are living in a state of deprivation that many believe to be detrimental to a dignified life. It does not tell us much, however, about what causes them to live in these conditions, or what the consequences of these living

arrangements will be on their life opportunities. Use of the slum index therefore needs to be more cautious.

If you Target the Slum, Don't Hit the Poor

The language of slum upgrading and titling projects often depicts these projects as solutions to urban poverty. The evidence presented in this thesis highlights that slum households and informal owners are a diverse group. Furthermore, poverty is surprisingly marginal in much of theory on which the policy interventions are built. Seen from this angle, it is perhaps unsurprising that critics have dismissed these projects as unhelpful. For example, suggesting they mistake aesthetic improvements to poor neighbourhoods as improvements to lives and livelihoods of the poor (Roy 2005), and considering the slum agenda as a distraction (Arabindoo 2011).

Yet it is also misleading to suggest that these projects have no merit. The data presented in this thesis highlights that once land use coordination breaks down, slum housing may indeed be self-reinforcing. Slum upgrading and titling may also have important economic benefits that enhance welfare for the city as a whole. A vibrant land market is considered important to agglomeration economies, efforts to facilitate land market transactions can be seen as central to the very poverty-reducing potential of urbanization (Duranton and Puga 2004; Lall, Henderson, and Venables 2017). Furthermore, as discussed in chapter 3, titling could have important impacts in terms of improved tax collection and administration of the city.

This is not, however, the same thing as projects that directly benefit the poor. In fact, the analysis presented in this thesis stresses that the poor may sometimes be harmed by these interventions. Poor renters will incur costs of moving as result of rising real estate prices. Poor informal owners may also be vulnerable. This is because, as Haldar and Stiglitz point out, there is a paradox at the heart of titling projects: if tenure security is unclear, then titling presents an opportunity for the well-connected to claim land at the expense of the vulnerable; yet if everyone previously agreed on who owns what, then titling will not matter to them (Haldar and Stiglitz 2013). In fact, we can even anticipate that secure owners may arguably be harmed, as current policy design requires that ‘beneficiaries’ pay towards the costs of the titles.

The idea that welfare effects of interventions will differ according to the characteristics and preferences of households is not controversial. Yet it is rarely considered in either the design or evaluation of current slum projects. Project design needs to better incorporate these potential differences in outcomes across residents in project areas. This could, for example, include measures to compensate and support tenants that move as well as re-evaluation of pricing of titling.

There is also a need for a more serious examination of what slum policy for poor households might look like in practice. Early slum policy – which was strongly guided by the notion that slum households were poor migrants – was split between ‘laissez-faire’ approaches and efforts to delivery public housing. The first is clearly incompatible with broader slum objectives embodied in the MDGs and SDGs, while the history of public housing provision

does not present an optimistic picture about public provision as a viable approach to housing the poorest (Malpezzi 1999), although it is notable that there appears to be a rise in government-led housing development projects in Sub-Saharan Africa.²⁰⁶ An alternative approach may to complement the existing mix of policies that aim to improve existing slums and reduce supply side constraints on housing delivery with direct policy efforts to address the income constraints of the poorest.

Adopt an Institutional Approach to Slum Policy

As discussed in section I, an institutional approach would shift policy to focus on whether or not key institutional functions are being performed rather than if certain features are present. The absence of formal title or rental regulation, therefore, would not be confused with the absence of tenure security or exploitative rental arrangements. Instead, drawing on the IAD framework, policy makers would be guided by analysis of the institutional framework governing public service delivery and land ownership, transfer, and use practices to identify binding constraints on housing quality.

Of course, policy design that relies on extensive context-specific analysis is expensive. This would make it a hard-sell for resource-constrained governments and even for international development organisations, where scalability is often seen as an indicator of value for money.

²⁰⁶ In a recent research reviewing the housing strategies of four African countries (Angola, Namibia, Ethiopia and South Africa) found that while many continue to ‘talk the talk’ of enabling housing markets, in practice, all four have started to scale up supply-driven approaches of delivering large housing projects (Croese, Cirolia, and Graham 2016).

Yet the findings presented in this thesis indicate that there may be room to develop a ‘rule of thumb’ about key institutional functions needed at different levels of urbanisation, using density as a guide.

In areas where settlement patterns remain relatively sparse – such as in the periphery and peri-urban areas of cities – land use coordination may be less of a priority than in more dense areas; residents may be able to develop agreements amongst themselves that are sufficient to establish credible constraints on land uses. Public service provision may also be very expensive in per capita terms in these areas, as they are relatively sparse. The policy priority may thus be to prevent information failures that lead residents to fail to properly weigh the long-term consequences of development patterns that make it difficult for public services to be delivered in future. Information campaigns about future infrastructure provision plans, for example, could help to create a credible commitment to more regular plot development patterns. Of course, if these areas are also locations where there is considerable pressure on land sales as a result of land speculation, then institutions that safeguard ownership rights and prevent fraudulent transfers will also be key.

As densities rise, coordination challenges become greater. Spatial externalities associated with different land uses and the under-provision of water and sanitation increase. The number of residents that are renters will also likely rise. As such, individual households’ solutions to water and sanitation supply – such as the digging of bore holes and pit latrines – become increasingly inadequate. At the same time, however, the market will likely provide a strong

incentive for increased expansion of housing. Institutions that provide a credible commitment to observance of plot uses and delivery of basic services thus become vital.

A third policy approach is likely needed in areas that are already highly irregular: dense settlements where there are a high proportion of slum households. In these cases, policy approaches will necessarily entail some degree of resettlement. Understanding the payoffs to leadership and the institutions governing community engagement will be vital to ensuring that projects do not either stall or become a vehicle for elite interests.

The approach would not only help policy design to focus on what key binding constraints on housing quality are, but it would also likely improve estimation of project benefits, and thus help to close the gap between the ambitions of slum policies and their outcomes. Indeed, incorporating informal institutions into an analysis is vital for a more complete understanding of what determines policy outcomes in practice (Guha-Khasnobis, Kanbur, and Ostrom 2006; Fafchamps 2010).

References

- Abedi, Lewis, Asante Emmanuel, Kofi Gavu, Dennis Papa, Odenyi Quansah, and Derek Osei Tutu. 2017. "The Difficult Combination of Renting and Building a House in Urban Ghana : Analysing the Perception of Low and Middle Income Earners in Accra." *GeoJournal*. Springer Netherlands. doi:10.1007/s10708-017-9827-2.
- Adam, Achamyeleh Gashu. 2014. "Informal Settlements in the Peri-Urban Areas of Bahir Dar, Ethiopia: An Institutional Analysis." *Habitat International* 43. Elsevier Ltd: 90–97. doi:10.1016/j.habitatint.2014.01.014.
- Addison, Tony. 2004. "Development Policy: An Introduction for Students." 9. *UNU-WIDER Discussion Paper*. Helsinki.
- Alchian, Armen A., and Harold Demsetz. 1973. "The Property Right Paradigm." *The Journal of Economic History* 33 (1): 16–27.
- Aldashev, Gani, Imane Chaara, Jean-Philippe Platteau, and Zaki Wahhaj. 2012. "Formal Law as a Magnet to Reform Custom." *Economic Development and Cultural Change* 60 (4): 795–828. doi:10.1086/665607.
- Ali, Daniel Ayalew, Klaus Deininger, Matthew Collin, Stefan Dercon, Justin Sanderfur, and Andrew Zeitlin. 2014. "The Price of Empowerment Experimental Evidence on Land Titling in Tanzania." 6908. *World Bank Policy Research Working Paper*.
- Andreasen, Manja Hoppe, and Jytte Agergaard. 2016. "Residential Mobility and Homeownership in Dar Es Salaam." *Population and Development Review* 42 (March): 95–110.
- Andreasen, Manja Hoppe, and Lasse Moller-Jensen. 2016. "Beyond the Networks: Self-Help Services and Post-Settlement Network Extensions in the Periphery of Dar Es Salaam." *Habitat International* 53. Elsevier: 39–47. doi:10.1016/j.habitatint.2015.11.003.
- Antos, Sarah E., Somik V. Lall, and Nancy Lozano Gracia. 2016. "The Morphology of African Cities." *World Bank Policy Research Working Paper*.
- Antwi, Adarkwah, and John Adams. 2003. "Economic Rationality and Informal Urban Land Transactions in Accra, Ghana." *Journal of Property Research* 20 (1): 67–90. doi:10.1080/09599910210159398.
- Arabindoo, Pushpa. 2011. "Rhetoric of the 'Slum.'" *City* 15 (15:6): 636–46. doi:10.1080/13604813.2011.609002.
- Arimah, Ben. 1992. "Hedonic Prices and the Demand for Housing Attributes in a Third World City: The Case of Ibadan, Nigeria." *Urban Studies* 29 (5): 639–51. doi:10.1080/00420989220080601.
- Arku, G., I. Luginaah, and P. Mkandawire. 2012. "'You Either Pay More Advance Rent or You Move Out': Landlords/Ladies' and Tenants' Dilemmas in the Low-Income Housing Market in Accra, Ghana." *Urban Studies* 49 (14): 3177–93. doi:10.1177/0042098012437748.
- Ashraf, Nava, Edward L. Glaeser, and Giacomo A M Ponzetto. 2016. "Infrastructure, Incentives, and Institutions." *American Economic Review* 106 (5): 77–82. doi:10.1257/aer.p20161095.
- Asiyanbola, Abidemi R. 2006. "Residential Location Decision-Making and Gender in Nigeria." *Geoforum* 37 (6): 1059–65. doi:10.1016/j.geoforum.2006.01.006.

- Azariadis, Costas, and John Stachurski. 2005. "Poverty Traps." In *Handbook of Economic Growth*, edited by Philippe Aghion and Steven N Durlauf, 1:449–86. Elsevier. doi:10.1016/S1574-0684(05)01005-1.
- Baker, Judy. 2008. "Urban Poverty: A Global View." 5. *World Bank Urban Papers*. Urban Papers.
- Baland, Jean-Marie, and Jean-Philippe Platteau. 2000. *Halting Degradation of Natural Resources: Is There a Role for Rural Communities?* Oxford: Oxford University Press. doi:10.1093/0198290616.001.0001.
- Bardham, Prenab. 2010. "Institutional Economics of Development: Some General Reflections." In *Institutional Microeconomics of Development*, edited by T. Besley and Rajshri Jayaraman. MIT Press.
- Barnhardt, Sharon, Erica Field, and Rohini Pande. 2017. "Moving to Opportunity or Isolation? Network Effects of a Randomized Housing Lottery in Urban India." *American Economic Journal: Applied Economics* 9 (1): 1–32. doi:10.1257/app.20150397.
- Barrett, Christopher B., and Michael R. Carter. 2013. "The Economics of Poverty Traps and Persistent Poverty: Empirical and Policy Implications." *Journal of Development Studies* 49 (7): 976–90. doi:10.1080/00220388.2013.785527.
- Barrett, Christopher B., Michael R. Carter, and Peter D. Little. 2006. "Understanding and Reducing Persistent Poverty in Africa: Introduction to a Special Issue." *Journal of Development Studies* 42 (2): 167–77. doi:10.1080/00220380500404587.
- Bates, Robert H. 1995. "Social Dilemmas and Rational Individuals: An Assessment of the New Institutionalism." In *The New Institutional Economics and Third World Development*, edited by J. Harris, J. Hunter, and C. M Lewis, 27–48. Routledge.
- Beall, Jo, and Sean Fox. 2009. *Cities and Development*. Oxford: Routledge. <http://www.routledge.com/books/details/9780415390996/>.
- Beegle, Kathleen, Luc Christiaensen, Andrew Dabalen, and Isis Gaddis. 2016. *Poverty in a Rising Africa*. Washington, DC: World Bank. doi:10.1596/978-1-4648-0723-7.
- Beegle, Kathleen, Joachim De Weerd, Jed Friedman, and John Gibson. 2010. "Methods of Household Consumption Measurement through Surveys Experimental Results from Tanzania." *World Bank Policy Research Working Paper*. Washington, DC.
- Belghith, Nadia Belhaj Hassine, Maria Adelaida Lopera, Alvin Etang Ndip, and Wendy Karamba. 2018. "Analysis of the Mismatch between Tanzania Household Budget Survey and National Panel Survey Data in Poverty & Inequality Levels and Trends." 8361. *World Bank Policy Research Working Paper*. Washington, DC.
- Birch, Eugenie L., Shahana Chattaraj, and Susan M. Wachter, eds. 2016. *Slums: How Informal Real Estate Markets Work*. Philadelphia: University of Pennsylvania Press.
- Bird, Julia, Piero Monteburuno, and Tanner Regan. 2017. "Life in a Slum: Understanding Living Conditions in Nairobi's Slums across Time and Space." *Oxford Review of Economic Policy* 33 (3): 496–520. doi:10.1093/oxrep/grx036.
- Boone, Catherine, and Lydia Nyeme. 2015. "Land Institutions and Political Ethnicity in Africa Evidence from Tanzania." *Comparative Politics* 48 (1): 67–86. http://apps.woefknowledge.com/full_record.do?product=UA&search_mode=MarkedList&qid=26&SID=2E1nJRIOMR4rsEV8H8P&page=3&doc=29&colName=WOS&cacheurlFromRightClick=no.
- Boudreaux, Karol. 2008. "Urbanisation and Informality in Africa's Housing Markets."

- Economic Affairs*. <http://onlinelibrary.wiley.com/doi/10.1111/j.1468-0270.2008.00818.x/full>.
- Bowles, Samuel, Steven N Durlauf, and Karla Hoff. 2006. "Introduction." In *Poverty Traps*, edited by Samuel Bowles, Steven N Durlauf, and Karla Hoff, 1–13. Princeton: Princeton University Press.
- Brennan, James R. 2007. "Between Segregation and Gentrification: Africans, Indians, and the Struggle for Housing in Dar Es Salaam, 1920-1950." In *Dar Es Salaam: Histories from an Emerging African Metropolis*, edited by James R. Brennan, Andrew Burton, and Yusuf Lawi, 118–35. Dar es Salaam: Mkuki Na Nyota Publishers.
- Brennan, James R., and Andrew Burton. 2007a. "Introduction." In *Dar Es Salaam: Histories from an Emerging African Metropolis*, edited by James R. Brennan, Andrew Burton, and Yusuf Lawi, 1–12. Dar es Salaam: Mkuki Na Nyota Publishers.
- . 2007b. "The Emerging Metropolis: A History of Dar Es Salaam, circa 1862-2000." In *Dar Es Salaam: Histories from an Emerging African Metropolis*, edited by James R. Brennan, Andrew Burton, and Yusuf Lawi, 13–75. Dar es Salaam: Mkuki Na Nyota Publishers.
- Brenner, Neil. 2009. "What Is Critical Urban Theory?" *City* 13 (2–3): 198–207. doi:10.1080/13604810902996466.
- Briggs, John. 2011. "The Land Formalisation Process and the Peri-Urban Zone of Dar Es Salaam." *Planning Theory and Practice* 12 (1): 115–53.
- Brousseau, Eric, and Jean-Michel Glachant. 2008. *New Institutional Economics: A Guide Book*. Cambridge: Cambridge University Press.
- Brueckner, K., and Somik V. Lall. 2015. "Cities in Developing Countries: Fueled by Rural – Urban Migration, Lacking in Tenure Security, and Short of Affordable Housing." In *Handbook of Regional and Urban Economics*, edited by Gilles Duranton, Vernon Henderson, and William Strange, 5:1399–1455. Amsterdam: Elsevier B.V. doi:10.1016/B978-0-444-59531-7.00021-1.
- Buckley, Robert M., and Jerry Kalarickal. 2005. "Housing Policy in Developing Countries: Conjectures and Refutations." *The World Bank Research Observer* 20 (2): 233–57. doi:10.1093/wbro/lki007.
- . 2006. *Thirty Years of World Bank Shelter Lending: What Have We Learned?* Washington, DC: World Bank. doi:10.1596/978-0-8213-6577-9.
- Burbidge, Dominic. 2013. "Trust Creation in the Informal Economy: The Case of Plastic Bag Sellers of Mwanza." *African Sociological Review* 17 (1): 79–103.
- Burgess, Rod. 1977. "Self-Helphousing: A New Imperialist Strategy? A Critique of the Turner School." *Antipode* 98 (March). doi:10.1111/j.1467-8330.1977.tb00710.x.
- Burra, Marco. 2004. "Land Use Planning and Governance in Dar Es Salaam: A Case Study from Tanzania." In *Reconsidering Informality: Perspectives from Urban Africa*, edited by Karen Tranberg Hansen and Mariken Vaa, 143–57. Nordiska Afrikainstitutet.
- Cadstedt, Jenny. 2006a. "Influence and Invisibility Tenants in Housing Provision in Mwanza City." Stockholm University.
- . 2006b. "Tenants in Tanzania - Invisible Dwellers?" *Paper Presented at the Nordic Africa Days*. The Nordic Africa Institute 30 September–2 October, Uppsala, Sweden.
- . 2010. "Private Rental Housing in Tanzania — a Private Matter?" *Habitat International* 34 (1). Elsevier Ltd: 46–52. doi:10.1016/j.habitatint.2009.05.001.

- Cai, Yongyang, Harris Selod, and Jevgenijs Steinbuks. 2015. "Urbanization and Property Rights." *World Bank Policy Research Working Paper*. Washington, DC.
- Campbell, Patricia. 2013. "Collateral Damage? Transforming Subprime Slum Dwellers into Homeowners." *Housing Studies* 28 (3): 453–72.
doi:10.1080/02673037.2013.759543.
- . 2014. "'The Shack Becomes the House, the Slum Becomes the Suburb and the Slum Dweller Becomes the Citizen': Experiencing Abandon and Seeking Legitimacy in Dar Es Salaam." University of Glasgow.
- Carr-Hill, Roy. 2013. "Missing Millions and Measuring Development Progress." *World Development* 46. Elsevier: 30–44. doi:10.1016/j.worlddev.2012.12.017.
- Centre for Affordable Housing in Africa. 2017. "Housing Finance in Africa: A Review of Some of Africa's Housing Finance Markets." Johannesburg.
http://housingfinanceafrica.org/app/uploads/2017_CAHF_YEARBOOK_14.10-copy.compressed.pdf.
- Chang, Ha Joon. 2011. "Institutions and Economic Development: Theory, Policy and History." *Journal of Institutional Economics* 7 (4): 473–98.
doi:10.1017/S1744137410000378.
- Chant, Sylvia, and Cathy McIlwaine. 2015. *Cities, Slums and Gender in the Global South: Towards a Feminised Urban Future*. Routledge. doi:10.4324/9781315862996.
- Chattaraj, Shahana. 2016. "Property Markets Without Property Rights: Dharavi's Informal Real Estate Market." In *Slums: How Informal Real Estate Markets Work*, edited by Eugenie L. Birch, Shahana Chattaraj, and Susan M. Wachter, 94–106. University of Pennsylvania Press.
- Chattaraj, Shahana, and Michael Walton. 2017. "Functional Dysfunction: Mumbai's Political Economy of Rent Sharing." *Oxford Review of Economic Policy* 33 (3): 438–56. doi:10.1093/oxrep/grx032.
- Cheshire, Paul, and Stephen Sheppard. 2004. "Land Markets and Land Market Regulation: Progress towards Understanding." *Regional Science and Urban Economics* 34 (6): 619–37. doi:10.1016/j.regsciurbeco.2004.03.001.
- Chetty, Raj, and Nathaniel Hendren. 2018a. "The Impacts of Neighbourhoods on Intergenerational Mobility I: Childhood Exposure Effects." *The Quarterly Journal of Economics* 133 (3): 1107–62. doi:10.1093/qje/qjy007.Advance.
- . 2018b. "The Impacts of Neighbourhoods on Intergenerational Mobility II: County-Level Estimates." *The Quarterly Journal of Economics*, no. 3: 1163–1228.
doi:10.1093/qje/qjy006.Advance.
- Chetty, Raj, Nathaniel Hendren, and Lawrence F. Katz. 2016. "The Effects of Exposure to Better Neighborhoods on Children: New Evidence from the Moving to Opportunity Experiment." *American Economic Review* 106 (4): 855–902.
doi:10.1257/aer.20150572.
- Clark, William A V. 2013. "Life Course Events and Residential Change: Unpacking Age Effects on the Probability of Moving." *Journal of Population Research* 30 (4): 319–34.
- Cohen, Michael. 2014. "The City Is Missing in the Millennium Development Goals." *Journal of Human Development and Capabilities* 15 (2–3): 261–74.
doi:10.1080/19452829.2014.899564.
- Collier, Paul. 2017. "African Urbanization: An Analytic Policy Guide." *Oxford Review of*

- Economic Policy* 33 (3): 405–37. doi:10.1093/oxrep/grx031.
- Collier, Paul, and Patricia Jones. 2017. “Transforming Dar Es Salaam into a City That Works.” In *Tanzania: The Path to Prosperity*, edited by Christopher S. Adam, Paul Collier, and Ndulu Benno, 45–66. Oxford. doi:10.1093/acprof:oso/978019870812.001.0001.
- Collier, Paul, and Anthony J. Venables. 2013. “Housing and Urbanization in Africa: Unleashing a Formal Market Process.” *CSAE Working Paper Series*.
- . 2017. “Urbanization in Developing Economies: The Assessment.” *Oxford Review of Economic Policy* 33 (3): 355–72. doi:10.1093/oxrep/grx035.
- Collin, Matthew, Stefan Dercon, Simone Lombardini, Justin Sandefur, and Andrew Zeitlin. 2012. “Slum-Upgrading in Tanzania: Public Infrastructure and Private Property Rights.”
- Collin, Matthew, Justin Sandefur, and Andrew Zeitlin. 2015. “Falling Off the Map: The Impact of Formalizing (Some) Informal Settlements in Tanzania.” *CSAE Working Paper Series*. <http://www.csae.ox.ac.uk/workingpapers/pdfs/csae-wps-2015-09.pdf>.
- CPCS. 2015. “Housing Market Study Tanzania.” [http://www.unhabitat.org/downloads/docs/4997_65700_IHMS Main Report.pdf](http://www.unhabitat.org/downloads/docs/4997_65700_IHMS%20Main%20Report.pdf).
- Crawford, Sue E. S., and Elinor Ostrom. 1995. “A Grammar of Institutions.” *American Political Science Review* 89 (3): 582–600. doi:10.2307/2082975.
- Dasgupta, Basab, and Somik V. Lall. 2006. “Assessing Benefits of Slum Upgrading Programs in Second-Best Settings.” *World Bank Policy Research Working Paper* 3993: 1–40.
- Dasgupta, P. 2003. “Social Capital and Economic Performance: Analytics.” In *Critical Writings in Economic Institutions: Foundations of Social Capital*, edited by Elinor Ostrom and Toh-Kyeong Ahn. Cheltenham: Edward Elgar. <http://medcontent.metapress.com/index/A65RM03P4874243N.pdf%5Cnhttp://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.127.8067&rep=rep1&type=pdf>.
- Davis, Mike. 2006. *Planet of Slums*. London; New York: Verso.
- De Soto, Hernando. 1989. *The Other Path: The Invisible Revolution in the Third World*. New York: Harper & Row.
- . 2000. *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else*. Basic Civitas Books.
- de Waal, Dominic, and Brian Cooksey. 2008. “Why Did City Water Fail? The Rise and Fall of Private Sector Participation in Dar Es Salaam’s Water Supply.” *WaterAid in Tanzania*. Dar es Salaam.
- De Weerd, Joachim, Stefan Dercon, Tessa Bold, and Alula Pankhurst. 2007. “Membership Based Indigenous Insurance Associations in Ethiopia and Tanzania.” In *Membership Based Organizations of the Poor*, edited by Martha Chen, Renana Jhabvala, Ravi Kanbur, and Carol Richards, 157–76. London: Routledge. doi:10.4324/9780203934074.
- Deaton, Angus. 2009. “Measuring Poverty.” In *Handbook on Poverty and Inequality*, edited by Jonathan Haughton and Shahidur Khandker, 9–38. Washington, D.C.: World Bank. doi:10.2139/ssrn.564001.
- Demsetz, Harold. 1967. “Toward a Theory of Property Rights.” *American Economic Review* 57 (2): 347–59.
- Desai, Vandana, and Alex Loftus. 2013. “Speculating on Slums: Infrastructural Fixes in

- Informal Housing in the Global South.” *Antipode* 45 (4): 789–808.
doi:10.1111/j.1467-8330.2012.01044.x.
- DFID. 2002. “Better Livelihoods for Poor People: The Role of Land Policy.”
- Dieleman, Frans M. 2001. “Modelling Residential Mobility ; a Review of Recent Trends in Research.” *Journal of Housing and Built Environment* 16 (1970): 249–65.
doi:10.1023/a:1012515709292.
- Doss, Cheryl R., and Ruth Meinzen-Dick. 2015. “Collective Action within the Household: Insights from Natural Resource Management.” *World Development* 74. Elsevier Ltd: 171–83. doi:10.1016/j.worlddev.2015.05.001.
- . 2018. “Women’s Land Tenure Security: A Conceptual Framework.” Seattle, WA: Research Consortium.
- Dowall, David, and Michael Leaf. 1991. “The Price of Land for Housing in Jakarta.” *Urban Studies* 28 (5): 707–22. doi:10.1080/00420989120080881.
- Durand-Lasserve, Alain, Maylis Durand-Lasserve, and Harris Selod. 2013. “A Systemic Analysis of Land Markets and Land Institutions in West African Cities The Case of Bamako , Mali.” *World Bank Policy Research Working Paper*.
- Duranton, Gilles, and Diego Puga. 2004. “Micro-Foundations of Urban Agglomeration Economies.” In *Handbook of Regional and Urban Economics*. Vol. 4.
doi:10.1016/S0169-7218(04)07048-0.
- Durlauf, Steven N. 2004. “Neighborhood Effects.” In *Handbook of Regional and Urban Economics Volume 4*, edited by J Vernon Henderson and J. F. Thisse. Vol. 4. Elsevier B.V. doi:10.1016/S0169-7218(04)07050-9.
- Eckstein, Susan. 1990. “Urbanization Revisited: Inner-City Slum of Hope and Squatter Settlement of Despair.” *World Development* 18 (2): 165–81. doi:10.1016/0305-750X(90)90046-Z.
- Eggertsson, Thráinn. 1990. *Economic Behavior and Institutions*. Cambridge: Cambridge University Press.
- Ellickson, Robert C. 1991. *Order without Law: How Neighbors Settle Disputes*. Cambridge, MA: Harvard University Press.
- Ezeh, Alex, Oyinlola Oyebode, David Satterthwaite, Yen Fu Chen, Robert Ndugwa, Jo Sartori, Blessing Mberu, et al. 2017. “The History, Geography, and Sociology of Slums and the Health Problems of People Who Live in Slums.” *The Lancet* 389 (10068). Elsevier Ltd: 547–58. doi:10.1016/S0140-6736(16)31650-6.
- Fafchamps, Marcel. 1992. “Solidarity Networks in Preindustrial Societies: Rational Peasants with a Moral Economy.” *Economic Development and Cultural Change* 19 (9): 155–79.
- . 2010. “Spontaneous Markets, Networks, and Social Capital: Lessons from Africa’.” In *Institutional Microeconomics of Development*, edited by T. Besley and Rajshri Jayaraman. MIT Press.
- Farfán, Gabriela, María Eugenia Genoni, and Renos Vakis. 2015. “You Are What (and Where) You Eat: Capturing Food Away from Home in Welfare Measures.” *World Bank Policy Research Working Paper*, no. 7257.
- Fekade, Wubalem. 2000. “Deficits of Formal Urban Land Management and Informal Responses under Rapid Urban Growth, an International Perspective.” *Habitat International* 24 (2): 127–50. doi:10.1016/S0197-3975(99)00034-X.
- Feler, Leo, and J Vernon Henderson. 2011. “Exclusionary Policies in Urban Development:

- Under-Servicing Migrant Households in Brazilian Cities.” *Journal of Urban Economics* 69 (3). Elsevier Inc.: 253–72. doi:10.1016/j.jue.2010.09.006.
- Field, Erica. 2005. “Property Rights and Investment in Urban Slums.” *Journal of the European Economic Association* 3 (May): 279–90. doi:10.1162/jeea.2005.3.2-3.279.
- Field, Erica, and Michael Kremer. 2006. “Impact Evaluation for Slum Upgrading Interventions.” Washington, DC: World Bank.
- Fox, Sean. 2014. “The Political Economy of Slums: Theory and Evidence from Sub-Saharan Africa.” *World Development* 54. Elsevier Ltd: 191–203. doi:10.1016/j.worlddev.2013.08.005.
- Frankenhoff, C. A. 1967. “Elements of an Economic Model for Slums in a Developing Economy.” *Economic Development and Cultural Change* 16 (1): 27–36.
- Friedman, Joseph, Emmanuel Jimenez, and Stephen K. Mayo. 1988. “The Demand for Tenure Security in Developing Countries.” *Journal of Development Economics* 29 (2): 185–98. doi:10.1016/0304-3878(88)90034-X.
- Fukuda-Parr, Sakiko. 2011. “Theory and Policy in International Development: Human Development and Capability Approach and the Millennium Development Goals.” *International Studies Review* 13 (1): 122–32. doi:10.1111/j.1468-2486.2010.01003.x.
- Gibson, John, and Bonggeun Kim. 2013. “Do the Urban Poor Face Higher Food Prices? Evidence from Vietnam.” *Food Policy* 41. Elsevier Ltd: 193–203. doi:10.1016/j.foodpol.2013.05.003.
- Gilbert, Alan. 2007. “The Return of the Slum: Does Language Matter?” *International Journal of Urban and Regional Research* 31 (4): 697–713. doi:10.1111/j.1468-2427.2007.00754.x.
- . 2008. “Viewpoint: Slums, Tenants and Home-Ownership: On Blindness to the Obvious.” *International Development Planning Review* 30 (2): i–x. doi:10.3828/idpr.30.2.1.
- . 2011. “Epilogue.” *City* 15 (6): 722–26. doi:10.1080/13604813.2011.609019.
- . 2016. “Rental Housing: The International Experience.” *Habitat International* 54. Elsevier Ltd: 173–81. doi:10.1016/j.habitatint.2015.11.025.
- Glaeser, Edward L., and J. Vernon Henderson. 2017. “Urban Economics for the Developing World: An Introduction.” *Journal of Urban Economics* 98. Elsevier Inc.: 1–5. doi:10.1016/j.jue.2017.01.003.
- Gollin, Douglas, Remi Jedwab, and Dietrich Vollrath. 2016. “Urbanization with and without Industrialization.” *Journal of Economic Growth* 21 (1). Springer US: 35–70. doi:10.1007/s10887-015-9121-4.
- Gollin, Douglas, Martina Kirchberger, and David Lagakos. 2017. “In Search of a Spatial Equilibrium in the Developing World.” doi:10.3386/w23916.
- Grant, Ursula. 2010. “Spatial Inequality and Urban Poverty Traps.” *ODI Working Paper*. London.
- Green, Maia. 2014. *The Development State Aid, Culture & Civil Society in Tanzania*. Boydell & Brewer Ltd. <http://public.eblib.com/choice/PublicFullRecord.aspx?p=1811395>.
- Grusky, David B., and S. M. Ravi Kanbur. 2006. “Introduction: The Conceptual Foundations of Poverty and Inequality Measurement.” In *Poverty and Inequality*, edited by David B. Grusky, S. M. Ravi Kanbur, and Amartya Kumar Sen. Stanford University Press.

- Guha-Khasnobis, Basudeb, Ravi Kanbur, and Elinor Ostrom. 2006. "Introduction." In *Linking the Formal and Informal Economy: Concepts and Policies*, 1–320. doi:10.1093/0199204764.001.0001.
- Gulyani, Sumila, and Ellen M Bassett. 2007. "Retrieving the Baby from the Bathwater: Slum Upgrading in Sub-Saharan Africa." *Environment and Planning C: Government and Policy* 25 (4): 486–515. doi:10.1068/c4p.
- Gulyani, Sumila, and Debabrata Talukdar. 2008. "Slum Real Estate: The Low-Quality High-Price Puzzle in Nairobi's Slum Rental Market and Its Implications for Theory and Practice." *World Development* 36 (10). Elsevier Ltd: 1916–37. doi:10.1016/j.worlddev.2008.02.010.
- Haffner, Marietta, Marja Elsinga, and Joris Hoekstra. 2008. "Rent Regulation: The Balance between Private Landlords and Tenants in Six European Countries." *European Journal of Housing Policy* 8 (2): 217–33. doi:10.1080/14616710802037466.
- Haldar, Antara, and Joseph E. Stiglitz. 2013. "Analyzing Legal Formality and Informality: Lessons from the Land-Titling and Microcredit Programs." In *Law and Economics with Chinese Characteristics: Institutions for Promoting Development in the Twenty-First Century*, edited by David Kennedy and Joseph E. Stiglitz. Oxford University Press. doi:9780199698547.
- Harris, Richard. 2014. "Urban Land Markets: A Southern Exposure." In *Routledge Handbook of Cities in the Global South*, edited by Susan Parnell and Sophie Oldfield, 109–21. Abingdon: Routledge.
- Harvey, David. 2003. "The Right to the City." *International Journal of Urban and Regional Research* 27 (December): 939–41.
- . 2008. "The Right to the City." *New Left Review* 53 (53): 23–40. doi:10.1080/13604819608713449.
- Henderson, J Vernon. 2009. "The Effect of Residential Land Market Regulations on Urban Welfare." In *Urban Land Markets: Improving Land Management for Successful Urbanization*, edited by Somik V. Lall, Mila Freire, Belinda Yuen, Robin Rajack, and Jean-Jacques Helluin. Springer Netherlands.
- Henley, Giles, and Harriet Hoffler. 2016. "DFID's Land Portfolio and Programmes: An Overview."
- Hoff, Karla, and Joseph E Stiglitz. 2004. "The Transition Process in Post-Communist Societies : Towards a Political Economy of Property Rights." In *Toward Pro-Poor Policies: Aid, Institutions and Globalization*, 231–45.
- Hoy, M, and E Jimenez. 1991. "Squatters' Rights and Urban Development: An Economic Perspective." *Economica*, 79–92.
- Huchzermeyer, Marie. 2007. "Tenement City : The Emergence of Multi-Storey Districts Through Large-Scale Private Landlordism in Nairobi." *International Journal of Urban and Regional Research* 31 (December): 714–32. doi:10.1111/j.1468-2427.2007.00751.x.
- . 2009. "Enumeration as a Grassroot Tool Towards Securing Tenure in Slums: Insights from Kisumu, Kenya." *Urban Forum* 20: 271–92. doi:10.1007/s12132-009-9063-z.
- . 2011. *Cities with Slums : From Informal Settlement Eradication to a Right to the City in Africa*. Cape Town: UCT Press.
- Hulchanski, J. David. 1995. "The Concept of Housing Affordability: Six Contemporary

- Uses of the Housing Expenditure-to-Income Ratio.” *Housing Studies* 10 (4): 471–91. doi:10.1080/02673039508720833.
- Hulme, David. 2007. “The Making of the Millennium Human Development Meets Results-Based Management In an Imperfect World David Hulme Brooks World Poverty Institute December 2007 BWPI Working Paper 16.” *Brooks World Poverty Institute* 16 (1): 1–26.
- Ioannides, Yannis M., and Giorgio Topa. 2010. “Neighborhood Effects: Accomplishments and Looking Beyond Them.” *Journal of Regional Science* 50 (1): 343–62. doi:10.1111/j.1467-9787.2009.00638.x.
- Jamal, Kalunde, and Asna Kaniki. 2018. “Tanzania: Land Officers in Hot Water.” *The Citizen*.
- Jason, Arthur. 2007. “Informal Construction Workers in Dar Es Salaam, Tanzania.” 226. *Sectoral Activities Programme*. Geneva.
- Jha, Saumitra, Vijayendra Rao, and Michael Woolcock. 2007. “Governance in the Gullies: Democratic Responsiveness and Leadership in Delhi’s Slums.” *World Development* 35 (2): 230–46. doi:10.1016/j.worlddev.2005.10.018.
- Johnson, R. B., a. J. Onwuegbuzie, and L. a. Turner. 2007. “Toward a Definition of Mixed Methods Research.” *Journal of Mixed Methods Research* 1 (2): 112–33. doi:10.1177/1558689806298224.
- Johnson, R. B., and Anthony J. Onwuegbuzie. 2004. “Mixed Methods: A Research Paradigm Whose Time Has Come.” *Educational Researcher* 33 (7): 14–26.
- Joireman, Sandra F. 2011. *Where There Is No Government: Enforcing Property Rights in Common Law Africa*. Oxford: Oxford University Press. doi:10.1093/acprof:oso/9780199782482.001.0001.
- Jones, Patricia, Julia Bird, Anne Laski, and J M Lusugga Kironde. 2016. “Dar Es Salaam: A Policy Narrative.” Washington, DC: World Bank.
- Kazoka, Ludovick. 2017. “Tanzania : DAWASA Works to Supply Water to At Least 95 Percent of Dar City Residents.” *Tanzania Daily News*.
- Keogh, Geoffrey, and Eamonn D’Arcy. 1999. “Property Market Efficiency: An Institutional Economics Perspective.” *Urban Studies* 36 (13): 2401–14. doi:10.1080/0042098992485.
- Kiduanga, Juma Rashidi. 2003. “The Constraints Underpinning the Provision of Rental Housing by Low-Income Landlords in Dar Es Salaam.” University of Dar es Salaam.
- Kihato, Caroline Wanjiku, and Lauren Royston. 2013. “Rethinking Emerging Land Markets in Rapidly Growing Southern African Cities.” *Urban Forum* 24 (1): 1–9. doi:10.1007/s12132-012-9176-7.
- Kihato, Caroline Wanjiku, Lauren Royston, José Alberto Raimundo, and Inês Macamo Raimundo. 2013. “Multiple Land Regimes: Rethinking Land Governance in Maputo’s Peri-Urban Spaces.” *Urban Forum* 24 (1): 65–83. doi:10.1007/s12132-012-9163-z.
- Kim, Annette M. 2004. “A Market without the ‘right’ Property Rights.” *Economics of Transition* 12 (2): 275–305. <http://onlinelibrary.wiley.com/doi/10.1111/j.0967-0750.2004.00179.x/full>.
- Kironde, J M Lusugga. 1992. “Rent Control Legislation and the National Housing Corporation in Tanzania , 1985-1990.” *Canadian Journal of African Studies / Revue Canadienne Des Études Africaines* 26 (2): 306–27.
- . 1997. “Land Policy Options for Urban Tanzania.” *Land Use Policy* 14 (2): 99–

117. doi:10.1016/S0264-8377(96)00040-3.
- . 2000. “Understanding Land Markets in African Urban Areas: The Case of Dar Es Salaam, Tanzania.” *Habitat International* 24.
- . 2006. “The Regulatory Framework, Unplanned Development and Urban Poverty: Findings from Dar Es Salaam, Tanzania.” *Land Use Policy* 23 (4): 460–72. doi:10.1016/j.landusepol.2005.07.004.
- . 2009. “Improving Land Sector Governance in Africa: The Case of Tanzania.” In *Workshop on “Land Governance in Support of the MDGs: Responding to New Challenges March 9-10*. Washington DC.
- . 2015. “Good Governance, Efficiency and the Provision of Planned Land for Orderly Development in African Cities: The Case of the 20,000 Planned Land Plots Project in Dar Es Salaam, Tanzania.” *Current Urban Studies*, no. 3: 348–67.
- Kombe, Wilbard J. 1994. “The Demise of Public Urban Land Management and the Emergence of Informal Land Markets in Tanzania. A Case of Dar-Es-Salaam City.” *Habitat International* 18 (1): 23–43. doi:10.1016/0197-3975(94)90037-X.
- . 2005. “Land Use Dynamics in Peri-Urban Areas and Their Implications on the Urban Growth and Form: The Case of Dar Es Salaam, Tanzania.” *Habitat International* 29 (1): 113–35. doi:10.1016/S0197-3975(03)00076-6.
- Kombe, Wilbard J., and Volker Kreibich. 2000. “Reconciling Informal and Formal Land Management: An Agenda for Improving Tenure Security and Urban Governance in Poor Countries.” *Habitat International* 24 (2): 231–40. doi:10.1016/S0197-3975(99)00041-7.
- . 2001. “Informal Land Management in Tanzania and the Misconception about Its Illegality.” In *ESF/N-Aerus Annual Workshop “Coping with Informality and Illegality in Human Settlements in Developing Countries.”*
- Komu, Felician. 2011. “Housing Decay and Maintenance: The Case of Public Housing in Tanzania.” Royal Institute of Technology.
- . 2013. “Rental Housing in Tanzania: Power and Dialects of Misidentification.” *The Journal of Building and Land Development Special Is* (September): 29–41.
- Kornmeier, Jürgen, and Michael Bach. 2005. “The Necker Cube - An Ambiguous Figure Disambiguated in Early Visual Processing.” *Vision Research* 45 (8): 955–60. doi:10.1016/j.visres.2004.10.006.
- Kreibich, Volker. 2000. “Informal Land Management: An Introduction.” *Habitat International* 24: 121–25.
- Kruse, Hanna, and Lotta Torstensson. 2011. “Vertical Extensions of the Urban Swahili House.” Fieldstudy Report Civil Engineering and Urban Management M.A. KTH Royal Institute of Technology.
- Kumar, Sunil. 2001. “Social Relations, Rental Housing Markets and the Poor in Urban India.” London: London School of Economics.
- . 2011. “The Research–Policy Dialectic.” *City* 15 (6): 662–73. doi:10.1080/13604813.2011.609009.
- Kwanama, Elias M. 2015. “The Present Housing Challenge in Tanzania and Efforts Towards Provision of Affordable Housing.” In *The Role of Engineers in Development of Sustainable Built Environment and Affordable Housing in Tanzania*, 1–21. https://warwick.ac.uk/fac/sci/eng/elith/publications/all_publications/elith-z04.pdf.
- Kyessi, Alphonse G. 2005. “Community-Based Urban Water Management in Fringe

- Neighbourhoods: The Case of Dar Es Salaam, Tanzania.” *Habitat International* 29 (1): 1–25. doi:10.1016/S0197-3975(03)00059-6.
- Laderchi, Caterina Ruggeri, Saith Ruhi, and Frances Stewart. 2003. “Does It Matter That We Don’t Agree on the Definition of Poverty? A Comparison of Four Approaches.” *QEH Working Paper Series*.
- Lall, Somik V., J. Vernon Henderson, and Anthony J. Venables. 2017. *Africa’s Cities: Opening Doors to the World*. Washington, DC: World Bank.
- Lanjouw, Jean O., and Philip I. Levy. 2002. “Untitled: A Study of Formal and Informal Property Rights in Urban Ecuador.” *Economic Journal* 112 (482): 986–1019. doi:10.1111/1468-0297.00067.
- Lemanski, Charlotte, and Collin Marx, eds. 2015. *The City in Urban Poverty*. Palgrave Macmillan.
- Limbumba, Tatu Mtwangi. 2010. “Exploring Social-Cultural Explanations for Residential Location Choices: The Case of an African City - Dar Es Salaam.” Royal Institute of Technology Stockholm, Sweden.
- Locke, Anna, and Giles Henley. 2014. “Topic Guide: Land.” *ODI Working Paper*.
- Lombard, Melanie, and Carole Rakodi. 2016. “Special Issue Article: Urban Land and Conflict in the Global South: Towards an Analytical Framework.” *Urban Studies* 53 (13): 2683–99. doi:10.1177/0042098016659616.
- Lonardoni, Fernanda, and Jean Claude Bolay. 2016. “Rental Housing and the Urban Poor: Understanding the Growth and Production of Rental Housing in Brazilian Favelas.” *International Journal of Urban Sustainable Development* 8 (1). Taylor & Francis: 49–67. doi:10.1080/19463138.2015.1102141.
- Lozano-Gracia, Nancy, and Cheryl Young. 2014. “Housing Consumption and Urbanization.” 7112. *World Bank Policy Research Working Paper*. Washington, DC.
- Lucci, Paula, and Tanvi Bhatkal. 2014. “Monitoring Progress on Urban Poverty Are Current Data and Indicators Fit For.” *ODI Working Paper*.
- Lugongo, Bernard. 2016. “Tanzania: Rent Hike Fear Grips Tenants As TRA Plans House Checks.” *Tanzania Daily News*.
- Magigi, Wakuru, and B. B.K. Majani. 2006. “Community Involvement in Land Regularization for Informal Settlements in Tanzania: A Strategy for Enhancing Security of Tenure in Residential Neighborhoods.” *Habitat International* 30 (4): 1066–81. doi:10.1016/j.habitatint.2005.12.002.
- Mahoney, J. 2006. “A Tale of Two Cultures: Contrasting Quantitative and Qualitative Research.” *Political Analysis* 14 (3): 227–49. doi:10.1093/pan/mpj017.
- Malpezzi, Stephen. 1999. “Economic Analysis of Housing Markets in Developing and Transition Economies.” In *Handbook of Regional and Urban Economics Volume 3*, edited by Paul Chesire and Edwin S. Mills. North-Holland: Elsevier.
- Marx, Benjamin, Thomas Stoker, and Tavneet Suri. 2013. “The Economics of Slums in the Developing World.” *Journal of Economic Perspectives* 27 (4): 187–210. doi:10.1257/jep.27.4.187.
- . 2016. “There Is No Free House : Ethnic Patronage in a Kenyan Slum.” *MIT Working Paper*.
- Marx, Colin. 2009. “Conceptualising the Potential of Informal Land Markets to Reduce Urban Poverty.” *International Development Planning Review* 31 (4): 335–53. doi:10.3828/idpr.2009.1.

- Mayo, Stephen K, Stephen Malpezzi, and David J Gross. 1986. "Shelter Strategies for the Urban Poor in Developing Countries." *The World Bank Research Observer* 1 (2): 183–203.
- McGinnis, Michael D. 2011. "An Introduction to IAD and the Language of the Ostrom Workshop: A Simple Guide to a Complex Framework." *Policy Studies Journal* 39 (1): 169–83.
- Megbolugbe, I F. 1989. "A Hedonic Model: The Housing Market of Jos, Nigeria." *Urban Studies* 26 (1989): 486–94. doi:10.1080/00420988920080551.
- Mercer, Claire. 2014. "Middle Class Construction: Domestic Architecture, Aesthetics and Anxieties in Tanzania." *Journal of Modern African Studies* 52 (2): 227–50. doi:10.1017/S0022278X14000068.
- . 2017. "Landscapes of Extended Ruralisation: Postcolonial Suburbs in Dar Es Salaam, Tanzania." *Transactions of the Institute of British Geographers* 42 (1): 72–83. doi:10.1111/tran.12150.
- Michaels, Guy, Dzhamilya Nigmatulina, Ferdinand Rauch, Tanner Regan, Neeraj Baruah, and Amanda Dahlstrand-rudin. 2017. "Planning Ahead for Better Neighborhoods: Long Run Evidence from Tanzania." *IZA Discussion Paper Series*.
- Mitlin, D, and D Satterthwaite. 2013. *Urban Poverty in the Global South: Scale and Nature*. Routledge.
- Moldrop Wolff, Stina, Amelia Kuch, and Joshua Chipman. 2018. "Urban Land Governance in Dar Es Salaam." C-40412-TZA-1. *IGC Working Paper*.
- Mooya, Manya M. 2011. "Making Urban Real Estate Markets Work for the Poor: Theory, Policy and Practice." *Cities* 28 (3). Elsevier Ltd: 238–44. doi:10.1016/j.cities.2010.09.006.
- Mooya, Manya M., and Chris Cloete. 2007. "Informal Urban Property Markets and Poverty Alleviation: A Conceptual Framework." *Urban Studies* 44 (1): 147–65. doi:10.1080/00420980601032498.
- Morse, Janice M. 2004. "Theoretical Sampling." In *The SAGE Encyclopedia of Social Science Research Methods*, edited by Michael S. Lewis-Beck, Alan Bryman, and Tim Futing Liao, 1122–23. doi:http://dx.doi.org/10.4135/9781412950589.n1010.
- Moser, Caroline O. N. 1998. "The Asset Vulnerability Framework: Reassessing Urban Poverty Reduction Strategies." *World Development* 26 (1): 1–19. doi:10.1016/S0305-750X(97)10015-8.
- Moyo, Kerbina. 2006. "The Perceptions of Security of Land Tenure in Informal Settlements in Tanzania: Findings from Dar Es Salaam City." University of Dar es Salaam.
- Mukhija, Vinit. 2012. "Cities with Slums." In *The Oxford Handbook of Urban Planning*, edited by Randall Crane and Rachel Weber. Oxford: Oxford University Press. doi:10.1093/oxfordhb/9780195374995.013.0026.
- Musyoka, Rose. 2006. "Non-Compliance and Formalisation - Mutual Accommodation in Land Subdivision Processes in Eldoret, Kenya." *International Development Planning Review* 28 (2): 235–61. doi:10.3828/idpr.28.2.6.
- Mwakyusa, Alvar. 2015. "Tanzania: Tenants' Body Calls for Rent Regulator." *Tanzania Daily News*.
- Nijman, Jan. 2010. "A Study of Space in Mumbai's Slums." *Tijdschrift Voor Economische En Sociale Geografie* 101 (1): 4–17. doi:10.1111/j.1467-9663.2009.00576.x.

- Nkurunziza, Emmanuel. 2007. "Informal Mechanisms for Accessing and Securing Urban Land Rights: The Case of Kampala, Uganda." *Environment and Urbanization* 19 (2): 509–26. doi:10.1177/0956247807082833.
- North, Douglas C. 1990. *Institutions, Institutional Change and Economic Performance (Political Economy of Institutions and Decisions)*. Cambridge: Cambridge University Press. doi:10.1017/CBO9780511808678.010.
- . 1993. "The New Institutional Economics and Development." *Economic History, EconWPA*, no. January: 3–8. [http://www.deu.edu.tr/userweb/sedef.akgungor/Current topics in Turkish Economy/north.pdf](http://www.deu.edu.tr/userweb/sedef.akgungor/Current%20topics%20in%20Turkish%20Economy/north.pdf).
- Nuissl, Henning, and Dirk Heinrichs. 2013. "Slums: Perspectives on the Definition, the Appraisal and the Management of an Urban Phenomenon." *Erde* 144 (2): 105–16. doi:10.12854/erde-144-8.
- Obeng-Odoom, Franklin. 2011. "Real Estate Agents in Ghana: A Suitable Case for Regulation?" *Regional Studies* 45 (3): 403–16. doi:10.1080/00343400903241550.
- ODI. 2016. "Case Study: Arusha."
- Ostrom, Elinor. 2005. "Understanding the Diversity of Structured Human Interactions." In *Understanding Institutional Diversity*, 3–31. PRINCETON; OXFORD: Princeton University Press.
- . 2015. *Governing the Commons*. Canto Clas. Cambridge: Cambridge University Press. doi:978-1-10756978-2.
- Pamuk, A. 2000. "Informal Institutional Arrangements in Credit, Land Markets and Infrastructure Delivery in Trinidad." *International Journal of Urban and Regional Research* 24 (2): 379–96. doi:10.1111/1468-2427.00253.
- Parks, Michael J. 2014. "Urban Poverty Traps: Neighbourhoods and Violent Victimization and Offending in Nairobi, Kenya." *Urban Studies (Sage Publications, Ltd.)* 51 (9): 1812–32. doi:10.1177/0042098013504144.
- Parsa, Ali, Fahad Nakendo, William J. McCluskey, and Mark W. Page. 2011. "Impact of Formalisation of Property Rights in Informal Settlements: Evidence from Dar Es Salaam City." *Land Use Policy* 28 (4). Elsevier Ltd: 695–705. doi:10.1016/j.landusepol.2010.12.005.
- Pastore, M. C. 2015. "Reworking the Relation between Sanitation and the City in Dar Es Salaam, Tanzania." *Environment and Urbanization* 27 (2): 1–16. doi:10.1177/0956247815592285.
- Patel, Amit, Naoru Koizumi, and Andrew Crooks. 2014. "Measuring Slum Severity in Mumbai and Kolkata: A Household-Based Approach." *Habitat International* 41. Elsevier Ltd: 300–306. doi:10.1016/j.habitatint.2013.09.002.
- Payne, Geoffrey, A. Durand-Lasserve, and C. Rakodi. 2009. "The Limits of Land Titling and Home Ownership." *Environment and Urbanization* 21 (2): 443–62. doi:10.1177/0956247809344364.
- Payne, Geoffrey, and Alain Durand-Lasserve. 2012. "Holding On: Security of Tenure - Types, Policies, Practices and Challenges." <http://www.ohchr.org/Documents/Issues/Housing/SecurityTenure/Payne-Durand-Lasserve-BackgroundPaper-JAN2013.pdf>.
- Pedersen, Rasmus Hundsbæk. 2010. "Tanzania's Land Law Reform: The Implementation Challenge." *DIIS Working Paper 2010:37*, 20. doi:978-87-7605-422-9.
- . 2013. "Tanzania's New Wave Land Reform: A Matter of Institutionalisation."

- DIIS Working Paper.*
- . 2016. “Access to Land Reconsidered: The Land Grab, Polycentric Governance and Tanzania’s New Wave Land Reform.” *Geoforum* 72: 104–13. doi:10.1016/j.geoforum.2015.12.010.
- Peppercorn, Ira Gary, and Claude Taffin. 2013. *Rental Housing: Lessons from International Experience and Policies for Emerging Markets*. Washington, D.C.: World Bank.
- Perlman, Janice E. 2016. “The Formalization of Informal Real Estate Transactions in Rio’s Favelas.” In *Slums: How Informal Real Estate Markets Work*, edited by Eugenie L. Birch, Shahana Chattaraj, and Susan M. Wachter, 58–82. University of Pennsylvania Press.
- Perlman, Janice E., and Fernando Henrique Cardoso. 2010. *Favela: Four Decades of Living on the Edge in Rio de Janeiro*. Oxford: Oxford University Press.
- Pieter, Meine, Van Dijk, S Etajak, B Mwalwega, and John Ssempebwa. 2014. “Financing Sanitation and Cost Recovery in the Slums of Dar Es Salaam and Kampala.” *Habitat International* 43. Elsevier Ltd: 206–13. doi:10.1016/j.habitatint.2014.02.003.
- Plano Clark, V.L., and M. Badiee. 2010. “Research Questions in Mixed Methods Research.” In *Sage Handbook of Mixed Methods in Social and Behavioral Research*, edited by Abbas Tashakkori and Charles Teddlie. Sage.
- Platteau, Jean-Philippe. 2000. *Institutions, Social Norms, and Economic Development*. Amsterdam: Harwood Academic Publishers.
- . 2008. “The Causes of Institutional Inefficiency: A Development Perspective.” In *New Institutional Economics: A Guidebook*, edited by Eric Brousseau and Jean-Michel Glachant. Cambridge University Press.
- Polski, Margaret M, and Elinor Ostrom. 2017. “An Institutional Framework for Policy Analysis and Design.” In *Elinor Ostrom and the Bloomington School of Political Economy, Volume 3 A Framework for Policy Analysis*, edited by Daniel H. Cole and Michael D McGinnis. Lanham, Maryland: Lexington Books.
- Portes, Alejandro. 1971. “The Urban Slum in Chile: Types and Correlates.” *Land Economics* 47 (3): 235–48.
- Potts, Deborah. 2007. “The State and the Informal in Sub-Saharan African Urban Economies: Revisiting Debates on Dualism.” 18. *Cities and Fragile States*. Crisis States Working Papers Series. London.
- Precht, Rasmus. 2005. “Informal Settlement Upgrading and Low-Income Rental Housing: Impact and Untapped Potentials of a Community-Based Upgrading Project in Dar Es Salaam, Tanzania.” In *World Bank Urban Research Symposium*, 1–22. Brasilia.
- Quigley, John M. 2008. “Urban Economics.” In *The New Palgrave Dictionary of Economics*, edited by Steven N. Durlauf and Lawrence E. Blume, 2nd ed. Palgrave Macmillan.
- Rakodi, Carole. 1992. “Housing Markets in Third World Cities: Research and Policy into the 1990s.” *World Development* 20 (1): 39–55. doi:10.1016/0305-750X(92)90135-I.
- . 1995. “Rental Tenure in the Cities of Developing Countries.” *Urban Studies* 32 (4–5): 791–811. doi:10.1080/00420989550012898.
- . 2002. “Prosperity or Poverty? Wealth, Inequality and Deprivation in Urban Areas.” In *The Companion to Development Studies*, edited by Vandana Desai and R. B. Potter, 253–57. New York: Oxford University Press.

- . 2006a. “Social Agency and State Authority in Land Delivery Processes in African Cities: Compliance, Conflict and Cooperation.” *International Development Planning Review* 28 (2): 263–85. doi:10.3828/idpr.28.2.7.
- . 2006b. “State-Society Relations in Land Delivery Processes in Five African Cities. An Editorial Introduction.” *International Development Planning Review* 28 (2): 127–36. doi:10.3828/idpr.28.2.1.
- Rao, Vyjayanthi. 2003. “Slum as Theory.” *Lotus International* 143 (143): 10–17.
- . 2006. “Slum as Theory: The South/Asian City and Globalization.” *International Journal of Urban and Regional Research* 30 (2): 225–32. doi:10.1111/j.1468-2427.2008.00818.x.
- Rodrik, Dani. 2000. “Institutions for High-Quality Growth: What They Are and How to Acquire Them.” 7540. *NBER Working Paper*. Cambridge, MA.
- . 2007. *One Economics, Many Recipes: Globalization, Institutions, and Economic Growth*. Princeton: Princeton University Press.
- Roy, Ananya. 2005. “Urban Informality: Toward an Epistemology of Planning.” *Journal of the American Planning Association* 71 (2): 147–58. doi:10.1080/01944360508976689.
- Sanga, Alananga, and Charles Lucian. 2016. “Cost Shares and Factor-Cost Ratios in Owner-Built Incremental Housing in Dar Es Salaam, Tanzania.” *Journal of Construction in Developing Countries* 21 (July): 113–30. doi:10.21315/jcdc2016.21.1.6.
- Sanyal, Bish. 2016. “Informal Land Markets: Perspectives for Policy.” In *Slums: How Informal Real Estate Markets Work*, edited by E. Berch, S. Chattaraj, and S. Wachter, 177–95. University of Pennsylvania Press.
- Satterthwaite, David. 2014. “The Multidimensional Poverty Index: Another Underestimate of Urban Poverty | International Institute.” *IIED Blog*.
- . 2016. “A New Urban Agenda?” *Environment and Urbanization* 28 (1): 3–12. doi:10.1177/0956247816637501.
- Satterthwaite, David, Diana Mitlin, and Sheridan Bartlett. 2015. “Editorial : Is It Possible to Reach Low-Income Urban Dwellers with Good-Quality Sanitation ?” 27 (October): 3–18. doi:10.1177/0956247815576286.
- Scott, James C. 1998. *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*. Yale University Press.
- Selod, Harris, and Lara Tobin. 2013. “City Structure and Informal Property Rights in West Africa: Theory and Evidence.” *Unpublished Paper, World Bank*.
- Shaffer, Paul. 2013. “Ten Years of ‘Q-Squared’: Implications for Understanding and Explaining Poverty.” *World Development* 45 (May). Elsevier Ltd: 269–85. doi:10.1016/j.worlddev.2012.12.008.
- Shelter Afrique. 2014. “Formal Rental Housing in Sub-Sahara Africa: Opportunities for Providing Affordable Housing for All.” *Africa Rental Housing Conference*.
- Sheuya, Shaaban A. 2007. “Reconceptualizing Housing Finance in Informal Settlements: The Case of Dar Es Salaam, Tanzania.” *Environment and Urbanization* 19 (2): 441–56. doi:10.1177/0956247807082823.
- . 2009. “Urban Poverty and Housing Transformations in Informal Settlements.” *IDPR* 31 (1). doi:10.1080/0042098992485.
- Sheuya, Shaaban A., and Marco M. Burra. 2016. “Tenure Security, Land Titles and Access to Formal Finance in Upgraded Informal Settlements: The Case of Dar Es Salaam,

- Tanzania.” *Current Urban Studies* 04 (04): 440–60. doi:10.4236/cus.2016.44029.
- Simon, David. 2011. “Situating Slums.” *City* 15 (June 2014): 674–85. doi:10.1080/13604813.2011.609011.
- Sivam, Alpana. 2003. “Housing Supply in Delhi.” *Cities* 20 (2): 135–41. doi:10.1016/S0264-2751(02)00121-X.
- Smiley, Sarah L. 2013. “Mental Maps, Segregation, and Everyday Life in Dar Es Salaam, Tanzania.” *Journal of Cultural Geography* 30 (2): 215–44. doi:10.1080/08873631.2013.779151.
- Smith, Shaun. 2017. “Landlordism and Landlord – Tenant Relations in Kisumu and Kitale’s Low-Income Settlements.” *International Journal of Urban Sustainable Development* 9 (1). Taylor & Francis: 46–63. doi:10.1080/19463138.2016.1264403.
- Stiglitz, Joseph. 1998. “Redefining the Role of the State : What Should It Do? How Should It Do It ? And How Should These Decisions Be Made?” In *Presentation at the MITI Research Institute*. Tokyo, Japan.
- Stokes, Charles T. 1962. “A Theory of Slums.” *Land Economics* 38 (3): 187–97.
- Storper, Michael, and Allen J. Scott. 2016. “Current Debates in Urban Theory: A Critical Assessment.” *Urban Studies* 53 (6): 1114–36. doi:10.1177/0042098016634002.
- Talukdar, Debabrata. 2018. “Cost of Being a Slum Dweller in Nairobi: Living under Dismal Conditions but Still Paying a Housing Rent Premium.” *World Development* 109. Elsevier Ltd: 42–56. doi:10.1016/j.worlddev.2018.04.002.
- Teddle, Charles, and Abbas Tashakkori. 2008. *Foundations of Mixed Methods Research: Integrating Quantitative and Qualitative Approaches in the Social and Behavioral Sciences*. SAGE Publications, Inc.
- The Economist*. 2017. “The Great Urban Racket: Exploitation and Short-Sightedness in Africa’s Slums,” April 20.
- Thomson, Hilary, and Mark Petticrew. 2005. “Is Housing Improvement a Potential Health Improvement Strategy?” *Health Evidence Network Report*. Copenhagen WHO Regional Office for Europe. <http://www.euro.who.int/Document/E85725.pdf>.
- Tsuruta, Tadasu. 2007. “Simba or Yanga? Football and Urbanisation in Dar Es Salaam.” In *Dar Es Salaam: Histories from an Emerging African Metropolis*, edited by James R Brennan, Andrew Burton, and Yusuf Lawi, 198–212.
- Tunstall, Rebecca, Mark Bevan, Jonathan Bradshaw, and Karen Croucher. 2013. “The Links Between Housing and Poverty: An Evidence Review, Joseph Rowntree Foundation Report.” London.
- Turner, John. 1968a. “Housing Priorities, Settlement Patterns, and Urban Development in Modernizing Countries.” *Journal of the American Planning Association* 34 (6): 354–63. doi:10.1080/01944366808977562.
- . 1968b. “Uncontrolled Urban Settlement: Problems and Policies.” *International Social Development Review*, no. 1: 107–28.
- UN-HABITAT. 2018. “Housing and Slum Upgrading – UN-Habitat.” Accessed August 1. <http://unhabitat.org/jordan/jordan-housing-and-slum-upgrading/>.
- . 2003a. *Rental Housing An Essential Option for the Urban Poor in Developing Countries*. Nairobi, Kenya: UN Habitat.
- . 2003b. *Slums of the World*. UN-HABITAT. <http://www.unhabitat.org/pmss/listItemDetails.aspx?publicationID=1124>.
- . 2003c. “The Challenge of Slums - Global Report on Human Settlements.” Nairobi,

- Kenya. doi:<http://dx.doi.org/10.1108/meq.2004.15.3.337.3>.
- . 2006. *The State of the World's Cities Report 2006/2007*.
- . 2008. "The State of the World's Cities 2008/2009: Harmonious Cities." Nairobi, Kenya.
- . 2009. "Tanzania: Dar Es Salaam City Profile." Nairobi, Kenya.
- . 2011a. *Malawi Lilongwe Urban Profile. UN Habitat Human Settlements Programme*. <http://www.unhabitat.org>.
- . 2011b. *Quick Guide 2: Low-Income Housing Approaches to Helping the Urban Poor Find Adequate Housing in African Cities*. Nairobi, Kenya: UN Habitat.
- . 2012. *Handling Land: Innovative Tools for Land Governance and Secure Tenure. Tools for Land Governance and Secure Tenure*. Nairobi, Kenya. doi:ISO 14001:2004.
- . 2013. "Africa's Urban Land Markets: Piecing Together an Economic Puzzle."
- . 2014a. *The State of African Cities 2014*. Nairobi, Kenya: UN Habitat. <http://jas.sagepub.com/content/early/2014/09/05/0021909614547604.abstract>.
- . 2014b. *Women and Housing: Towards Inclusive Cities*. Nairobi, Kenya: UN Habitat.
- . 2016a. "SLUM ALMANAC 2015 2016 Tracking Improvement in the Lives of Slum Dwellers." <https://unhabitat.org/slum-almanac-2015-2016/>.
- . 2016b. *Urbanization and Development: Emerging Futures World Cities Report 2016. International Journal*. doi:10.1016/S0264-2751(03)00010-6.
- UN-HABITAT, and Cities Alliance. 2011. *Quick Guide for Policy Makers 7 Housing the Poor In African Cities - Rental Housing: A Much Neglected Housing Option for the Poor*.
- USAID. 2010. "Tanzania - Property Rights and Resource Governance Profile." http://www.land-links.org/wp-content/uploads/2016/09/USAID_Land_Tenure_Tanzania_Profile.pdf.
- Weeks, John R., Allan Hill, Douglas Stow, Arthur Getis, and Debbie Fugate. 2007. "Can We Spot a Neighborhood from the Air? Defining Neighborhood Structure in Accra, Ghana." *GeoJournal* 69 (1–2): 9–22. doi:10.1007/s10708-007-9098-4.
- Wells, Jill, Sinda H. Sinda, and Fatiha Haddar. 1998. "Housing and Building Materials in Low-Income Settlements in Dar Es Salaam." *Habitat International* 22 (4): 397–409. doi:10.1016/S0197-3975(98)00016-2.
- Whitehead, Christine. 2012. "The Neo-Liberal Legacy to Housing Research." In *The Sage Handbook of Housing Studies*, edited by W. Clapham, A. V. Clark, and K. Gibb, 113–130. London: Sage.
- . 2013. "Neo-Liberalism and the City: Or the Failure of Market Fundamentalism." *Housing, Theory and Society* 31 (1): 19–24. doi:10.1080/14036096.2013.843813.
- World Bank. 1993. "Housing: Enabling Markets to Work." Washington, D.C.
- . 2009. "Systems of Cities: Harnessing Urbanization for Growth and Poverty Alleviation." Washington DC.
- . 2010. "Tanzania Housing Finance Project (P117242) Project Appraisal Document."
- . 2013. "Harnessing Urbanization to End Poverty and Boost Prosperity in Africa."
- . 2015a. "Stocktaking of the Housing Sector in Sub-Saharan Africa: Challenges and Opportunities."
- . 2015b. "Tanzania Mainland Poverty Assessment." Washington, D.C.

- . 2016. “Measuring Living Standards within Cities.”
- Wratten, E. 1995. “Conceptualizing Urban Poverty.” *Environment and Urbanization* 7 (1): 11–38. doi:10.1177/095624789500700118.
- Xiao, Yang. 2017. “Hedonic Housing Price Theory Review.” In *Urban Morphology and Housing Market*, 11–40. Springer Netherlands. doi:10.1007/978-981-10-2762-8.