Combating the Growth of Slums Using For-Profit Social Business Models

by

Kurtis C. Fusaro

B.A., Economics Management, 2001

Ohio Wesleyan University

Submitted to the Center for Real Estate in Partial Fulfillment of the Requirements for the Degree of Master of Science in Real Estate Development

at the

Massachusetts Institute of Technology

September, 2009

Signature of Author _____

Center for Real Estate
July 24, 2009

Certified by: _____

Lynn Fisher, PhD
Associate Professor of Real Estate
Department of Urban Studies and Planning
Thesis Supervisor

Accepted by: _____

Brian A. Ciochetti, PhD
Chairman, Interdepartmental Degree
Program in Real Estate Development

Combating the Growth of Slums Using For-Profit Social Business Models

by

Kurtis C. Fusaro

Submitted to the Center for Real Estate in Partial Fulfillment of the Requirements for the Degree of Master of Science in Real Estate Development

Abstract

With 1 billion people living in the slums of cities today and no signs of a decrease in the rate of urbanization and population growth, it is obvious that new approaches to combating poverty and the global housing crisis are needed. Acknowledging the recent growth of the microfinance industry and social investing, this thesis investigates how for-profit social investment techniques could be used to create housing and combat the growth of slums. It compares various for-profit social business models and provides a "toolbox" of potential structures which could be employed based on the characteristics of a specific community. In the end, it shows that social business techniques hold promise as effective ways to draw money into developing nations from the world's capital markets to improve the lives of millions of informal settlers.

Using literature reviews, interviews with industry participants, and a feasibility study based in Manila, the paper shows that:

- There are multiple for-profit social business structures for producing low-cost housing which could be employed based on the characteristics of the particular community.
- The social investment landscape has developed to the point where there is significant capital available for investments in housing.
- A social business structure would be effective in providing housing for the lower-middle class population of informal settlements in Manila; and the implementation of such a program would be effective in relieving a large financial burden from public institutions, allowing them to serve more households in the lowest income segment.
- These social business models could be scaled-up to numerous communities to create a significant impact on the housing crisis.

As real estate developers fancy themselves as choreographers of a dance of multiple disciplines which, when orchestrated well, improves the quality of the built environment, I hope this paper presents a unique multidisciplinary approach to the issue of informal settlements, combining elements of finance, urban planning, law, and policy.

Thesis Supervisor: Lynn Fisher, PhD
Title: Associate Professor of Real Estate

Acknowledgements

I would like to express my profound and sincere appreciation to the following people for their time, support, and encouragement:

My sapient and patient advisor, Lynn Fisher, for her sound advice and feedback throughout the thesis process.

Luis Canizo for his enthusiasm, advice, and support.

Those who graciously met with me during my travels to Manila, including:

- Antonio "Tony" Meloto, Tamara Tan, and Michael Go of Gawad Kalinga
- Karen Goyena and Mark Diamante of HUDCC
- Johanna Klein of the Asian Development Bank
- Chris Pablo of the World Bank
- Mayor Tinga of the City of Taguig
- Representative Rufus Rodriguez of the Philippines House of Representatives
- Guillermo Choa & Ariel Pagdanganan of the Property Company of Friends

All the industry professionals who graciously granted me interviews.

Those who volunteered their time to review my work and provide advice.

Alberto Cailao for all his help planning my trip and Joyce Urieta who was a wonderful tour guide during my travels.

My CRE classmates. I have learned much from each of you over the past year and I look forward to seeing where the future leads everyone.

My family and friends without whom I would not be where I am today.

Table of Contents

List of Figures

Chapter 1: Introduction- Overview of Problem

1.1 Introduction

The bulk of world population growth in the next twenty years is expected to occur in less developed nations. In addition, a global trend of urbanization is occurring as the poor relocate to cities in the search of a higher standard of living. This rapid growth and urbanization is creating overwhelming demand for affordable housing in developing nations and is resulting in the formation of large informal settlements where poorly constructed housing and unsanitary conditions are the norm.

This paper examines the potential for using for-profit social business techniques to draw large sums money into developing countries from the world's capital markets to finance the creation of enough low-cost housing to make a significant impact on the growth of slums. It intends to show the following:

- Trends in urbanization and population growth throughout the world are causing a dramatic growth in the prevalence of slums and a corresponding demand for low-cost housing.
- Common non-profit practices in dealing with the growth of slums have not been able to keep pace with the problem.
- There are multiple for-profit social business structures for producing low-cost housing which could be employed based on the characteristics of the particular community.
- The social investment landscape has developed to where there is significant capital available for investments in housing.
- A social business structure would be effective in providing housing for the lower-middle class population of informal settlements in Manila, and the implementation of such a program would be effective in relieving a large financial burden from public institutions, allowing them to serve more households in the lowest income segment.
- These social business models could be scaled-up to numerous communities to create a significant impact on the housing crisis.

Motivation

My interest in this topic has developed over several years. I first became interested in the issue of the growth of slums and how real estate affects poverty during a trip to Malawi. I was amazed at how the access to technology and the standard of living varied so significantly within short distances. As I left the city on a minibus, cell phones, cars, and modern buildings gave way to small thatched roof huts and antiquated farming techniques within just a few miles. My interest was further piqued after reading Hernando DeSoto's book *The Mystery of Capital* which explores the role of property rights in development and Muhammed Yunis' book *Banker to the Poor* which promotes microlending as a powerful tool for helping people in developing nations pull themselves out of poverty. When I matriculated as a Masters in Real Estate Development candidate, I came to contemplate how property rights reforms, microlending, social business techniques, and new developments in renewable technologies could be combined to provide housing for informal settlers and combat the growth of slums.

As I further investigated the topic, I realized there may be an opportunity to contribute to the body of knowledge in a unique fashion by focusing on for-profit social business models for housing. There is a tremendous body of literature regarding informal settlements from an urban planning and policy perspective, but little about the potential for using private, for-profit models to deal with the problem. In addition, in recent years, popular economics books and industry reports have begun to focus on opportunities in developing nations for microfinance institutions and multinational consumer products companies, but little has been written about housing.

Methodology

This paper uses a combination of literature reviews, interviews with industry participants, and a feasibility study based in Manila to explore the pertinent issues and evaluate the proposed hypotheses. To explore the severity of the slum problem and common public sector responses, literature from economic and urban planning journals as well as publications from the main research institutions such as the World Bank and UN-HABITAT was reviewed. Potential for-profit revenue streams were analyzed using common business strategy techniques. The size of the social investment market was determined using literature from large industry players and consulting firms such as Monitor Group and Deutsche Bank. To evaluate the efficacy of these principles in the real world, they were applied to the Metropolitan Manila market. Manila was chosen due to the prevalence of informal settlements as well as the access to local stakeholders. Research conducted in Manila included interviews with industry professionals and visits to local communities. The Manila feasibility study is admittedly high-level in nature, however it provides a sanity check for many of the concepts presented in the rest of the paper. Although outside the scope of this thesis, ideally, the study would be expanded to survey the informal population to more accurately determine incomes, how much they are willing to pay for housing, and their willingness to relocate.

Preview

In the end, the paper concludes that social business models hold promise as a way to leverage the world's capital markets and create large amounts of housing for informal settlers; however implementation will be an arduous process due to high risks, small margins, and the immature nature of the social investment sector. The viability of such models is likely to increase as the social investment landscape matures. There is likely to be a significant increase in the amount of capital flowing into this untraditional investment class in the near future which will support an expansion of housing finance.

The Manila feasibility study shows that a social business structure would be an effective means for providing housing for the lower-middle class population living in informal settlements, but not the poorest segment of the community. Even though social investment models would not be effective in serving this group, the implementation of such models to help the low to middle class population would relieve a large financial burden from public institutions which would, in turn, allow them to serve more households in the lowest income segment.

Finally, the paper shows that these findings are likely generalizable to other communities. A "toolbox" of potential business models is necessary due to differences in demographics, land values, property

rights, labor costs, materials costs, cultural sensitivities, governmental cooperation, and natural resources. However, some variation on one of the proposed social business models should be effective in most communities. Risks due to political instability, corruption, violence, and inflation are the most daunting to overcome and may preclude investment in some communities, which is why segmentation strategies and feasibility studies are important to assess the optimal markets to target.

1.2 Urbanization and Population Growth

Many of the papers and articles written about the rapid population growth and urbanization occurring in developing nations start with a shocking statistic such as:

- "Up to 1 billion people live in the slums in the cities of the world - one sixth of humanity" (UN-HABITAT, 2009, p. 1)
- "Half of humanity now lives in cities, and within two decades, nearly 60 per cent of the world's people will be urban dwellers." (UN-HABITAT, 2008, p. iv)
- There are still around 1 billion people living at the margins of survival on less than US$1 a day, with 2.6 billion—40 percent of the world's population—living on less than US$2 a day. (UNDP, 2008, p. 25)
- "One out of every three people living in cities of the developing world lives in a slum" (UN-HABITAT, 2008, p. 90)
- "The World's urban population is projected to grow by more than 2 billion by 2030…ninety-four percent of this urban population growth will be in less developed regions….This means that virtually all the additional needs of the world's future population will have to be address in the urban areas of low- and middle- income countries." (UNDP #1, 2005, p. 11)

No matter which organization's statistics you find most shocking, it is evident that the world has a growing problem of inadequate shelter for the poor. The majority of initiatives which have attempted to deal with this growing problem have been led by governments, non-governmental organizations (NGOs), and international finance institutions. Although some models have shown promise, a lack of scalability has prevented any of the initiatives from keeping pace with the growth of the problem.

The table below displays the size of the slum populations in different areas of the world. As of 2005, 36.5% of the urban population (810 million people) in the developing world lived in slums. Sub-Saharan Africa is the region with the highest percentage of the urban population living in slums at 62.2% or 165 million people.

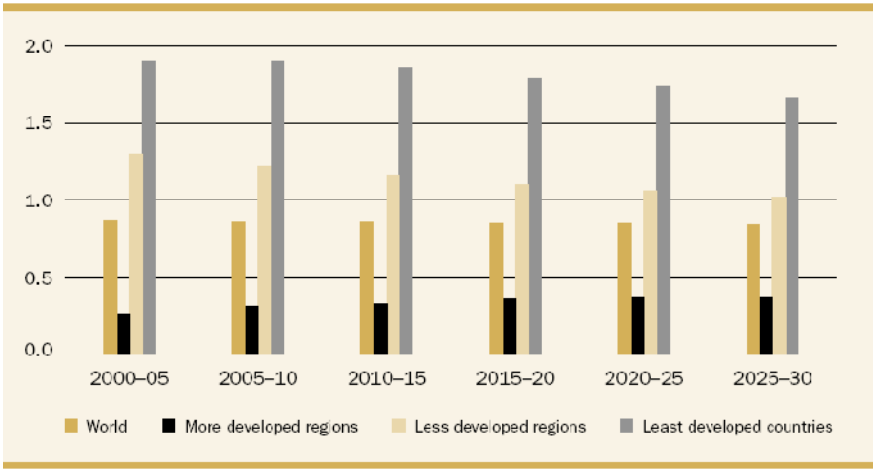
Figure 1: Proportion of Urban Population Living in Slums

Major area or region	Urban population (thousands) 2005 a	Percentage of Urban Population living in Slum 2005 b	Slum population (thousands) 2005 c
Developing world	2,219,811	36.5	810,441
Northern Africa	82,809	14.5	12,003
Sub-Saharan Africa	264,355	62.2	164,531
Latin America and the Caribbean	434,432	27.0	117,439
Eastern Asia	593,301	36.5	216,436
Southern Asia	468,668	42.9	201,185
South-Eastern Asia	243,724	27.5	67,074
Western Asia	130,368	24.0	31,254
Oceania	2,153	24.1	519

(UN-HABITAT, 2008, p. 90)

The chart below shows how urban population growth will continue to be highest in the least developed countries. Urban population growth rates are expected to be 1.5% to 2.0% annually over the next twenty years in the least developed countries while less than 0.5% in more developed regions.

Figure 2: Average Annual Rate of Change of Urban Population (%)



(UNDP #1, 2005, p. 11)

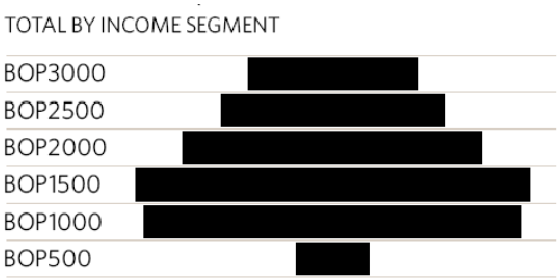
Millennium Development Goals

In September 2000 at the United Nations headquarters in New York, world leaders adopted the Millennium Declaration and committed their countries to a set of time-bound targets to reduce extreme poverty by 2015. These targets have become known as the Millennium Development Goals (MDGs). (United Nations) The eight goals and 18 targets were signed by 189 countries including 147 heads of state. Target 11 is to "have achieved a significant improvement by 2020 in the lives of at least 100 million slum dwellers". (The World Bank, 2006) Unfortunately, the world is not making significant progress on this goal. The 2008 Millennium Development Goals Report gave little evidence of improvement on this target, stating that still more than one third of the urban population in developing regions lives in slum conditions and "simple, low-cost interventions could significantly improve the lives of many slum dwellers." Appendix I displays a listing of all 18 Millennium Development Goal targets.

1.3 BOP Market

Numerous articles and books have been published in recent years discussing the "Base of the Pyramid" (BOP) as a potential consumer segment to target. The International Finance Corporation (IFC) defines the BOP as the 4 billion people in the world with incomes below $3,000 in local purchasing power. The IFC estimates that the global purchasing power of the BOP constitutes a $5 trillion consumer market. The BOP markets are poorly served and are characterized by inefficiency and a lack of competition. Many people see serving this segment of the world's population as both a new market opportunity and a means to help the people improve their standard of living. (Hammond, Kramer, Tran, Katz, & Walker, 2007)

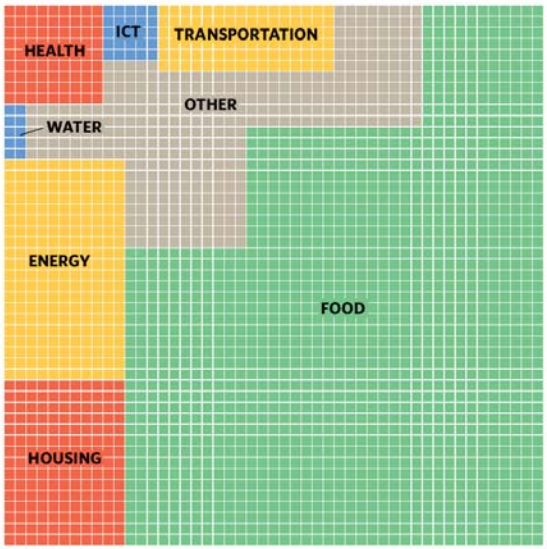
Figure 3: BOP Market- $5 Trillion



(Hammond, Kramer, Tran, Katz, & Walker, 2007)

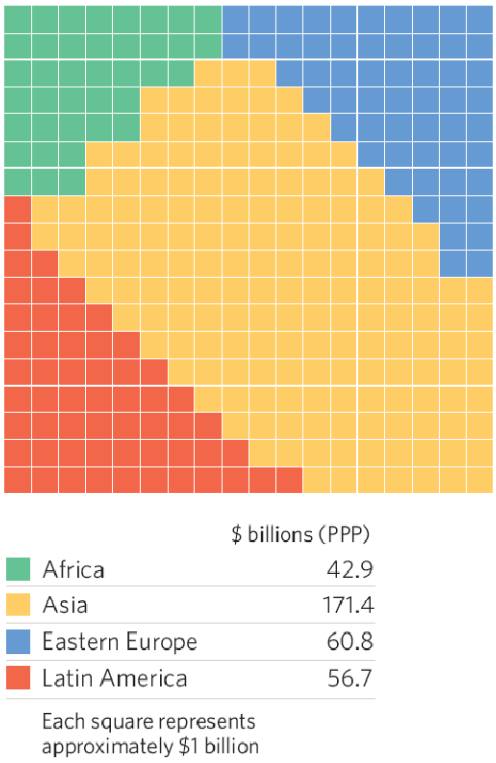
There is a significant market for housing in BOP populations. The World Resources Institute has calculated the total household spending on housing in the 36 low and middle income countries where standardized data exists as $187.5 billion. They estimate the total worldwide market for BOP housing to be $331.8 billion for 3.96 billion people but state that these numbers should be considered a lower bound due to difficulties in surveying and estimation. (Hammond, Kramer, Tran, Katz, & Walker, 2007, p. 69)

Figure 4: BOP Market by Sector ($5 trillion total)



(Hammond, Kramer, Tran, Katz, & Walker, 2007, p. 9)

Figure 5: BOP Spending on Housing ($331.8 billion total)



(Hammond, Kramer, Tran, Katz, & Walker, 2007, p. 69)

1.3 What are Slums and Why Do They Form?

The previous section showed that the growth of informal settlements is a major problem facing the world. Now, in order to analyze potential solutions to the informal settlement problem, it is important to specify the definition of a slum and understand why they form.

Definition of a Slum

There is no universally accepted definition of a slum, and the standards often vary by country. For the purposes of this paper, the terms "slum" and "informal settlement" will be used interchangeably and UN-HABITAT's definition of a slum from their 2008/2009 State of the World's Cities report will be used:

> "a group of individuals living under the same roof lacking one or more of the following conditions: access to improved water; access to improved sanitation facilities; sufficient living area (not more than three people sharing the same room); structural quality and durability of dwellings; and security of tenure." (UN-HABITAT, 2008, p. 92)

In addition to a definition of slums, UN-HABITAT also offers guidelines for measuring the successful remediation of each of these shelter deprivations.

Access to Safe Water

"A household is considered to have access to improved water supply if it has sufficient amount of water for family use, at an affordable price, available to household members without being subject to extreme effort, especially for women and children." (UN-HABITAT, 2006, p. 2)

Access to Improved Sanitation Facilities

"A household is considered to have adequate access to adequate sanitation, if an excreta disposal system, either in the form of a private toilet or a public toilet shared with a reasonable number of people, is available to household members." (UN-HABITAT, 2006, p. 2)

Sufficient Living Area

"A house is considered to provide a sufficient living area for the household members if not more than two people share the same room." (UN-HABITAT, 2006, p. 2)

Structural Quality and Durability of Dwellings

"A house is considered as 'durable' if it is built on a non-hazardous location and has a structure permanent and adequate enough to protect its inhabitants from the extremes of climatic conditions such as rain, heat, cold, humidity." (UN-HABITAT, 2006, p. 2)

Secure Tenure

"Secure tenure is the right of all individuals and groups to effective protection by the State against forced evictions. People have secure tenure when:

- There is evidence of documentation that can be used as proof of secure tenure status;
- There is either de facto or perceived protection from forced evictions." (UN-HABITAT, 2006, p. 2)

Why Slums Form

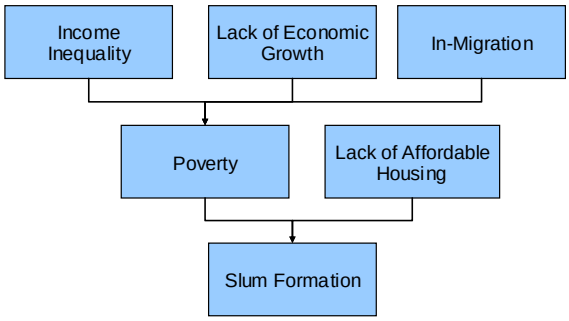
Slums form due to the convergence of poverty and a lack of affordable housing. The major elements of poverty (income inequality, lack of economic growth, and in-migration) are important issues to be addressed, however they are outside the scope of this paper. Our concern lies with the how to combat the lack of decent affordable housing.

Housing shortages can be caused by many factors. First, land may be controlled by the rich or be too expensive due to population growth and urbanization. Another factor is often a failure of governance. This may be due to a lack of housing policies and delivery systems, the direction of infrastructure resources to the formal sector, corruption, or a lack of political will. (UN-HABITAT, 2003, p. 40) Finally, housing shortages are often the result of informal settlers not being able to obtain financing. If the poor do not have access to mortgage loans, it is difficult for them to purchase or build homes. This, in turn, prevents informal settlers from monetizing the capital in their homes and contributes to the cycle of poverty according to some economists like Hernando DeSoto.

So how can the factors contributing to the lack of affordable housing be solved by private sector enterprises? Private sector solutions are most effective in solving the issues of inefficient delivery systems and the lack of financing. Private sector programs should be able to provide housing more

efficiently than governmental institutions, and microfinance institutions hold promise as a way to bring housing finance to the poor. The issues of corruption and a lack of political would need to be addressed by market selection as it would be difficult for private firms to be effective in markets plagued by these issues. Housing policies and the allocation of infrastructure resources to the formal sector are both items which would need to be negotiated with the government. Finally, when land is expensive or controlled by the rich, the price of land would be negotiated down or a model that does not entail the purchase of land would need to be used.

Figure 6: Elements of Slum Formation



(UN-HABITAT, 2003, p. 17)

1.4 Successful Remediations

The production of housing with adequate physical characteristics does not necessarily lead to a successful outcome for residents of slums. Several additional factors must be considered when assessing the effectiveness of a remediation program. The resident's tenure security, whether the social fabric of the community is maintained, the degree of community involvement, and the potential for scaling up operations are all important factors in evaluating the effectiveness of plans to provide housing.

Tenure Security

Acquisition of property rights by the poor is a stated goal of UN-HABITAT because they believe "security of tenure is one of the most important catalysts for attracting large scale capital necessary for comprehensive slum upgrading but also for the urban poor themselves to invest in their own dwelling and communities." (UN-HABITAT, 2006, p. 2). Many developing nations lack property rights or a system which makes it feasible for the poor to register formal title to property. In recent years, an increasing focus has been placed on property rights reforms to as a way to help developing nations improve their economies. Most notably, Hernando DeSoto popularized the belief that one of the main reasons capitalism has not succeeded in developing nations is a lack of an accessible property rights system and an efficient market for representing and leveraging existing capital. DeSoto attributes much of the economic vitality of the United States and other developed nations to the ability of entrepreneurs to

leverage their largest asset, their homes. He calculated the total value of real estate held but not legally registered by the poor in developing nations at $9.3 trillion. (DeSoto, 2000, p. 35) He further believes that widespread property rights reforms would allow developing countries to unlock this "dead capital" and accelerate economic growth. (DeSoto, 2000) Although DeSoto's theories have become popular in recent years and have influenced UN-HABITAT's slum remediation goals, there are competing theories which are important to acknowledge.

Predating DeSoto's recent books, Omar Razzaz argued that property can maintain significant value even without formal property rights in his article "Examining Property Rights and Investment in Informal Settlements: The Case of Jordan". Razzaz outlined the property rights issues experienced in Yajouz, a tribal area to the north-east of Amman, Jordan between the government, the Bani-Hasan tribe, and new urban settlers. As demand for land in the area grew, the indigenous Bani-Hasan started subdividing and selling small parcels of land to new settlers. No official titles or documents were used, only an unofficial document called a hujja (proof). By signing the hujja, the seller guaranteed to protect the buyer against the encroachment by neighbors, but it was explicitly stated that the owner was not responsible for actions by the government. (Razzaz, 1993, p. 344) Razzaz made the important point that what was being transacted in Yajouz was not property rights to land, but rather property claims. These claims were trading at prices lower than the market rate, but people were still buying. (Razzaz, 1993, p. 344)

In the early 1980s, as the value of land in Yajouz was increasing rapidly, the government started to take action to clear public land of illegal settlers. To their surprise, they met fierce resistance and clashes erupted. The government then took a different tactic and attempted to prevent any further settlement. Daily patrols were established, and any illegal structures under construction were destroyed. (Razzaz, 1993, p. 347) Any homes which did not have a permanent roof were considered under construction and torn down. The new program was effective for a short period, until residents began taking advantage of weekends to construct homes. Through the natural ingenuity of the markets, a specialty construction industry soon developed which was able to produce permanent homes in just two days during the weekend. (Razzaz, 1993, p. 348) The creation of these new ways to protect property rights show how there can be still be value in homes without legal title.

Another common rationale for promoting property rights in informal settlements is the belief that residents do not invest in their shelters because they lack security of tenure. Evidence of increased investment in housing following legalization has been documented, but Razzaz argued that the line of causality is not well understood. He argued that legality of tenure is not necessarily a precondition of security of tenure, and there is actually a continuum of security in illegal settlements which depends more on the occupant's perception of the probability of eviction, the availability of services, and the passage of time rather than on the exact legal status of tenure. (Razzaz, 1993, p. 349) He also pointed to growing evidence that in many parts of the world, rather than granting of legal title encouraging investment, the reverse causality is witnessed. In these communities, residents will invest in land up to the point where it is no longer economically feasible for the government to evict the settlers. (Razzaz, 1993, p. 352) However, Razzaz concedes that governments may want to pursue property rights reforms even if the economic causality of legal tenure and housing investment does not hold, because accurate

land records and enhanced property tax revenue may justify the costs of legalization. (Razzaz, 1993, p. 352)

Although DeSoto and Razzaz represent a tiny percentage of the literature regarding the importance of property rights in developing nations, their writings exhibit how there are differing views on the necessity of formal property rights reforms in creating successful outcomes for inhabitants of informal settlements. However, increased tenure security, whether formal or informal, appears to benefit settlers and economies. In the context of this investigation, formal tenure structures are most important for providing collateral which is needed for several models of large-scale housing production, which will be discussed further in Chapter 3.

Retaining communities and economies

When evaluating successful outcomes to informal settlements, another important consideration in addition to the physical and tenure security specifications outlined by UN-HABITAT is the ability to retain the pre-existing structure of communities and economies. This issue has been most notable in several controversial attempts to relocate informal settlements long distances from their original location. Large slums often have intricate and sizeable economies and social networks. For example, Mumbai's plan to redevelop the Dharavi slum and relocate residents to 225 square foot units in vertical towers has faced opposition not only because residents believe they are entitled to more space, but also because they fear the disruption of their businesses. Dharavi contains a huge number of small factories, workshops, kitchens, and recycling businesses. Many of these households depend on selling goods out of their ground level homes or are fundamentally linked to their proximity to downtown Mumbai. The relocation of this community will wreak havoc with the community and business networks which have taken generations to build. Any successful slum prevention or redevelopment plan must make provisions for these important social and business networks.

Community Involvement

Another important consideration when evaluating the success of an initiative to upgrade slums or prevent their formation is that of community involvement. There have been many examples of projects which have been unsuccessful because they did not include communities in the planning and decision-making process. Community opposition can easily curtail the success of any upgrading or resettlement program. One example of successful community involvement is the Community Organizations Development Institute (CODI) of Thailand which will be discussed later in Chapter 2. The CODI program allows urban poor community organizations to control the management and funding of upgrading projects and perform most of the construction. The process is "demand-driven" by communities rather than "supply-driven" by governments or NGOs. Communities choose how to use infrastructure subsidies and what type of housing to build. This is widely seen as having promoted pride in the low-income communities and has legitimized their role in the city. CODI's strength rises from the facts that it has been able to develop consensus among many stakeholders and its development plans are flexible and based on the characteristics of the community. (Boonyabancha, 2005, p. 11) To be characterized as

successful, any informal settlement remediation project should attempt to engage the community in a meaningful way.

Scalability

Over the past 30 years, many governments and NGOs have made noble efforts and developed innovative approaches for tackling the problem of the growth of slums. Unfortunately, the rapid pace of urbanization and population growth has eclipsed their efforts. Although projects may meet the previously stated requirements for a successful outcome, if there is hope for reversing the ominous trends, a larger-scale effort is required. This means that projects and organizations need to be built with the potential for scalability. Although helping even one family extricate themselves from conditions of inadequate shelter is commendable and important, if a business model does not have the potential to be scaled-up to a dramatic size, it does not hold promise as the ultimate solution to the problem.

This chapter has described how trends in urbanization and population growth throughout the world are causing a dramatic growth in the prevalence of slums and a corresponding demand for extremely low-cost housing. It defined slums based on a definition provided by UN-HABITAT and described how slums form due to a combination of poverty and a lack of affordable housing. Finally, it discussed how several factors, in addition to the quality of shelter, are essential in assessing the effectiveness of a remediation program including tenure security, retention of communities and economies, community involvement and scalability. Now that the problem has been described, and a structure for evaluating successful remediations has been proposed, Chapter 2 will discuss the efforts that have been made by non-profits and NGOs to deal with the growth of slums and assess the effectiveness of these efforts.

Chapter 2: Public Sector Initiatives

This chapter discusses the complicated landscape of housing aid in the world today and presents evidence that although large sums of money have been invested in numerous programs, public sector efforts in dealing with the growth of slums have largely not been able to keep pace with the problem. It goes on to present evidence that the scale of the informal housing problem shows the need to engage new creative ways to draw in significant sources of capital to combat the problem. It then discusses the major competing philosophies in housing policy, and describes the experiences of Thailand's Community Organization Development Institute (CODI) in order to provide an example of the hurdles that even the most effective public organizations face.

2.1 Housing Aid Landscape

"Since the late 1960s nations have been searching for solutions to the growth of informal settlements. Governments have tried to deal with this problem in different ways. However, their urban policies often failed because of bad governance, corruption, inappropriate regulation, dysfunctional land markets, and, above all, an absence of political will." (World Bank & MIT, 2001)

Public sector aid for housing in developing nations consists of a complicated, multi-tiered environment with innumerable organizations of varied sizes and missions ranging from local non-profits to international aid organizations. Appendix II displays a small selection of the public sector organizations involved with housing aid including International Aid Providers, National Foreign Aid Organizations, Research & Advocacy Groups, NGOs Providing Financing to Housing Organizations, Local Government Programs providing direct aid, and Local NGO programs providing direct aid.

Although there has been a world-wide push to increase foreign aid in recent years since the publishing of the Millennium Development Goals, there are questions regarding the effectiveness of foreign aid in wide-scale poverty elimination. In his book, Reinventing Foreign Aid, William Easterly outlines some of the contradictory viewpoints which have been presented even by the aid organizations themselves:

- In one United Nations Development Program report, it states, "International aid is one of the most effective weapons in the war against poverty. Today, that weapon is underused, inefficiently targeted and in need of repair." (UNDP #2, 2005, p. 7)
- In a report published by the United Nations Millennium Project, they state, "many national strategies will require significant international support. But the international system is ill equipped to provide it because of a shortage of supportive rules, effective institutional arrangements, and above all resolve to translate commitments to action." (UNDP #3, 2005, p. 193)
- A report by the Department for International Development states, "Aid helps reduce poverty by increasing economic growth, improving governance and increasing access to public services,"

but later states "some parts of the international system have become either too complicated and inefficient or simply do not work at all. They must change." (DFID, 2005, p. 20 & 70)

- Finally, the World Bank and the International Monetary Fund issued a report which stated, "International financial institutions still emphasize loans and reports rather than development outcomes" (The World Bank, 2006, p. xvii)

These examples show how the foreign aid institutions themselves recognize that the traditional system of foreign aid is ineffective and inefficient. This creates an even more alarming picture when combined with an understanding of the scope of the problem of informal settlements.

The Millennium Development Goals include the provision of improving the lives of 100 million slum dwellers. In addition, the UN believes the informal settlement population will grow by 570 million by 2020. The United Nations Development Program (UNDP) estimates that upgrading housing for these 100 million slum dwellers and providing alternatives for the additional 570 million people will cost $294 billion. As shown in the chart below, they propose that the majority of funding should come from private donors and governments. It is curious that the UNDP is advocating for the majority of investment to come from the same international aid system which they said lacks the "resolve to translate commitments into action". (UNDP #3, 2005, p. 193)

Figure 7: Investment Required to Upgrade Slums and Provide Alternatives to Slums by 2020

				Source of Investment ($ billions)		
Intervention	Target Population (millions)	Average Cost Per Person	Total ($ billions)	Donors	Governments	Slum Dwellers and future low-income urban residents
Upgrading Slums	100	670	67	23	37	7
Providing Alternatives to Slums	570	400	227	78	126	22
Total	670	440	294	101	163	29

(UNDP #1, 2005, p. 9)

The UNDP's cost estimates vary across regions as shown in the chart below.

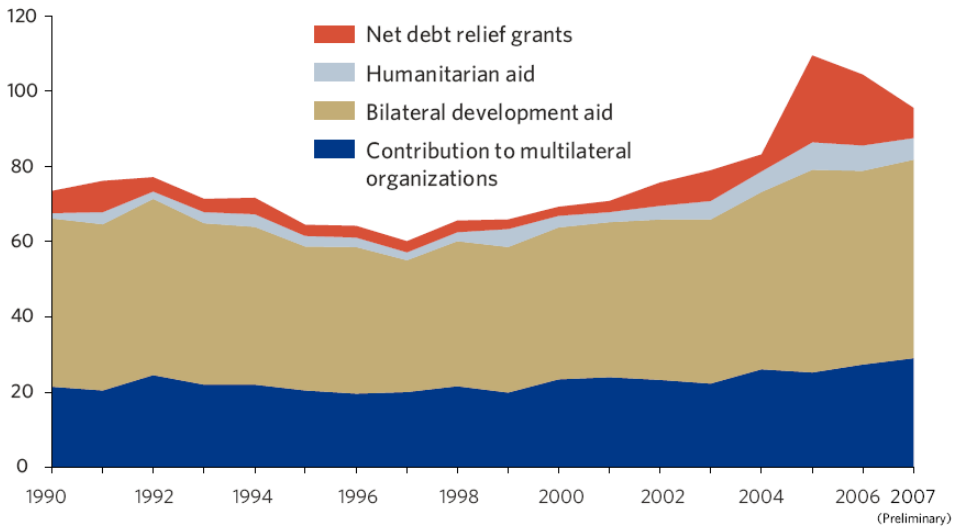
Figure 8: Average Investment Per Person Required to Upgrade Slums, by Region
(U.S. Dollars)

Item	East Asia	Latin America	North Africa	Oceana	South Central Asia	South East Asia	Sub-Saharan Africa	Western Asia
Land	50	97	105	50	43	45	18	105
Bulk Infrastructure	17	92	80	17	17	17	49	80
Housing	169	195	292	169	131	200	77	292
Schools and Clinics	10	18	12	10	10	10	12	12
Networked Infrastructure	58	306	265	58	58	58	164	265
Community Development	30	71	75	30	26	33	32	75
Average Investment per person	334	780	829	334	285	363	352	829

(UNDP #1, 2005, p. 138)

Accepting these numbers at face value, a comparison to the total foreign aid assistance of major world donors is problematic. The following chart shows the total official development assistance (ODA) of the major Organization for Economic Cooperation and Development (OECD) countries over time. Total ODA including debt relief totaled $103.7 billion in 2007 (The World Bank, 2008). This means that achieving the slum upgrading Millennium Development goal alone would require approximately three times the total foreign aid disbursed annually for all causes combined. It is therefore reasonable to assume that in order to tackle the problem effectively, new sources of capital must be arranged.

Figure 9: Official Development Assistance from OEDC-DAC countries, 1990-2007
(Billions of constant 2006 U.S. dollars)



(United Nations, 2008, p. 44)

The scale of the informal housing problem shows the need to engage new creative ways of drawing in significant sources of capital to combat the problem. Since the announcement of the Millennium Development Goals in 2000, slum communities have continued to grow. In the 2008 Millennium Development Goals Report, the UN neglected to state progress on Target 11, presumably because there has been little progress to tout. There are many public institutions performing great work; however, whether resulting from a lack of resources, inefficiencies, or more pressing issues, the public sector is having difficulty keeping up with the rapid pace of population growth and urbanization. If the global community is to have a reasonable chance of slowing the growth of informal settlements, something new must be done.

2.2 Public Strategies

Over the past forty years, public institutions have tried many different approaches to deal with the problem of informal settlements. The current debate revolves around a few main issues including relocation versus upgrading, the effectiveness of sites and services schemes, and the level of community engagement required.

Relocation vs. Upgrading

One of the most vocal debates regarding informal housing practices regards the question of whether it is more appropriate to relocate slum populations or upgrading communities in place. There are numerous issues which characterize the debate of proponents on each side of the argument, including the following:

- Property rights: Although the necessity of legal tenure is an outstanding debate as discussed earlier, proponents of relocation argue that it is easier to acquire property rights when developing on a new site which has clear ownership. They say the cost of providing secure tenure increases significantly in upgrading projects due to additional professional staff time required to sort out ownership in informal settlements. (Ferguson & Navarrete, 2003, p. 203)
- Development Costs: There is conflicting evidence about whether it is cheaper to upgrade housing or develop on new land. Some public institutions claim that upgrading is significantly cheaper than developing housing from scratch, but other institutions, like MetroVivendia in Bogata, claim basic infrastructure costs for upgrading are three times that of new developments. (Ferguson & Navarrete, 2003, p. 203) Of course, every informal settlement is unique and therefore has a different cost structure. Some of the factors that increase the cost of upgrading include undefined property boundaries and common spaces, little street organization, long distance from existing infrastructure lines, unsuitable topography or soil conditions, non-cooperative neighborhood associations, and lack of community involvement in the upgrading process. (Ferguson & Navarrete, 2003, p. 203)

- Availability of Land: It is often difficult to find appropriately located and inexpensive land for relocation. Most squatters remain in informal settlements precisely because land is expensive or unavailable.
- Transportation: Most slums develop near sources of employment. Relocation usually requires a provision for transportation which can be cost prohibitive. If the cost of transportation is not subsidized, it can demand a large percentage of the incomes of slum dwellers.
- Value of Settled Land: Advocates of in-situ upgrading argue that the land upon which slum-dwellers reside, albeit usually illegally settled upon, is their only real asset. They argue this asset should be leveraged to help them climb out of poverty.
- Disruption of Community: Slum communities have intricate economies and social structures which are often destroyed in relocation schemes. One example of this is the movement of informal settlers to vertical multifamily housing where families which once ran businesses out of their homes no longer have the ability to do so. In order for relocation to be successful, provisions must be made to support the reestablishment of the slum economies and social structures.

The upgrading versus relocation argument has been explored by many experts and consensus is unlikely to soon develop. It is reasonable to assume that the uniqueness of each community necessitates the assessment of the benefits of upgrading versus relocation on a case-by-case basis.

Sites & Services

Another source of debate among low-income housing actors is the level of shelter which should be provided. There has been prolonged debate about whether slum dwellers should be provided complete housing or whether it is sufficient to employ a "site & services" approach. Advocates argue that by simply laying out an orderly road network and providing basic infrastructure and sanitation services, the lives of informal settlers can be improved dramatically. They claim that the lives of more people can be improved by allocating limited capital specifically to these basic humanitarian needs. The answer to this question likely depends on the availability of resources. If professionally constructed housing for everyone could be provided, it would likely be preferable.

Community Engagement

In recent years, development frameworks have increasingly focused on community participation. Slum dwellers are being engaged in the planning process as partners to ensure their most pressing needs are being met. Informal settlers are also being asked to contribute significant resources. General consensus is that engaging community members in the designing of upgrading schemes contributes to the viability and sustainability of development projects and facilitates improved relations between local communities and public authorities. (UN-HABITAT, 2006, p. 14)

2.3 Thailand's Community Organization Development Institute (CODI)

Numerous public sector initiatives have been advanced to attempt to deal with the problems of rapid urbanization and the growth of slums. These efforts have varied widely in their scale, strategy and level of engagement. Although few have reached a large enough scale to solve the slum problem in their respective communities, much can be learned from the experiences of hands-on organizations such as local governments and NGOs.

One of the most successful examples of successful upgrading of slums by a local government is that of the Community Organization Development Institute in Thailand. Thailand has a long history of aggressively addressing the problem of informal settlements. In 1973, The National Housing Authority was set up to try to combat the problem by focusing on producing homes for underserved populations. Then, from 1977 through the 1980s the organization tried a sites and services approach focusing on upgrading rather than relocation. In 1992, the Urban Community Development Organization (UCDO) was created within the National Housing Authority to focus on extending loans to community groups which would engage in the planning of their own community projects such as land acquisition, home construction, home improvement, and infrastructure projects. The experiment became a success. The UCDO was able to show how communities could lead their own development projects if they had access to loans and other resources. (UN-HABITAT, 2009, p. 3)

Although they originally worked directly with communities, as the project scaled up, the UCDO began asking communities to form networks to make administration more efficient. In 2000, the UCDO was merged with the Rural Development Fund to create the Community Organizations Development Institute (CODI). At the time, UCDO had established 950 community savings groups in 53 of Thailand's 75 provinces with over 100 community networks and had provided housing loans and technical support for 6,400 households in 47 housing projects. (Boonyabancha, 2005, p. 7)

In 2003, in an effort to increase upgrading efforts, the Baan Mankong or "secure housing" Program was created with a goal of creating 200 cities without slums (approximately 300,000 households) within five years. Their strategy was to channel government development subsidies directly to community networks which would carry out improvements themselves aided by technical support staff. Infrastructure improvements are made through community grants and are limited at of 25,000 baht (US$625) per family for upgrading and 65,000 baht (US$ 1,625) for relocating. Families can obtain low-interest loans from CODI for purchasing land or constructing housing. A second program, the Baan Ua Arthorn program constructs and sells subsidized apartments and homes to families that have slightly higher incomes and can afford monthly payments of US$25-37 per month. (Boonyabancha, 2005, p. 7)

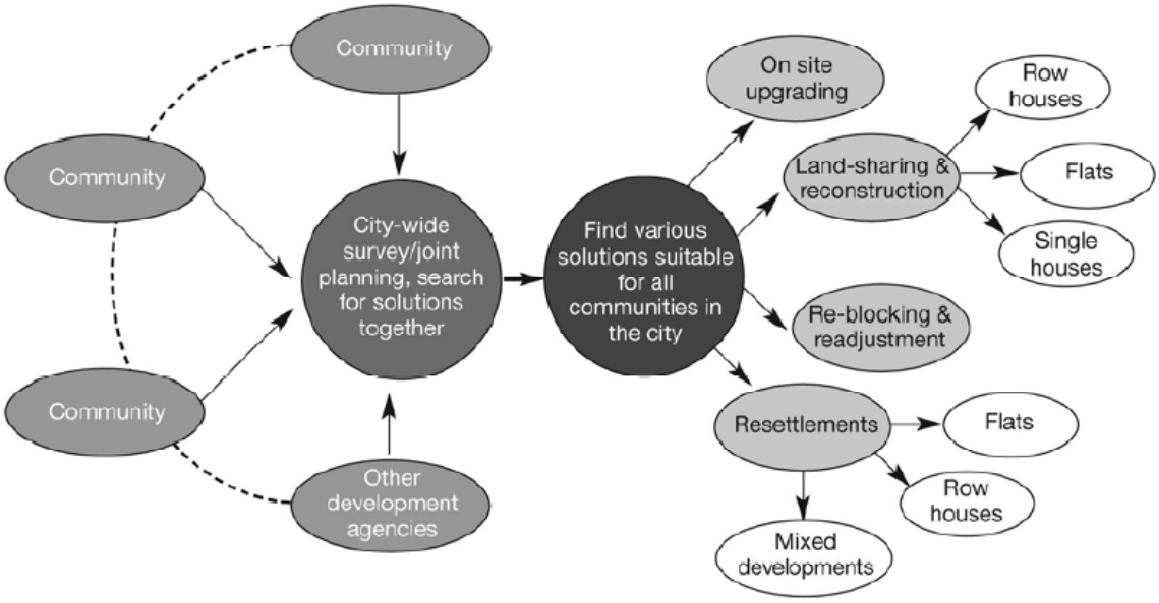
The CODI program provides several unique approaches to informal settlement redevelopment. First, urban poor community organizations control the management and funding as well as perform most of the construction. Also, the process is "demand-driven" by communities rather than "supply-driven" by governments or NGOs. Communities choose how to use infrastructure subsidies, what type of housing to build, etc. Finally, it promotes pride in low-income communities and legitimizes their role in the city. (Boonyabancha, 2005, p. 11)

CODI's program for city-wide slum upgrading focuses on bringing all stakeholders together and developing custom solutions for each new community. Their chronological process has been described as follows:

- Identify stakeholders and explain the program
- Organize community and network meetings
- Establish a joint committee to oversee the implementation including poor community members, the municipality, local academics, and NGOs.
- Establish a community joint savings plan
- Organize a survey to collect information on households, land tenure, infrastructure problems, community organizations, and savings activities.
- Collaboratively develop a community upgrading plan coordinating with public and private landowners to provide secure tenure.
- Create pilot projects
- Proceed to city-wide development (Boonyabancha, 2005, p. 9)

CODI's strength comes from the fact that it has been able to develop consensus amongst many stakeholders and their development plans are flexible based on the characteristics of the community. The strategy can include upgrading, land-sharing, or resettlement, and the final real estate product varies as well. The chart below displays CODI's flexible approach.

Figure 10: CODI Development Model



(Boonyabancha, 2005, p. 10)

CODI has been very successful in achieving its goals of upgrading communities, keeping community members in-place, and creating long-term tenure security. Statistics for the project are listed in the table below.

Figure 11: CODI Baan Mankong Progress

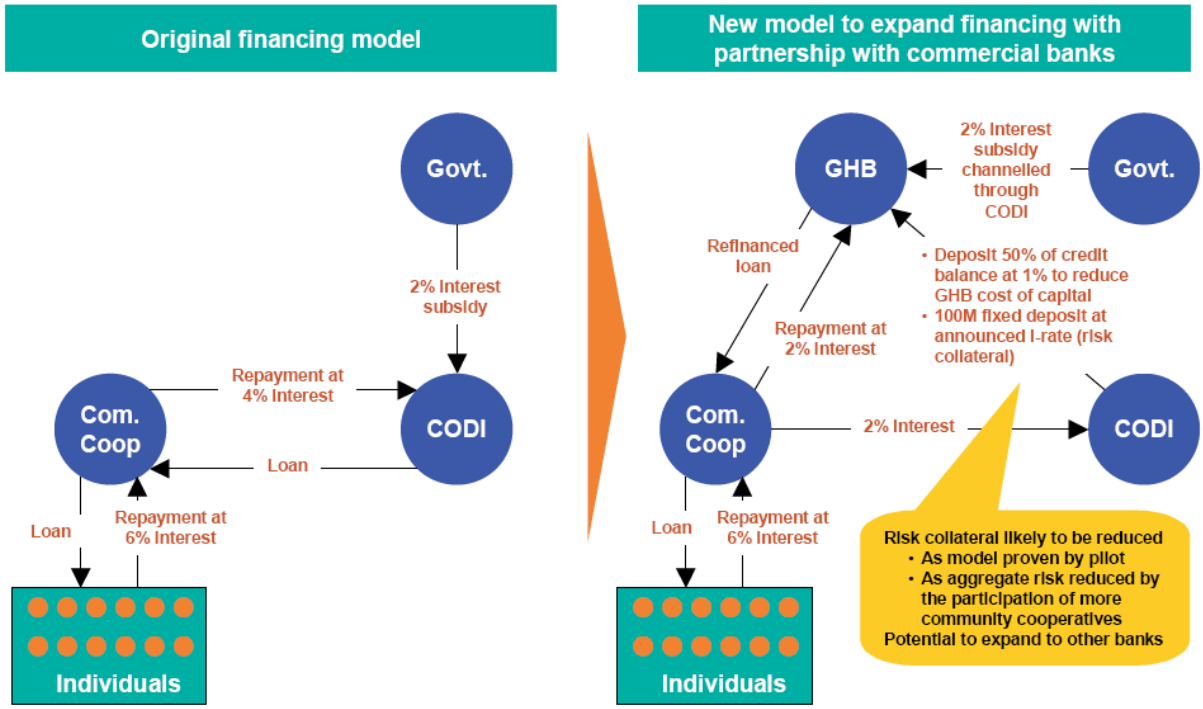
(January 2003 – March 2008)

Total Projects			
Projects approved	512		
Total communities involved	1,010		
Total families involved	53,976		
Total budget approved (upgrading subsidy)	$46.13 million		
Total budget approved (housing & land loans)	$52.26 million		
Projects by Type of Upgrading	Communities	Households	% of Total
On-site upgrading, reblocking, reconstruction	443	34,516	64%
Nearby relocation (within 5 km)	237	7,393	14%
Relocation (more than 5 km away)	329	11,997	22%
Common house for elderly, poorest, homeless	1	70	0.1%
Total	**1,010**	**53,976**	
Projects by Type of Housing Problem	Communities	Households	% of Total
Solving eviction problems	684	39,311	73%
Securing tenure in existing slums	286	13,191	24%
Developing new communities in new sites	40	1,474	3%
Total	**1,010**	**53,976**	
Projects by Tenure Security	Communities	Households	% of Total
Cooperative land ownership	623	23,479	44%
Long term lease to community cooperative	226	20,980	39%
Short term lease to community cooperative	59	4,143	8%
Permission to use land	102	5,104	10%
Total	**1,010**	**53,706**	

(UN-HABITAT, 2009, p. 5)

CODI is funded from the central government, and despite the program's success, more capital is needed in order to respond to growing community demand. As a result, they have begun working with a leading commercial bank (National Housing Bank) to provide additional capital for projects. This initial financing required significant credit enhancement by CODI, but it is hoped that terms will be eased as a track record of successful repayment is established. (UN-HABITAT, 2009, p. 17) The chart below shows CODI's original and upgraded financing models.

Figure 12: CODI Financing Model



CODI: Community Organizations Development Institute; GHB: Government Housing Bank

(UN-HABITAT, 2009, p. 19)

CODI is an impressive example of empowering communities to take a part in upgrading their communities. The Baan Mankong project has reached over 53,000 households in five years, however the project did not reach their five year goal of creating 200 cities without slums (approximately 300,000 households). The initiative is beginning to show the inability to keep up with demand without bringing in outside capital sources.

This chapter briefly explained the landscape of housing aid providers in the world today and showed that public sector efforts in dealing with the growth of slums have largely not been able to keep pace with the problem. Unfortunately, the scale of the housing problem in the world today is such that new sources of capital and innovative strategies are required to combat the problem. Chapter 3 will present for-profit social business structures which may provide more efficient delivery platforms and new sources of capital.

Chapter 3: Potential For-Profit revenue Streams and Business Structure

As shown in the previous chapter, traditional housing aid programs are having a difficult time keeping up with the accelerating pace of urbanization and population growth. This chapter will present potential models for structuring for-profit social businesses to combat the problem. Each of these structures for producing low-cost housing would be appropriate under certain circumstances, and would provide more efficient delivery systems and access to new sources of capital. Of course, there are concerns whenever a for-profit model is suggested to help an underserved population. Suspicions often arise that the participating firms will "get rich off the backs of the poor"; however, social investment approaches hold promise as a way to mobilize large amounts of capital and supplement the efforts of aid institutions.

An assessment of the potential of for-profit social business models to create housing in developing nations requires the definition of the most likely revenue structures. These structures lie on a spectrum of complexity and involvement, and can be defined by the inputs required and the outputs they produce. Although innumerable business models could be developed, six main models can be differentiated based on their unique combinations of inputs and outputs. For the purposes of this paper, they will be defined as Microfinance Organization, Materials Bank, Land Development, Specialized Construction Company, Residential Sale, and Commercial Real Estate Ownership. Later in this chapter, each model will be assessed for its effectiveness in creating a sustainable and scalable enterprise. The chart below details the major inputs and outputs in each model.

Figure 13: Inputs and Outputs of For-Profit Revenue Models

	Input					Output		
Revenue Model	Land	Materials	Labor	Capital	Mgmt	Improved Land	Housing	Comm. RE
Microfinance Institution				X	X		X	
Materials Bank		X		X	X		X	
Land Development	X	X	X	X	X	X		
Specialized Construction Company		X	X	X	X		X	
Residential Sale	X	X	X	X	X		X	
Commercial Real Estate Ownership	X	X	X	X	X		X	X

(Canizo, 2009)

These models can be further defined based on who retains title to the land, whether labor is contributed by the end-user, and whether the cost of housing units is subsidized by other revenue streams. The chart below explains how these attributes vary between the revenue models.

Figure 14: For-Profit Revenue Model Attributes

Revenue Model	Requires End-User to have Secure Title?	End User Contributes Labor?	Subsidized by other revenue streams?
Microfinance Institution	No	Yes	No
Materials Bank	No	Yes	No
Land Development	Yes	Yes	No
Specialized Construction Company	No	No	No
Residential Sale	Yes	Maybe	No
Commercial Real Estate Ownership	Yes	Maybe	Yes

3.1 Microfinance Institution

The concept of microfinance was thrust into popular culture when Professor Mohammad Yunus and his Grameen Bank of Bangladesh won the Nobel Peace Prize in 2006. The concept of helping the poor in developing countries pull themselves up out of poverty using micro-loans also gained much attention from Yunus' 2003 book "Banker to the Poor". Microfinance institutions (MFIs) provide small loans to people who have historically had difficulty accessing the formal banking sector. Borrowers are often required to establish "lending groups" to provide extra security for loans. Members of the group are required to make a joint and several pledge to repay the loan as there is often little collateral. Although this type of lending was originally seen as extremely risky, history has shown that default rates are often lower than those found in the traditional banking sector. (Dieckmann, 2007, p. 15)

The microfinance industry has grown dramatically in recent years and has gained acceptance in the capital markets as a legitimate investment opportunity. Deutsche Bank estimates that the total volume of microloans has grown from $4 billion in 2001 to $25 billion in 2006 (approximately 100 million borrowers). (Dieckmann, 2007, p. 7) The majority of this volume has been to individuals who intend to use the money to start or expand a revenue producing enterprise; however, some MFIs do lend to people to build or improve housing.

ProCredit Holding

ProCredit Holding is one of the largest microfinance groups in the world and is an example of the ability of for-profit models to produce substantial scale in mission-driven entities. ProCredit is an international holding company comprising lending institutions which focus on providing loans to small enterprises. ProCredit defines itself as a network of "Responsible Neighborhood Banks" with a commitment to achieving a development impact, serving the needs of customers, and creating a sustainable institution.

They focus on providing loans to small enterprises where applicants lack liquid assets or formal savings accounts. (ProCredit Holding, 2007, p. 8)

The firm's origins trace back to 1981 with IPC, a consulting company focused on development finance, which began doing work in credit services in Latin America. In the early years, IPC was mainly working with NGOs and public institutions, however they realized that it was difficult to achieve a high level of efficiency in NGOs. They ultimately concluded that they needed to transform themselves into a full-fledged bank. In 1997, they established their first microfinance bank in Bosnia and Herzegovina, and in 1998 , they received funding from several international finance institutions which allowed them to start rapidly expanding. By 2003, seventeen microfinance banks had been established in as many countries, and the firm began attracting private shareholders. (ProCredit Holding, 2007, p. 9) In 2006, ProCredit an investment of €40.5 in exchange for non-voting shares from TIAA-CREF and the Omidyar Tufts Microfinance Fund showing it is "an attractive investment for those who are seeking a reasonable return on equity from a secure investment which at the same time has a significant development impact". (ProCredit Holding, 2007, p. 14) As of 2007, ProCredit's total paid-in capital surpassed €189 million.

As of 2007, ProCredit had established operations in 21 countries with 622 branches. The loan portfolio had grown to 926,089 outstanding loans totaling €2.8 billion. Net profit for the year was €44 million and the return on equity was 12.64%. Housing improvement loans totaled €214 million, or 7.6% of the total outstanding loan portfolio. Their strong financial performance allowed them to distribute dividends for the first time in 2007. (ProCredit Holding, 2007, p. 4)

Procredit points to several factors as the reasons for their success. First, they attribute much of their success to credit assessment technology which has been developed over years and based on "a careful, but efficient analysis of the capacity and willingness of a customer to repay a loan". (ProCredit Holding, 2007, p. 8) They claim that they are different from other MFIs because they also support medium-sized enterprises (SMEs). ProCredit feels these SMEs are an important aspect of driving the economic growth of communities, and they are often underserved by commercial banks. Finally, they "place a great emphasis on institution-building and the need to earn a profit to reach scale." (ProCredit Holding, 2007, p. 9)

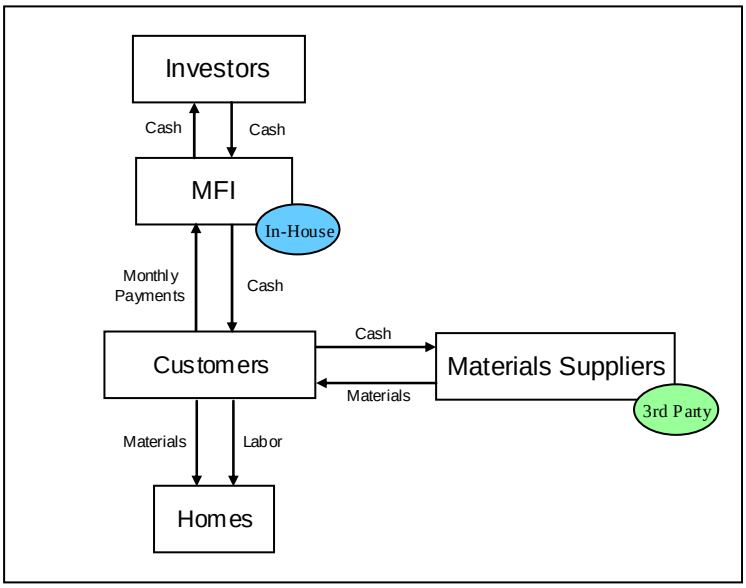
ProCredit is funded by owners who take a long-term view. They are social investors committed to the "responsible neighborhood bank" concept and aim to make a profit, but not at the expense of the mission. It shows how for-profit business models have the ability to leverage the capital markets to draw in large amounts of equity. Although microfinance is a more mature sector, ProCredit shows the potential for scalability in social business models.

MFIs are the least complicated form of for-profit business model to provide resources for informal settlers, but the model has several drawbacks. In a microfinance model, money is lent to borrowers who find their own building materials. However, informal settlers often do not have access to quality materials or are severely overcharged. Also, borrowers may not be provided with education on building techniques, which is often a valuable service that helps people take advantage of more sophisticated

building techniques. In addition, the model does not help the population in securing tenure, and the collateral is often difficult to define and control.

Below is a representation of the "value chain" of the materials bank model.[1]

Figure 15: Value Chain- Microfinance Institution Model



3.2 Materials Bank

A materials bank is similar in structure to a microfinance institution, but it provides loans in the form of building materials instead of cash. As the bank has no security in the land homes are built on, lending groups are usually set up to create community peer-pressure to encourage repayment. This prevents settlers from being overcharged for materials and avoids the potential for funds from loans being used for purposes other than housing.

Patrimonio Hoy

The most famous example of this model is the Patrimonio Hoy (PH) initiative of Cemex, a Mexican buildings material company and one of the largest cement manufacturers in the World. Started in 1998, the program was an attempt by the firm to satisfy the demands of the Mexican self construction market in which underserved populations had little access to materials and were often overcharged by local distributors. Cemex found that typical families spent 208 weeks to build a room of 100 square feet due to time and income constraints. To cater to this self-construction style, Cemex developed a standard program which allocated building materials to families over seven cycles of ten weeks each. To

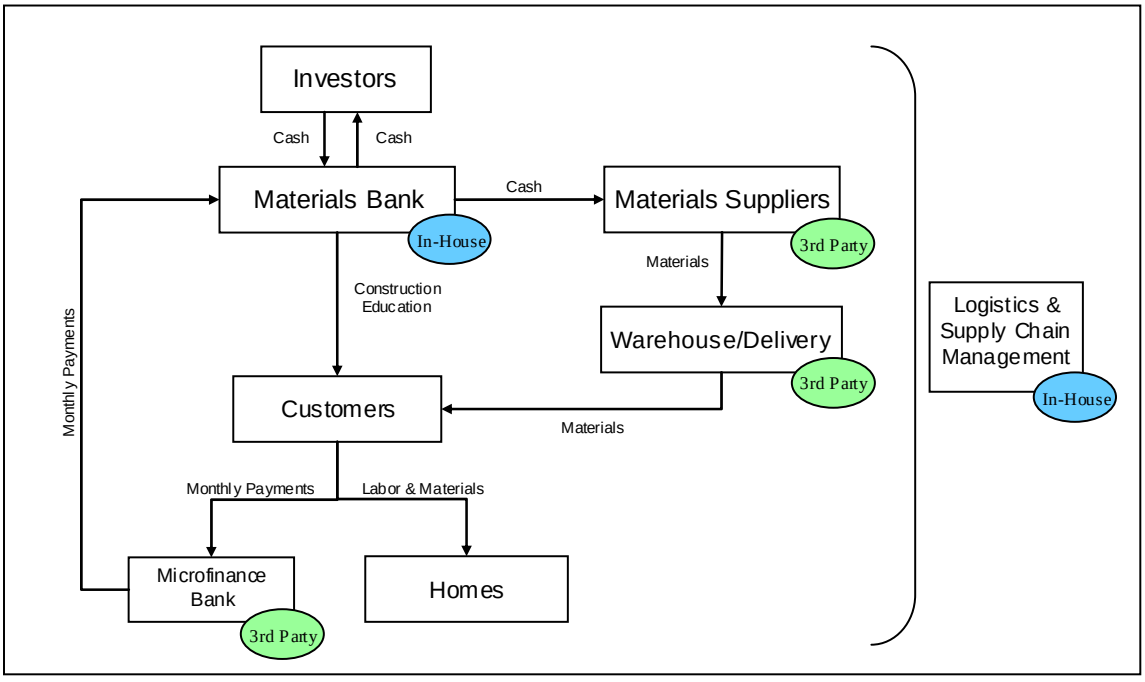
[1] Value Chain Analysis is a business analysis technique first described my Michael Porter in his 1985 book *"Competitive Advantage: Creating and Sustaining Superior Performance". In Porter's words, "The value chain disaggregates a firm into its strategically relevant activities in order to understand the behavior of costs and the existing and potential sources of differentiation."* (Porter, 1998)

reinforce the likelihood of repayment, groups of three families were formed, and each family contributed M$[2]120per week. M$105 of this amount went to the purchase of materials and M$15 paid for the PH membership fee which contributed to overhead costs. Materials for the 10-week cycle were advanced after receiving the first two payments, amounting to a down-payment of 20%. Architects employed by PH created floor plans, materials lists, and delivery schedules for families based on their specifications. Distribution was handled through a mix of Cemex-owned and independent outlets. (Segel, Chu, & Herrero, 2007, p. 3)

The Patrimonio Hoy initiative has grown into a successful, sustainable business. Cemex has found that the plans and guidance provided by architects has allowed PH customers to complete their projects more quickly and more efficiently, using approximately 30% less cement. Default rates on loans are extremely low with the nonperforming portfolio at less than 1% of sales. In total, PH has benefited over 224,000 families and now maintains 100 centers in Colombia, Costa Rica, Mexico, and Nicaragua. (Cemex, 2008, p. 21)

Patrimonio Hoy is an encouraging model as it has shown that a sustainable enterprise can be created without governmental or NGO support. The materials bank model allows slum dwellers to incrementally upgrade their housing over time as their income permits. It also allows residents to obtain loans without clear title to their land, which makes it attractive for those communities in which it is difficult to obtain a fee-simple interest. However, relying on the construction knowledge of the general public in building their own dwellings has some drawbacks. Professional construction could provide more structurally sound buildings, utilize labor more efficiently, and take advantage of new sustainable technologies.

Figure 16: Value Chain- Materials Bank Model



[2] M$= Mexican Peso.

3.3 Land Development

The land development model is an offshoot of a "site and services" model which has been promoted by the World Bank in the past. The structure entails acquiring title to land, subdividing it into lots and installing infrastructure, but then selling lots rather than finished homes. Clean water, sanitation, and electricity are often the most important issues in ensuring the health of those living in informal settlements, and this model allows more capital to be directed to this important infrastructure.

Argoz- El Salvador

One of the best examples of a successful land development model is that of Argos in El Salvador. During the 1970s through 1990s, El Salvador experienced rapid population growth and several natural disasters which greatly affected the government's ability to keep up with the need for housing and basic infrastructure. In 1977, a private commercial development firm named Argoz was formed with a new approach for helping families gain legal access to land. The firm purchased large tracts of land on the outskirts of major urban centers, subdivided the property, and marketed plots to low-income populations. Community members built structures themselves incrementally, and tended to re-build as their incomes increased and they gained access to higher quality building materials. (MIT SIGUS and The World Bank, 2001)

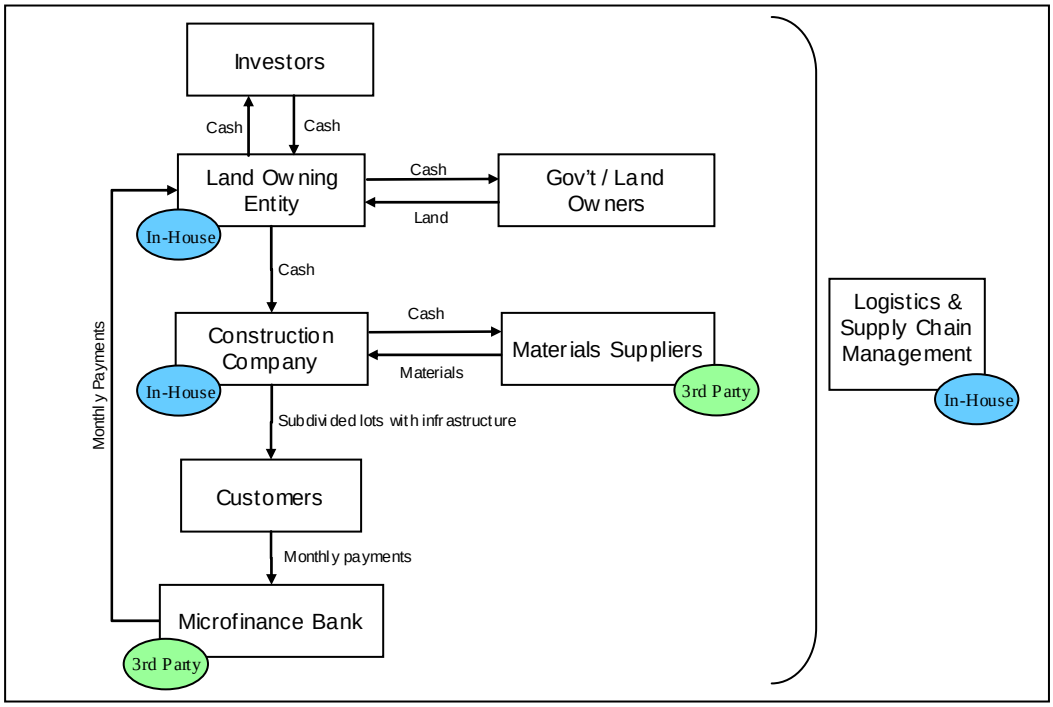
Argoz provided long term leases with the option to buy. Leases had a term of 5-years with title reverting to the lessee upon final payment. No down payment was required and the interest rate of 20% was 4% above commercial bank rates. Monthly payments were between $5 and $20 per month. When delinquencies occurred, Argoz would attempt to make mutually beneficial adjustments to loan terms, but if a family was still unable to pay, Argoz repossessed the plot and refunded 50% of the monthly installments which had been paid. Approximately 40% of the sales price of a plot was kept by Argoz to pay for processing, management, subdivision, and advertizing. (MIT SIGUS and The World Bank, 2001)

The sites were not provided with infrastructure, so Argoz provided advice to communities on how to petition local governments for the upgrading of services. In this way, Argoz was able provide secure tenure at a reasonable cost and helped communities put pressure on governments to do their part in paying for infrastructure. The most difficult services to obtain proved to be water and sewage with electricity, schools, clinics being easier to elicit. To aid in the development of housing and infrastructure, Argoz allocates 18% of its profits to provide loans to communities to finance housing and infrastructure improvements. As of 1999, Argoz had facilitated the acquisition of legal tenure to urban land for approximately 300,000 families, or two million individuals. The business was also financially successful with assets growing from $50,000 in 1977 to $141 million by 1999. (MIT SIGUS and The World Bank, 2001)

Argoz has shown the viability of the land development model as a profitable, scalable way to provide property rights to low income populations. The model is a compelling option for communities with uncooperative governments, where land is scarce or expensive, and when the general population has a high level of construction ability. The model allows for the allocation of more capital to basic services which improve sanitary conditions and encourage reinvestment in homes. Assuming cooperative

governments and potential subsidies, the Argoz model could be advanced to entail the installation of basic utilities, roads, and community amenities by the developer. Also, it is easy to see how this model could be combined with the materials bank structure to allow the purchasers of lots to slowly construct their own homes with the help of loans of building materials as their incomes permit.

Figure 17: Value Chain- Land Development Model



3.4 Specialized Construction Company

A specialized construction company model would work much in the same fashion as a traditional general contractor in developed nations. The model proposes the use of a professional construction staff instead of having the general population construct their own homes. It is assumed that the final products would be safer, more efficient homes albeit slightly less affordable due to increased labor costs.

Staff could be hired and trained from local communities, but materials, warehousing, distribution, and servicing of mortgages would likely be outsourced to third parties. Although the specialized construction company model would likely mean improved workmanship, it entails the firm acting essentially as a general contractor, building either for the government or for end users. This means there is less control over the details of the project and residents may not receive secure tenure.

Pro-Friends

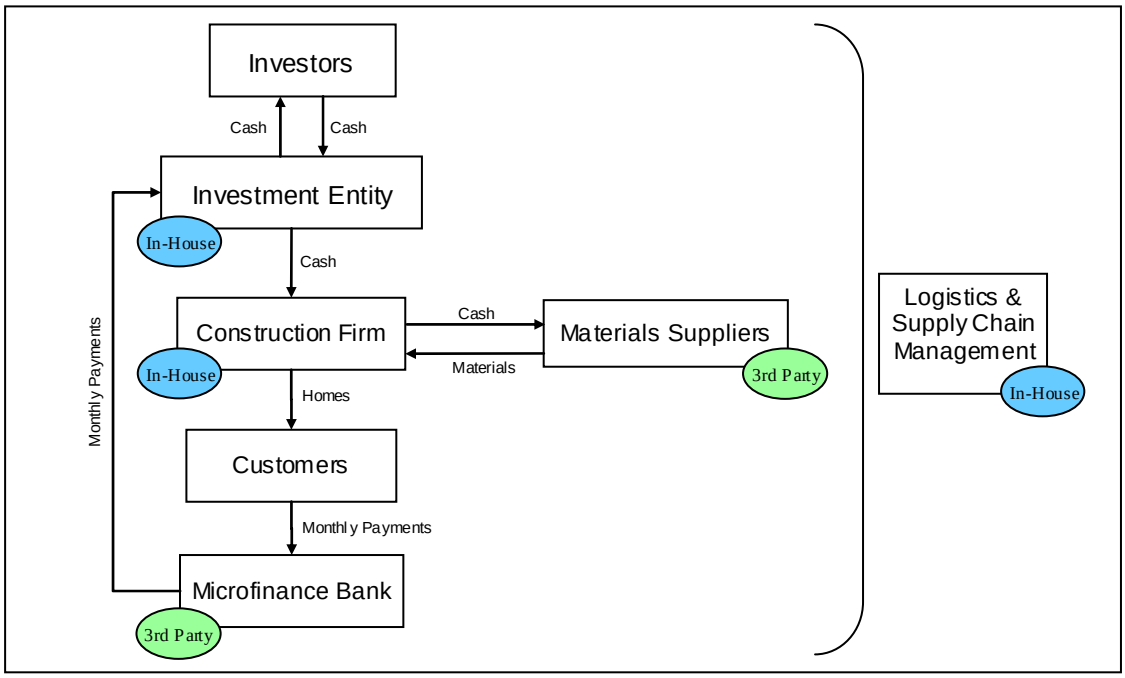
Property Company of Friends, Inc., also known as Pro-Friends, is a property development company in the Philippines that started operations in February 1999. The firm was founded with a focus on

providing housing for low-income groups, but over the years the company's product offerings have diversified. (Pro-Friends). The firm's normal housing product consists of single-family homes costing approximately P750,000 [3] or $15,500, and they produce up to 500 units per month.

Recently, they have decided to partner with Gawad Kalinga (GK), a local NGO, to produce housing for informal settlers on a philanthropic basis. GK has a successful track-record of producing homes for the poor, however they are looking to increase the scale of their operations. Pro-Friends agreed to provide support to help them develop the internal operating capacity needed to produce larger developments. The first joint "GK Estates" project in Passi Iloilo will entail the development of approximately 1,134 units of housing on 25 acres of land. Land has been donated by the local government and homes will be provided to selected individuals at zero cost. The project will use more sophisticated building techniques than GK has used in the past including pre-cast panels or cast-in-place systems. Pro-Friends expects to achieve economies of scale from the large unit count and they estimate the per unit cost at P70,000-P75,000 or approximately $1,450-$1,550.

Pro-Friends has agreed to build units for GK at cost due to their commitment to helping the lower class, however it can be seen how with slight adjustments in pricing, the collaboration could be organized in a for-profit structure. A specialized construction company model is most likely to occur in a situation like this where a the firm performs contract development for an NGO or local government. The public institution receives the benefits of cheaper, more efficient, higher-quality construction; and the construction company may receive a modest profit or a new pipeline of perspective clients for their market rate products.

Figure 18: Value Chain- Specialized Construction Company Model



[3] Philippino Pesos

3.5 Residential Sale

A residential sale model solves the property rights issue by requiring the long-term lease or purchase of property from the government or local land owners. In this model, a development firm would purchase land, install infrastructure, develop housing and sell homes to the BOP population using microfinancing. The viability of this model is based on finding cooperative governments or private landowners which are willing to sell land at a reasonable price, and having a population with enough income to support monthly debt service payments.

Jamii Bora- Kaputiei Town

One recent example of a residential sale model in action is Jamii Bora's development of Kaputiei Town outside Nairobi, Kenya. Jamii Bora, which means "good families" in Swahili, is a charitable trust established in 1999 with the mission of helping its members lift themselves out of poverty. Initially, the Trust began with a group of 50 street beggars in Nairobi and has grown to a full-service microfinance organization offering microloans for businesses, school fees, healthcare and housing. An extremely successful enterprise, Jamii Bora has grown from 50 members at its inception to over 170,000 members. (Jamii Bora)

In 2002, Jamii Bora embarked on an initiative to provide housing for members of Nairobi's slum population which amounts to 1.9 million people or approximately 60% of the urban population. The organization negotiated the purchase of 293 acres of land 60 kilometers south of Nairobi in the Kisaju, Kajiado District. The plan called for the construction of 2,000 homes in neighborhoods of 250 families with Jamii Bora acting as both developer and mortgage provider. Three home options were offered with each with an area of 50 square meters with two bedrooms, a sitting room and a bathroom. Infrastructure including roads, water and sewer for the entire community were developed at the beginning of the project to decrease costs, and materials were produced in a factory on-site using new community members for labor, thereby creating jobs. (Jamii Bora)

As the new settlement is a significant distance from Nairobi, it is important to ensure a base economy and access to jobs. New residents will include local small business owners who can bring their enterprises to Kaputiei Town to generate an internal micro-economy. To apply for a home, new residents were required to be a member of Jamii Bora, have a down payment of 10% and indicate a perfect repayment record of at least three business loans through their microlending program. (Jamii Bora)

Financing was provided in part by Acumen Fund, a global social venture fund headquartered in New York that uses entrepreneurial approaches to try to solve the problems of global poverty. The total cost of the 2,000 houses is budgeted at KES 300,000,000 (~$3,750,000 USD) and the infrastructure is estimated at KES 300,000,000 (~$3,750,000 USD). Infrastructure costs will be allocated half to the residential portion, and half to the commercial and industrial area which is expected to generate additional revenues. Home prices are expected to run KES 150,000 (~US$1,875 USD). Home buyers will receive loans with a term of 10-15 years and an interest rate of 8.5%-10% with monthly mortgage payments expected to be KES 2,500 (~$ 32 USD). The cost of maintenance will be covered by a monthly

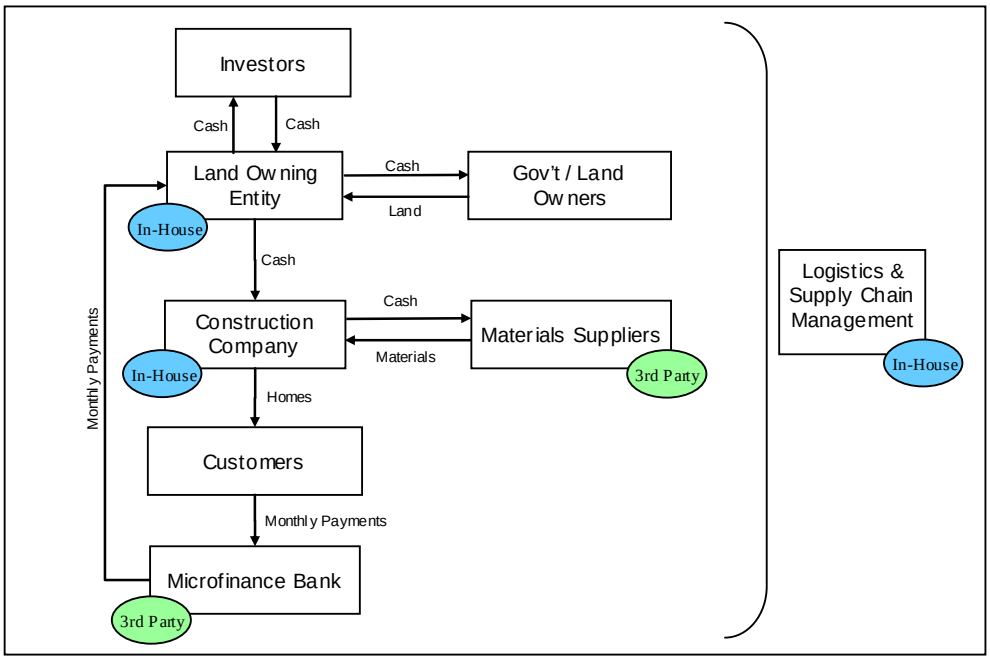
fee of KES 500 (~$6 USD). This is close to the cost of rent in the slums which ranges from thirty to sixty dollars per month. (Jamii Bora)

The timeline of the project has shown some of the difficulties in orchestrating a residential sale project. Land for Kaputiei Town was purchased from private owners in 2002. There was significant interest in the project from the local population, and after opening registration to Jamii Bora members in October 2002, over 1,000 families registered for homes in the first four weeks. During 2003 and 2004, a temporary factory for building materials production was created and local residents were trained. By the end of 2004, building materials for 900 homes had been completed. Design and planning was finalized in 2003 with approval from authorities obtained in June 2004. This impressive progress was stalled at the end of 2004 when a suit was filed by opponents to the project. It is believed that neighboring landowners were concerned about a low-income population moving into the area. The high court of Kenya finally struck down the neighbors appeals in 2007 at which time infrastructure work began with the first home construction beginning in June. (Jamii Bora) As of May 2009, 246 homes had been constructed. (Omondi & Were, 2009)

Although Jamii Bora and Acumen fund are non-profits, Kaputiei Town is an encouraging example of the underlying economics of development for BOP populations. The Kaputiei Town project also exemplifies the promise and common issues involved with the residential sale model. Although the merits of relocation and upgrading have been highly debated, Kaputiei Town shows that current slum residents can be attracted to new settlements on the urban fringe with the prospect of secure tenure and improved living conditions.

Although the residential sale model provides the benefits of clear and formal property rights, unlike the materials bank and specialized construction company models, it suffers from additional permitting and timing risk which is a particular concern in inflationary environments. The residential sale model is simpler in the context of creating a new community on undeveloped land rather than upgrading of existing slums, however the issues of creating transportation to employment centers or developing an independent sustainable economic environment must be considered.

Figure 19: Value Chain- Residential Sale Model



3.6 Commercial Real Estate Ownership

A commercial real estate ownership model is similar to the residential sale model, but entails providing subsidized housing by leveraging the potential value of commercial real estate in the community. Homes are constructed and given away for free or sold at a reduced cost, but a portion of the land would be held back for the future development or sale as commercial real estate. The sale or rental of this commercial real estate would subsidize the residential portion of the development.

This model holds promise as a way to reduce the required price of homes if the income of the general population does not cover the costs. However, the model entails risk due to the uncertainty of the value of speculative commercial real estate and the longer timeframe for investment. There is also concern about the alignment of incentives between the developer and the community. If giving homes away for free, the developer may have incentives to cut corners and create lower quality homes.

This model could be used by either relocating existing populations to new sites as exemplified in the Mumbai projects discussed below, or by upgrading slums in situ. One potential option for the in situ solution could be to negotiate an agreement with a slum community to move off certain portions of land to be used for roads, community areas, and commercial real estate. As an incentive, the slum population would share in the profits created by the commercial real estate and receive upgraded infrastructure and housing.

HDIL- Mumbai

The commercial real estate ownership approach is currently being tested on a huge scale in Mumbai, India. India's government has decided to partner with private developers to redevelop the Dharavi and Mumbai Airport slums, two of the largest in the world. The "rehabilitation project" is being administered by the Slum Rehabilitation Authority (SRA). Under the plan, developers are required to build housing free of charge for existing slum dwellers and in exchange are granted some or all of the following: rights to develop or sell a portion of the cleared land, transfer development rights to develop in other areas of the city, the right to develop at an increased floor area ratio (FAR).

Housing Development and Infrastructure, Ltd (HDIL) is one of the largest developers in India and won the contract to redevelop housing for residents of the Mumbai Airport Slum to make room for a new runway. The project will be the largest Slum Rehabilitation Scheme (SRS) ever in India. 276 acres of slum land will be cleared and approximately 85,000 families (one million people) will be relocated to newly constructed housing. Slum dwellers will receive 269 square foot tenements free of cost. (Housing Development and Infrastructure Ltd ("HDIL"), 2009, pp. 7-8)

In exchange for the development of housing and relocation of slum dwellers, HDIL is being granted rights to develop or sell a portion of the cleared land and increased FAR on these same sites. Of the 276 acres to be cleared, estimates on the amount of land HDIL will be permitted to sell or develop range from 70 to 90 acres at a FAR of 4.

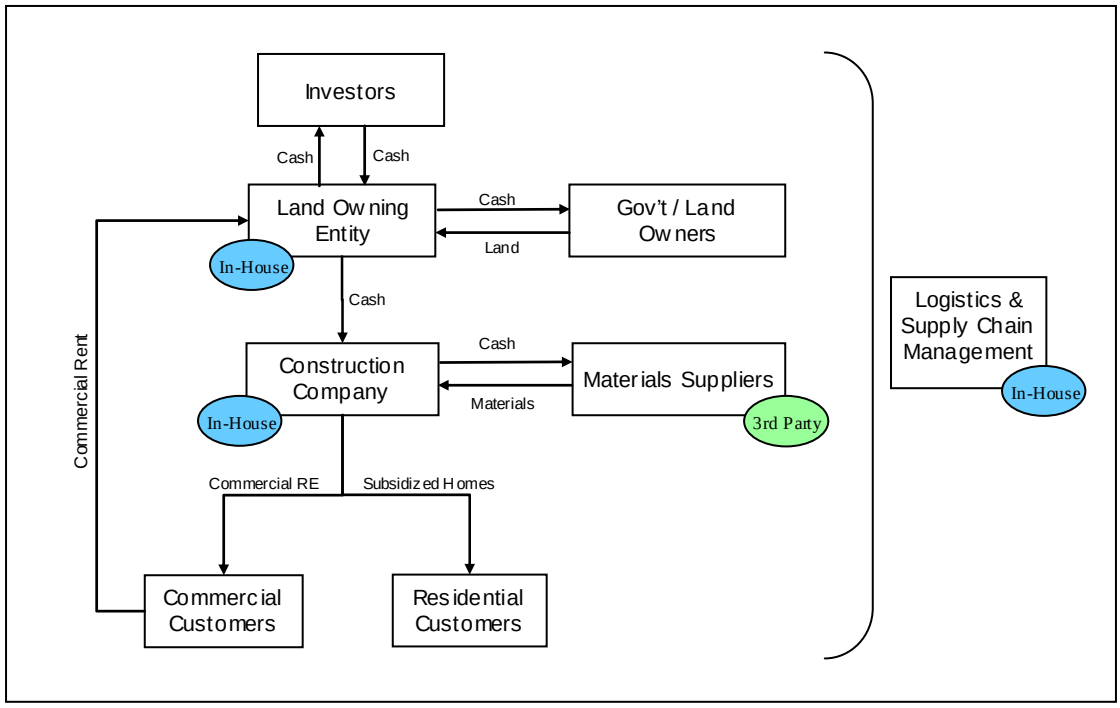
The project timeline shows the dramatic speed in which projects can proceed when governments partner with the private sector. In October 2007, HDIL was granted the project. In January 2008, they identified land to be used for phase I of the project which is less than one kilometer from the airport site. The site consisted of 53 acres and cost Rs 1900 crore or about US$402 million. In April 2008, they received final approval of their plans from the planning authority. In May 2008 construction started on Phase I which will consist of 6 million square feet in 150 buildings and house 18,000 to 20,000 families. More than 3,000 construction workers were deployed and the total construction cost is estimated at Rs 600 crores or about US$127 million. As of May 2009, approximately 50% of phase I construction had been completed. (Housing Development and Infrastructure Ltd ("HDIL"), 2009, p. 9)

The efforts to relocate slums in Mumbai have been criticized by many, and efforts to rehabilitate the Dharavi slum have been delayed by opposition from numerous parties. Common criticisms include claims of a lack of a participatory process, the inaccuracy of surveys to determine the ownership of current residents, and the disbelief that the economies of a large slum can be efficiently relocated to a new vertical environment.

The efficiency and speed with which these schemes can be employed is impressive, and it shows the benefits that can be derived from effective public-private partnerships. The model exhibits the ability to create large amounts of housing at no cost to the government, but it is most useful in areas of intense urbanization and high density with lofty property values. In these circumstances, governments can leverage the high value of the land to create significant amounts of housing. However, if the balance of benefits to the informal settlers and the developer are not managed carefully, the resulting product will

not be an acceptable solution. There are risks that the new development will not maintain the community or economy of the informal settlement and that residents will simply not be provided with adequate space. On the other hand, if too many promises are made to the informal settlers, the project may not remain financially feasible.

Figure 20: Value Chain- Commercial Real Estate Ownership Model



This chapter has presented potential models for structuring for-profit social businesses to combat the growth of slums. All the proposed structures have benefits and drawbacks. Their effectiveness depends on the attributes of the market to which they are applied. Each market should be assessed individually to determine the model which would be most effective given the constraints and forces at play. Now that potential structures for providing housing using social business models have been proposed, it is important to assess whether these models would be attractive to the social investment market. The next chapter will explore the size of this market and the returns required by investors.

Figure 21: Comparison of Advantages and Disadvantages of Revenue Models

Revenue Model	Pros	Cons
Microfinance Institution	• Established industry and infrastructure for business loans • Real estate loans are gaining acceptance	• Collateral is hard to define/control. • Doesn't help in securing tenure. • Doesn't leverage technical advances in home construction. • Potential for residents to be overcharged for building materials.
Materials Bank	• Fewer logistics when only providing materials and education.	• Collateral is hard to define/control. • Doesn't help in securing tenure. • Doesn't leverage technical advances in home construction.
Land Development	• More capital can be invested in basic services.	• Doesn't leverage technical advances in home construction.
Specialized Construction Company	• Leverages technological advances to build more structurally sound, sustainable homes.	• Doesn't help in securing tenure.
Residential Sale	• Leverages technological advances. • Provides property rights.	• More complicated due to the need to build the entire home and collect rents from customers.
Commercial Real Estate Ownership	• Easier to collect rents from commercial property owners/renters. • Provides property rights. • Only model which does not necessitate repayment from informal settlers.	• Amount of housing you can build is contingent on value of commercial real estate. • Additional commercial property market risk.

Chapter 4: Social Investment Landscape

Now that potential models for structuring private investments in housing for informal settlers have been proposed, it is important to assess the size of the market for these types of investments. This chapter will describe the characteristics and size of the social investment market, explore the sector's growth potential, and assess the returns which would be required by social investors for these types of investments. It will be shown that the social investment industry holds promise as an effective means to provide enough capital to make a meaningful impact on the slum problem.

Definition of Social or Impact Investing

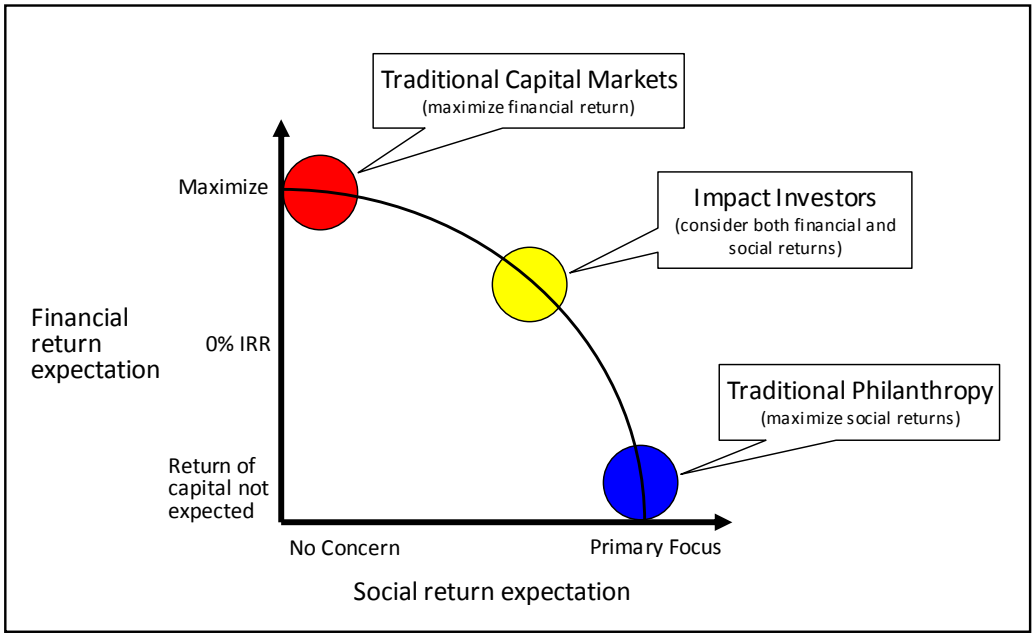
Bill Gates calls it "creative capitalism". Other descriptions have included social investing, socially responsible investing, impact investing, mission-driven investing, sustainable and responsible investing, blended value, values-based investing, mission-related investing, program related investing, ethical investing, responsible investing, triple-bottom line, and environmental-social-governance screening. (Freireich, 2009, p. 11) The lack of a widely-accepted nomenclature is due to the nascent nature of this quickly growing field. For the purposes of this paper, the terms social investing and impact investing will be used interchangeably and defined as actively placing capital in businesses and funds that generate social and/or environmental good and at least return nominal principal to the investor. (Freireich, 2009, p. 11)

Characteristics of Social Investors

Interest in the field of social investing has been growing in recent years and "moving from a periphery of activist investors to the core of mainstream financial institutions". (Freireich, 2009, p. 4) But what are the characteristics of social investors? Social investors can be defined as individuals or organizations who attribute real value to the social or environmental return in their investment decisions. (Trelstad, 2009, p. 2) They seek investments in high growth companies which will create a social or environmental benefit, and they believe it is possible to achieve both a commercial or quasi-commercial return and outsized social impact by betting on innovative entrepreneurs addressing underserved markets." (Trelstad, 2009, p. 1)

The figure below displays how social investors fit into the broader financial community. They do not necessarily expect the returns afforded to traditional investors, however they do expect a social benefit from their capital and at least a nominal return of or on their investment.

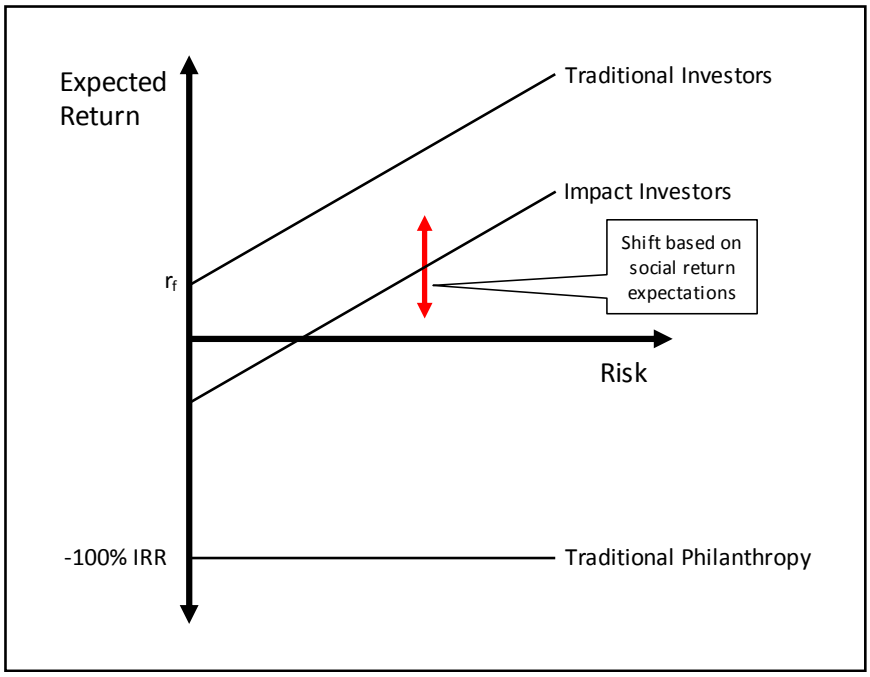
Figure 22: Spectrum of Capital



(Trelstad, 2009, p. 2)

The next graph explains the risk-return relationship among traditional investors, impact investors, and traditional philanthropists. Traditional investors have a return expectation which starts at the risk free rate (r_f), and rises as the uncertainty of returns increase. Impact investors have a similar relationship, but this curve will shift based on the social impact expectations of an investment. If the investment has the potential for a dramatic humanitarian impact, the curve will shift down indicating that the investor is willing to accept lower returns for the same risk. If the investment has relatively low social merit, the curve will be close to the curve of traditional investors. Traditional philanthropists lie on a flat curve at the point of a negative 100% internal rate of return as they do not expect their capital to be returned. They may be more likely to donate if the impact of their investment is high, but their expected return does not change as risk increases.

Figure 23: Risk-Return Tradeoff of Impact Investors



Types of Social Investment Funds

Social investment funds vary widely by their sizes, expected impact, and source of capital. On one end of the spectrum are profit-driven firms that happen to invest in emerging markets because they see opportunities for large returns with the positive social ramifications of their investments amounting to an unintentional positive externality. On the other end of the spectrum are "milestone based philanthropy" funds which use venture methods, term sheets, and intensive management assistance to elicit more impact out of traditional philanthropic investments. Between the two lies the "messy middle": a mixture of for-profit funds, non-profits, government sponsored funds, and endowments with mission related investments. (Trelstad, 2009) For examples of some of the many funds involved in the industry, please see Appendix IV- Spectrum of Social Investors.

Sources of Capital

Where do impact investment funds obtain capital? Sources of capital vary widely but can have a large impact on how investment decisions are made. Some funds receive capital from high-net-worth individuals which think impact investing is a better use of their capital than traditional philanthropy. Others receive money from foundations looking for "program related investments" which advance their missions. Foundations are beginning to think about creating impact not only using their yearly grants, but also using the investments of their endowments. Another trend is large corporations allocating capital to "socially oriented R&D and business development". These allocations capitalize on the resulting goodwill from their customers but also help develop new markets and products. Funding also comes from private banks and wealth advisors looking to offer their clients innovative products. In the competitive world of personal financial management, brokers are often looking for new products to

differentiate their services. Sovereign wealth funds are another source of capital. These institutions may be looking to generate positive results in their own countries or obtain goodwill from the global community. Finally, several firms have been successful in facilitating the investment of large sums of cash from small retail investors. Kiva and Microplace have built significant infrastructure and capital bases by leveraging the power of many small investors who value having a direct connection to the small business they support. (Freireich, 2009)

Size of Social Investment Market

It is difficult to estimate the total size of the social investment market as there is no universally recognized definition of social investing and it is difficult to determine which investors have the "intention" of creating a positive social impact. (Freireich, 2009, p. 82) However, there are a number of statistics from various organizations which give a sense of the market opportunity in the sector.

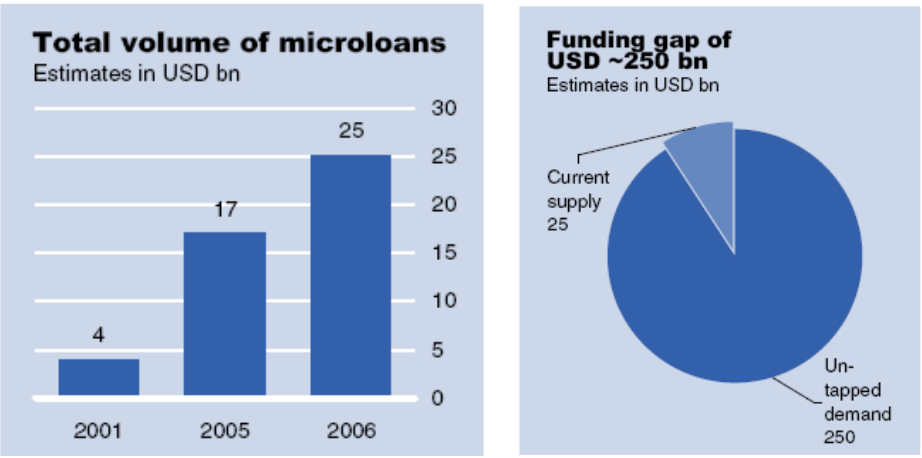
The Social Investment Forum (SIF) is a trade group for impact investors. SIF's 2007 Trends Report estimates that there is currently $2.71 trillion in total assets under management in what they recognize as the three core socially responsible investing (SRI) strategies of screening, shareholder advocacy, and community investing. They define "screened funds" as those which evaluate investment portfolios based on filters of social impact, environmental responsibility, and good corporate governance. "Shareholder advocacy" involves investors that engage with corporations to attempt to improve company policies and exercise good corporate citizenship. "Community investing" directs capital to communities that are underserved by traditional financial institutions. SIF cites that from 2005-2007, SRI assets increased more than 18 percent, eclipsing the growth of the total universe of professionally managed assets, which grew at less than 3 percent. As a result of this growth, 11 percent of U.S. assets under professional management are now involved in SRI. (Social Investment Forum, 2007, p. ii) Although these measures of growth are helpful in displaying how investors are becoming more socially conscious in their investment decisions, the SIF definition of a Social Investment is too broad to make their estimates useful in determining a potential market for distinct investments in housing in developing nations.

Estimates from industry observers about the size of the smaller subset of funds which are actively engaged in specific social investment projects are more useful in gaining an understanding of the size of the potential market. Acumen Fund estimates that several billion dollars have been raised by private social investment funds in the last few years, (Trelstad, 2009, p. 1) and most funds are in the $50 million to $100 million range. Larger funds in the $1 billion plus range are usually development finance institutions like the IFC, which currently has an $8 billion portfolio. (Trelstad, 2009, p. 5) Acumen Fund itself has raised $100 million in individual contributions from donors contributing $10,000 to $5 million. Other benchmarks include the Kellogg Foundation which recently announced a $100 million fund to invest in job creation initiatives in the United States and South Africa, SNS Real which has a $50 million water fund, and the Omidyar Network which recently raised a $15 million fund to invest in small to medium sized businesses in India. (Trelstad, 2009, p. 5) Acumen Fund also states that most social investment funds seem comfortable investing $1 million to $2 million per deal. "Even the largest funds,

except for the international finance institutions, can rarely invest more than a few million dollars in any given company." (Trelstad, 2009, p. 5)

Microlending is a more mature segment of the industry. Its size and growth are better documented and constitute another useful benchmark. Deutsche Bank estimates that the total volume of microloans has grown from $4 billion in 2001 to $25 billion in 2006 (~ 100 million borrowers). (Dieckmann, 2007, p. 7) Unfortunately, this is not coming close to fulfilling total demand which is estimated at $275 billion (~1 billion borrowers) as shown in the chart below. (Dieckmann, 2007, p. 10)

Figure 24: Supply and Demand of Microloans



(Dieckmann, 2007)

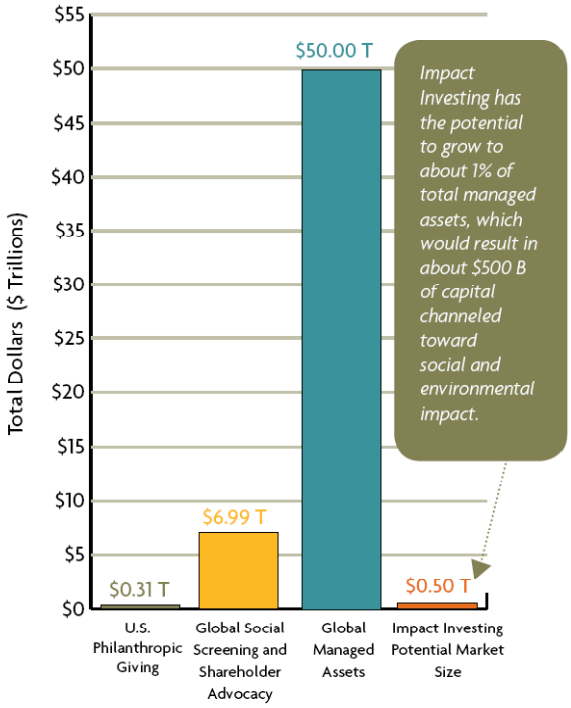
Monitor Institute, the think-tank portion of the consulting firm, has also done significant research on the growth of the impact investment industry. They attribute growth in the industry to several factors. First, they have witnessed a new breed of investors which have become very wealthy in recent years and are seeking a new approach to money management which enables them to "make a difference". In addition, there has been a focus on rapidly growing markets like China, India and South Africa where investments tend to have a stronger connection to public benefits. Also, consumers have been incorporating values-driven considerations into their purchasing decisions. Finally, new regulatory incentives and mandates such as the U.S. Community Reinvestment Act and the Dutch Green Funds Scheme have increased interest. (Freireich, 2009, p. 16)

Growth Expectations

The growth in impact investing is likely to mirror that of microfinance. The first microfinance organizations were started in the 1970s and the sector became more mainstream in the mid-2000s. Most of the first microlending was done by nongovernmental organizations. Over time, these institutions demonstrated the viability of the sector which, in turn, caused more players to enter the market including traditional for-profit financial institutions. Much of the industry's success is due to initiatives that built critical elements of infrastructure related to performance measurement, impact assessment, and standardization. (Trelstad, 2009, p. 23)

Monitor believes this same growth is likely to play out in the broader impact investment sector. They think it is reasonable to assume the industry will grow to represent 1 percent of professionally managed global assets in the next 5-10 years which would create a market of $500 billion. This would be nearly double the amount of philanthropic giving in the U.S. today. (Freireich, 2009, p. 9) The potential size of the market is expressed in the chart below.

Figure 25: Potential Size of Impact Investment Market in 5-10 Years versus 2008



(Freireich, 2009, p. 8)

These projections show tremendous opportunity in the industry; however, there are challenges which must be overcome to achieve such dramatic growth. Contributing to the potential for exponential growth is the growing interest among capital providers, greater recognition of the need for effective solutions to social and environmental challenges, a steadily developing track record with early successes, and a flock of talent to the industry from other more lucrative career paths. (Freireich, 2009, p. 15) Challenges include a lack of efficient intermediation, high search and transaction costs, a lack of enabling infrastructure, and a need to develop networks and industry metrics. Some of these challenges are already being addressed; for example, the Rockefeller Foundation's Global Impact Investment Network is looking to build infrastructure for the sector, particularly in emerging markets. (Trelstad, 2009, p. 6)

There is significant potential for dramatic growth in the social investment industry which will create tremendous opportunities for projects seeking capital. Already today, there is evidence of a shortage of investment opportunities which meet investors' required rates of return. (Freireich, 2009, p. 15) As an example, Scott Budde, TIAA-CREF's managing director of Global Social & Community Investing, stated,

"There are a lot of areas that we can't invest in because there is a lack of opportunities at scale." (Freireich, 2009, p. 39)

Required Returns

In the prior section on the characteristics of impact investors, the conclusion was drawn that social investment funds should be able to obtain capital at a lower required return than traditional investment funds with a similar risk profile. So, how much less? Again, little data is available due to the nascent nature of the industry, but we can get a sense from anecdotal evidence. Acumen Fund states that the required returns are "all over the map" and dependant on the investor, structure, time horizon, and exit options. On the commercial end of the spectrum, investors are looking for returns in the 25-30% range; and on the philanthropic end of the spectrum, some investors are willing to accept just a real return of principal. (Trelstad, 2009, p. 6)

One example is GroFin, a fund committed to assisting small and medium enterprises in emerging markets achieve sustainable profitability and foster socio-economic development. They have $230 million in funds under management which was raised from 22 investors and is invested in six funds. Their stated target IRR to investors is 10%. (GroFin, 2008)

Kiva is another example. Kiva is one of the first websites which connected entrepreneurs in developing nations with individuals in developed countries looking to provide microfinance loans. As of May 2009, they had made $77 million in loans from 512,000 lenders, employing 98 partner microfinance organizations and achieving a 98.5% repayment rate. (Kiva) Kiva offers only a return of capital.

Fees

Social investment fund management fees also vary dramatically. Traditional private equity economic structures entail fees of 2% of assets under management and 20% of returns over a certain benchmark, but few social investment funds operate under such a "two and twenty" cost structure. Some impact funds charge 3-4% of assets under management due to the higher costs of finding and structuring investments, but these tend to be the funds which bring in high returns. If the fund leverages a significant amount of expertise of a partner nonprofit, they may charge up to 20% of invested capital for this management assistance, business development, or grant-funded consulting. Another model being employed is to offer a fixed return to investors instead of charging such fees. (Trelstad, 2009, p. 5)

Structure

The investment structures used by social funds vary dramatically as well. Investment structure is usually based on whatever best supports the underlying business and the capital source. Debt, equity, preferred shares, guarantees, revenue participation, and royalty structures have all been employed. Of particular concern when structuring investments are exit options. As little liquidity exists in many markets, the ability for investors to withdraw cash is a common concern. (Trelstad, 2009, p. 5)

Opportunity

The current social investment climate is characterized by a broad spectrum of types of investors with different motivations and risk tolerances. There is evidence of significant unsatisfied demand, especially for opportunities to invest a large amount in a single investment. The market currently lacks infrastructure, but as the market matures, a solid history is established, metrics are created, and transaction costs decrease, impact investing is likely to see the exponential growth that the microfinance subset of the industry has seen. The new marketplace will likely offer a broad range of investment opportunities with a spectrum of expected returns, risk profiles, terms to maturity, geographies, and targeted social impacts. Social investing holds promise as an opportunity to dramatically increase the amount of capital directed towards combating the growth of slums and make a meaningful impact on the problem. Now that a specific framework has been proposed for structuring and financing investments in housing to combat the growth of slums, the next chapter will attempt to apply these concepts to a specific market.

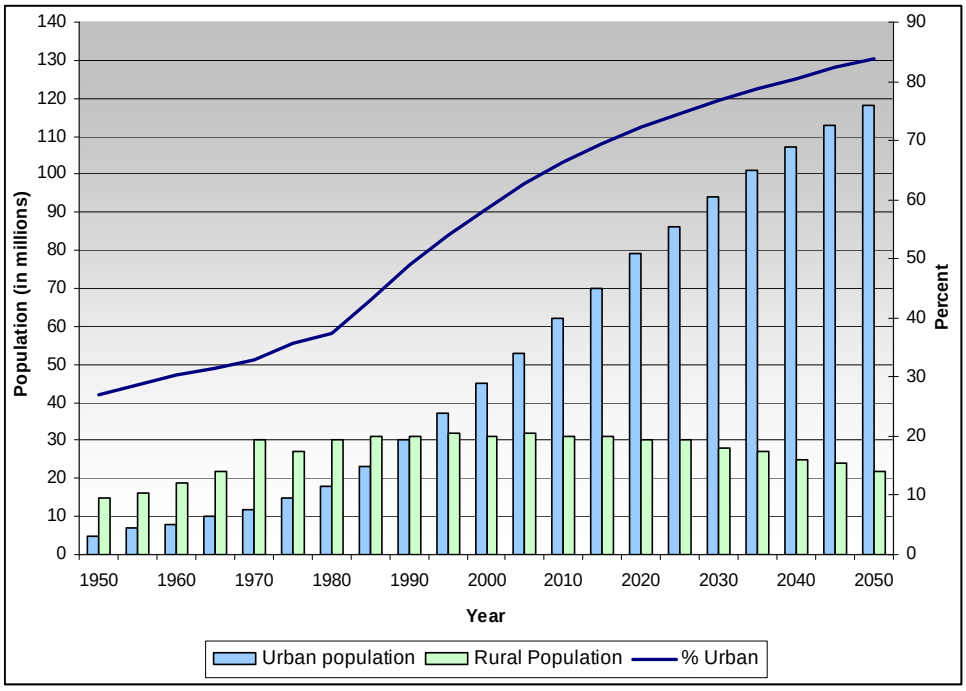
Chapter 5: Feasibility Study- Manila

Now that models for structuring and funding investments in low-income housing to combat the growth of slums have been proposed, these models will be applied to a particular market in order to understand the obstacles which may arise when attempting to implement such a program. Manila was chosen as the target market due to its large slum population, the availability of pertinent statistics, and access to local experts. Travel to Manila was conducted to obtain information about the market, interview local experts, and experience the slum conditions first-hand. Interviews were conducted with representatives from the World Bank, the Asian Development Bank, a local NGO which provides housing to informal settlers (Gawad Kalinga), a local developer (Pro-Friends), the Housing and Urban Development Coordinating Council (HUDCC), and the Mayor of Taguig (a major Metropolitan Manila city).

5.1 Economic Overview of the Philippines

The Philippines have experienced explosive growth of urban areas in recent decades. In 1950, just over 5 million or 27 percent of Filipinos resided in urban areas. Four decades later, the urban population grew to over 29 million or 49 percent of the country's population; and by 2005, the urban population increased to more than 53 million or 60 percent of the country's population. It is projected that about 117 million or 84 percent of Filipinos will be residing in urban areas by 2050. (HUDCC, p. 6) The chart below displays this dramatic growth of urban areas.

Figure 26: Urban vs. Rural Population in the Philippines

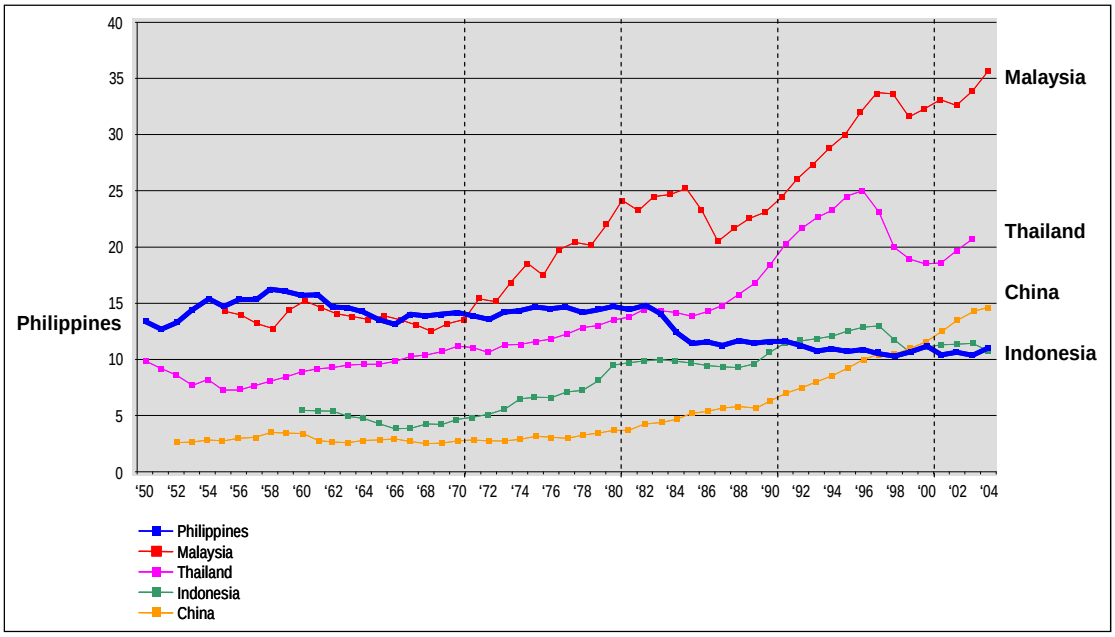


(HUDCC, p. 6)

This rapid urbanization is likely due to the availability of higher paying jobs and the greater socio-economic mobility which is available in cities. In recent decades, the Philippines has transformed into an urban economy where most economic activity emanates from the service and industry sectors, and agricultural employment is rapidly declining. Incomes in urban areas have been estimated to be 2.3 times that of rural areas. (HUDCC, p. 7) These employment trends mean that prospects for economic growth and employment lie largely in urban areas.

Unfortunately, performance of the Philippines' economic system has not been very encouraging when compared to other countries in the region. In terms of GDP per capita, the Philippines has been regularly overtaken by Malaysia, Thailand, Indonesia, and China as shown in the chart below. The culprits are likely inadequate infrastructure, overcrowding, congestion, pollution, and strained public services such as health, sanitation, and water. These problems are compounded by weak governance and financial capabilities which undermine efforts to deal with the problems. The challenge for the future will be to address these issues by enhancing economic production, increasing the credibility of governance, reinforcing financial capacity, and promoting the improved quality of life of all residents. (HUDCC, p. 7)

Figure 27: Real Per Capita GDP, 1950-2003



The low level of growth in per capita GDP has meant that poverty reduction has been modest. The national poverty rate decreased from 44% in 1985 to 34% in 2000. In absolute numbers, the number of poor families actually increased from 4.6 million in 1985 to 5.1 million in 2000. As shown in the table below, the poverty incidence rate decreased much more substantially in the urban areas during this time, underscoring why the rural population is drawn to the cities.

Figure 28: Poverty Incidence in the Philippines (% of Total Households)

Year	Philippines	Urban	Rural
1985	44.2	33.6	50.7
1988	40.2	30.1	46.3
1991	39.9	31.1	48.6
1994	35.5	24	47
1997	31.8	17.9	44.4
2000	33.7	19.9	46.9

(HUDCC, p. 11)

5.2 The Housing Problem

There is a severe housing shortfall in the Philippines and it is largely an urban phenomenon. It is estimated that more than one third of the urban population lives in slums and informal settlements. (HUDCC, p. 18) Slums are scattered over 526 communities in all cities and municipalities in Metropolitan Manila. Due to the dense nature of Manila, squatter settlements are sprinkled throughout the city in every conceivable location. (UN-HABITAT, 2003, p. 215) Half of the slum population is employed in the formal sector, and informal workers are often employed in jobs such as domestic help, tricycle driving, construction labor, factory labor, and vending. (UN-HABITAT, 2003, p. 216)

The Housing and Urban Development Coordinating Council estimates that the total need for publicly subsidized housing will reach 3.76 million units by 2010. This consists of a combination of new shelter needs due to population growth and existing shelter needs due to homelessness, informal settlements, and doubled-up housing. This leads to an average subsidized housing need per year of over 600,000 units. The table below displays HUDCC's estimates of housing need per category of shelter deprivation.

Figure 29: Housing Need Per Category, 2005-2010

Category	Total	Avg. Per Year
Housing Backlog	984,466	164,078
Doubled-Up Housing	387,315	64,553
Replacement / Informal Settlers	588,853	98,142
Homeless	8,298	1,383
Substandard (Upgrading)	186,334	31,056
New Households	2,585,272	430,879
Total	**3,756,072**	**626,012**

(Senate Economic Planning Office of the Philippines, 2006)

Unfortunately, the Government has been unable to keep up with this overwhelming demand. Between 2005 and 2007, direct production of housing by the government has averaged 107,000 units, far short of the estimated demand of over 600,000 units. HUDCC acknowledges this challenge cannot be met with public sector efforts alone, stating "Beyond the provision of housing by the public sector, new approaches are needed." (HUDCC, p. 16) The table below displays the low-income housing production subsidized by the government from 2005 to 2007.

Figure 30: Philippines Direct Public Housing Production (Households Assisted) [4]

Socialized Housing Program	2005	2006	2007
Resettlement	16,960	15,390	16,568
Slum Upgrading	4,136	1,338	3,707
Sites and Services	1,192	2,061	4,036
Core Housing	1,033	927	721
Community Mortgage Program	14,199	13,783	11,822
Community Based Housing	18,982	20,987	16,692
HDMF-End User Financing	11,938	8,878	14,622
Presidential Proclamation	7,807	19,978	2
Sub-Total Socialized Housing	**76,247**	**83,342**	**68,168**
Low-Cost Housing Program	**2005**	**2006**	**2007**
End-User Financing	25,237	24,061	32,745
GFIs End-User Financing	10,582	488	881
Medium Rise Housing	0	105	60
Sub-Total Low-Cost Housing	**35,819**	**24,654**	**33,686**
TOTAL DIRECT HOUSING PROVISION	**112,066**	**107,996**	**101,854**

(Philippines National Economic and Development Authority, 2008-2010)

The percentage of the national budget allocated to housing has fluctuated in recent years, however the general policy is to allocate approximately 1% of the total budget to housing programs. HUDCC would like this percentage to increase. They point to UN reports which recommend increasing the allocation to at least 2%. Unfortunately, even doubling the amount allocated to housing programs will not produce enough housing to satisfy demand. The chart below displays the budget allocation to housing in recent years.

[4] Socialized Housing Program refers to housing packages costing Php 300,000 and below. Low-Cost Housing Program refers to packages costing above this amount.

Figure 31: National Budgetary Allocation for the Housing Sector

Year	National Budget (Php M)	Allocation for Social Services (Php M)	Allocation for Housing and Community Development (Php M)	Percentage Share of Housing to the National Budget (%)	Percentage Share of Housing to the Social Sector Budget (%)
2005	1,243,504	117,654	1,725	0.14	1.46
2006	1,053,300	296,600	7,340	0.70	2.47
2007	1,257,061	145,308	1,744	0.14	1.20
Total	3,553,865	559,561	10,809	0.30	1.93

Going forward, the government has identified public-private partnerships as an important part of their shelter strategy. They have stated the intention to encourage private sector participation by streamlining processes for housing permits and creating "one-stop-shops" to shepherd private developers through the approvals process. They have also acknowledged their intention to provide support for NGOs which produce housing such as Gawad Kalinga and Habitat for Humanity. (Philippines National Economic and Development Authority, 2008-2010)

5.3 Property Rights

The 2009 International Property Rights Index ranks the Philippines 70th out of 115 countries for protection of physical property rights as shown in the chart below. Despite this ranking, the process of registration and the ability to defend claims are relatively advanced, with the biggest issues being the threat of changes in governmental land-use policies and the length of time it takes to resolve disputes in the courts.

Figure 32: International Property Rights Index: Philippines

Category	Score	World Rank	Regional Rank
Physical Property Rights	5.5	70 of 115	16 of 18
Property Rights Protection	4.3	67 of 115	12 of 18
Registering Property	7.7	58 of 115	14 of 18
Ease of Loan Access	3.2	77 of 115	15 of 18

(International Property Rights Index 2009)

Registering property in the Philippines is based on the Torrens system which was put in place while the islands were under U.S. sovereignty. Original registrations of land are quite tedious as they require surveys, notice, and judicial process; however transfers of ownership are largely administrative and run under a relatively expedient process. Once land is registered, adverse possession is not a risk for landowners. Illegal settlers have no right to land regardless of the duration of possession. Enforcement of mortgage contracts are rather straight-forward with the foreclosure process defined in law. (Jimenez Nepomuceno, 2009)

In terms of the landlord-tenant relationship, landlords can eject tenants for nonpayment of rent, subleasing of the unit without consent, the need for personal use, or the need to make repairs. However, local town tribunals mediate most landlord-tenant problems, and if the problem is not resolved at the town level, there is the possibility of a long and expensive trial. In practice, it takes an average 164 days to evict a tenant for non-payment of rent (Global Property Guide, 2007).

Land ownership is governed by the Regalian Doctrine which dictates that all lands have to be acquired from the State. If land has not been purchased from or granted by the state, it is part of the public domain, and the burden of proof lies on the owner. Land is designated as either private and capable of being registered for private ownership, or public and not qualifying for registration. Classification of public lands is the exclusive responsibility of the Executive Branch of the government. (Pamaos, 2008) This presents the risk that a new administration could change what is considered public or private property.

This risk was evidenced in a dispute over land rights in the popular resort island of Boracay. Some of the most luxurious resorts in the Philippines are located on this tourist destination island. Many of these resort owners had been given permission to build on government land, but never had actual title. In 2006, several owners of improvements on the island submitted a petition for confirmation of their imperfect titles in order to obtain more security in their land. During the time of these petitions, President Gloria Macapagal-Arroyo issued a proclamation classifying the island into 400 hectares of reserved forest land (protected public land which is not capable of being registered) and 629 hectares of agricultural land (unprotected land which can be sold by the government and registered by private individuals). (Pamaos, 2008) The Supreme Court ruled that the continued possession and substantial investment by private claimants did not automatically confer vested rights in land on Boracay or the right to apply for legal title. The Court did state that while claimants on public land are ineligible for ownership, it does not mean their automatic eviction or loss of their substantial investments, and their lack of title does not necessarily mean a lack of right to possess. (Rempillo, 2008) Which claimants end up with the right to purchase and register their lands will largely be a result of which areas of the island are declared as reserved forest land and which portions are specified as agricultural land.

The course of events in Boracay has frightened many investors; however, thus far, the government has acted in good faith and the fear of nationalization or demolition has not been realized. In a proposal to develop housing for the poor, it is reasonable to assume that a collaboration with the government would be established in advance, land capable of being registered could be obtained, and the government would be hesitant to interfere with low-income communities due to fear of populist outrage. The risks related to investments in low-income housing in the Philippines seem largely due to the length of time required to resolve disputes in the courts.

5.4 Gawad Kalinga

Gawad Kalinga (GK) is an innovative Filipino NGO which is based on the goals of nation building and poverty alleviation. GK has an impressive track-record of transforming communities by providing decent housing and initiating values formation. Since its founding in October 2003 the organization has built approximately 40,000 to 50,000 homes in communities throughout the Philippines.

GK does not charge recipients for their homes. They are focused on providing shelter for the "poorest of the poor" and believe that this demographic cannot afford to pay for the cost of their homes. GK uses multiple funding sources to finance their developments. One of the largest sources of capital is Filipinos living abroad. GK has also been successful at partnering with corporations. These companies sponsor developments as part of their corporate social responsibility efforts and villages are co-branded with the company name. Finally, GK has received assistance from local governments which are looking for help in dealing with informal settlements.

Land for GK communities is generally donated from private landowners or the local government. GK often works with the owners of land of which a portion has been invaded by squatters. They attempt to convince landowners that if they contribute 20% of their property, GK can reorganize squatters in a smaller area and build respectable housing. The resulting homes are generally of a similar square footage, and at a higher density, organized in a row house fashion. GK claims that the remaining 80% of the land can increase in value by as much as ten times. Tenure security in GK communities is usually managed as a long-term right of use. Residents have the indefinite right to their homes and the ability to pass them on to their children.

Recipients do not pay for the homes they are awarded. Community members are expected to contribute sweat equity and participate in "values formation" classes as a condition of their grants. GK believes that these values formation classes are a integral part of poverty alleviation and building a sustainable community. They believe poverty is usually treated as an economic problem when it is actually a behavioral problem. GK believes in microfinance, but not until the right community values are in place.

GK is currently attempting to scale-up their operations. They recently partnered with a local development firm called Pro-Friends to help them build in-house infrastructure to develop larger communities. They aim to gain efficiencies and build capabilities similar to that of a private development firm. As described in Chapter 3, GK's first project in collaboration with Pro-Friends is a 1,134 home "Estate" in the town of Passi, Iloilo. Increases in scale will decrease per-unit construction costs as well as reducing the "poverty penalty". With larger communities, more services such as schools and retail establishments can be provided and transportation costs are reduced.

The next goal of GK in increasing their scale is to introduce legislation. They are currently working with members of the House of Representatives to initiate bills which will require towns to land-bank property for affordable housing. Towns would be required to set aside land based on the number of informal settlers that reside in the community.

5.5 Proposed Model

There is an obvious need for additional resources to combat the housing problem in the Philippines. The government is facing a deficit of nearly 500,000 units per year and the most effective NGOs are producing a small fraction of this amount. The following section will analyze the viability of using social investment funds to supplement housing production.

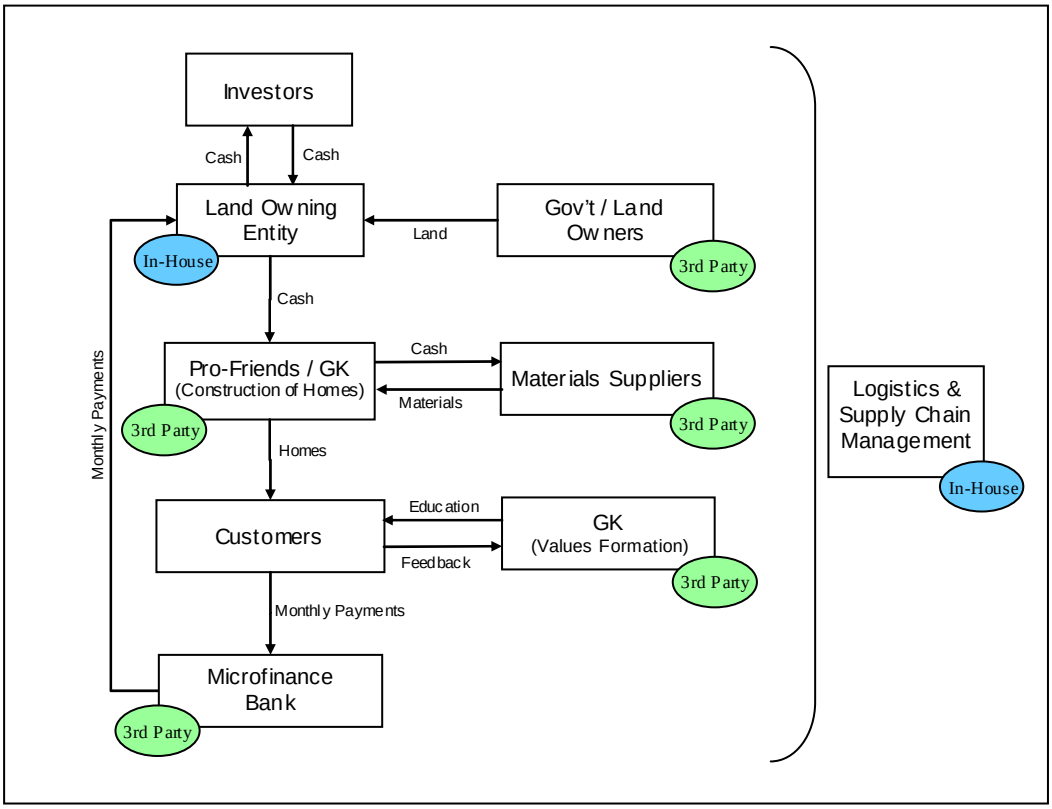
Structure

Of the six models presented in Chapter 3, the residential sale structure is the most likely to be effective in Manila. First, it makes sense to leverage the institutional knowledge of local players like Gawad Kalinga and Pro-Friends which are constructing housing, but on a philanthropic basis. They have much of the organizational infrastructure, governmental connections, and community relations in place. In addition, as community members are familiar with these organizations and their model, it would take less time to educate community members and earn their trust. Relatively safe property rights and governmental support of tenure security plans for informal settlers make the model feasible, and constructing housing for settlers is attractive as it entails more efficient production and higher quality units.

The commercial real estate ownership model would be interesting to explore, but it is currently very difficult to obtain financing for large-scale commercial development. In addition, there are several large projects currently under construction which are producing a large amount of supply in the market. One particularly large development, Bonifacio Global City, is the redevelopment of a twenty six square kilometer army base and aims to create a new city center and entails the development of numerous office buildings, condominium towers, shopping centers and hotels. However, using a hybrid of the commercial real estate ownership model by holding back a portion of developed land for commercial purposes may be an effective way to supplement income from residential sales.

Now we must consider how this structure would be organized. GK and Pro-Friends are building a robust infrastructure and they maintain a phenomenal reputation in the Philippines. Therefore, it makes sense to leverage their capabilities. Pro-Friends would provide construction services with community organization support from GK. The values formation education which GK provides is a valuable service and would likely increase the sustainability of communities and loan repayment rates. GK would provide these services, and would have much more capacity as they would no longer have to pay for the cost of constructing homes. Finally, a local microfinance organization would be engaged to manage the collection of monthly mortgage payments. A diagram of the proposed structure is shown below.

Figure 33: Proposed Value Chain



Construction Costs

Construction costs (excluding land) can be estimated based on the experiences of HUDCC, GK, and Pro-Friends. HUDCC's average construction cost per unit is $2,484. GK's average cost to produce a home varies between $1,553 and $1,967 based on the type of home and its location. Urban homes are usually more expensive to build due to the need for multiple stories and more sophisticated building techniques. Pro-Friends is budgeting their first GK estates project at $1,500 per unit. This lower cost is due to economies of scale, construction efficiency and the semi-attached nature of the units. For the purposes of our analysis, we will assume construction costs at Pro-Friends' estimated price and add 10% profit. The total cost of construction to the social investors will be $1,650 per unit which will be paid to Pro-Friends.

Figure 34: Construction Cost Estimates [5]

Organization	Row Houses	Semi-Attached	Single Family Detatched
HUDCC	n/a	n/a	$2,484
GK- Rural	$1,553	n/a	$1,760
GK- Urban	$1,760	n/a	$1,967
Pro-Friends	n/a	$1,500	n/a

[5] Based on exchange rate of $1 USD = 48.3 PHP

Incomes and Spending on Housing

Income inequality is dramatic in the Philippines. Although there is a small minority of high-income households, the median income of the population was less than $2,300 in 2006. Below is a table displaying a split by income decile of the 17.4 million households of the Philippines. The National Statistics office tracks the median income, spending, and the percentage of total spending which is devoted to housing. Combining these statistics we can derive the yearly household spending on housing for each income decile, and determine the monthly payment which each group can theoretically afford.

Figure 35: Income and Household Spending in the Philippines

Income Decile (total population = 17.4 million households)	Median Household Income (PHP)	Median Household Income (USD)	Median Household Spending (USD)	Housing Expenditure as a % of Total	Total Family Expenditure on Housing (USD)	Monthly Payment can afford (USD)
1st (low)	34,000	$704	$725	9.4%	$68	$6
2nd	51,000	$1,056	$1,056	9.4%	$99	$8
3rd	65,000	$1,346	$1,325	9.6%	$127	$11
4th	80,000	$1,656	$1,594	10.4%	$166	$14
5th	99,000	$2,050	$1,946	11.4%	$222	$18
6th	123,000	$2,547	$2,381	12.3%	$293	$24
7th	156,000	$3,230	$2,940	13.1%	$385	$32
8th	204,000	$4,224	$3,727	13.4%	$499	$42
9th	286,000	$5,921	$5,010	14.0%	$701	$58
10th (high)	509,000	$10,538	$8,282	15.4%	$1,275	$106
Median	111,000	$2,298	$2,112	13.3%	$281	$23

(Philippines National Statistics Office, 2006), (Philippines National Statistics Office, 2009)

The minimum wage in the national capital region is either P345 or P382 per day based on the type of job. (NSCB, 2008, p. 11~20) Assuming 256 work days per year, this translates to a yearly income of $1,829-$2,025 which places these workers in the 5th income class and, by our calculations, able to afford a monthly mortgage payment of $18. Anecdotally, representatives from HUDCC stated that the standard mortgage provided as part of their shelter program ($2,500 at 6% interest, amortized over 30 years) has a payment of approximately $15 per month and is about the limit of what the average family can afford. As will be shown later, our model is based on this payment structure of $15 per month. Based on the calculations above, a product priced at $15 per month would serve people in the 4th and 5th income deciles and possibly be attractive to those in higher income brackets. While this product would not serve the poorest residents, it would free up public and NGO resources to focus on the lowest income groups.

Cost of Microfinance

Per the 2008 Asia Microfinance and Benchmarking Report, the average microfinance organization in the Philippines had a cost per loan of $68 on an average outstanding loan balance of $186 for a ratio of operating expenses to loan portfolio of 31.3%. The average institution maintained 109 borrowers per

staff member. These expenses are high when compared to the total of all Asian countries. In this group, the average cost per loan was $36 with an average loan balance of $165 for a ratio of operating expenses to loan portfolio of 16%. This was while maintaining a slightly higher 129 borrowers per staff member. (MIX and Intellecap, 2008) In the proposed model, instead of having the microfinance organization fund mortgages they would simply handle administration of the loan repayments. As they will have no capital at risk, we will assume that they require only a return on costs of 10%. For the purposes of our model we estimate a business cost for Pro-Friends between the Philippines average rate and the all-Asia rate. Therefore, $50 per loan plus 10% for a total of $55 per loan per year will be used. This acknowledges that collection of large numbers of loans with the same amortization schedule in the same community will be easier to administer than the average small-business microloan. As the cost used is still above the average rate in Asia, it is expected that it may be a source of savings in the future.

Returns

The financial characteristics of the proposed model are displayed in Appendix VIII and summarized in the table below. It is assumed that investors contribute $1,700 per unit. 3% of this ($50) is allocated to investment management fees. Pro-Friends will be paid $1,650 per unit giving them a profit margin of 10%. Land is assumed to be contributed by the government or local land owners as previously discussed. The sales price of the home will be $1,725 with a 10% down payment. Residents will have 20 year mortgages with an interest rate of 10% on a principal amount of $1,553 which leads to monthly payments of $14.98 per household. A monthly microfinance fee of $4.58 ($55/12 months) would be deducted from this payment. These assumptions result in a net of $10.40 per month being returned to investors (in addition to the down payment) which entails an internal rate of return of 5.0% over the life of the loan.

Figure 36: Unsubsidized Model Financial Summary

Social Investment	
Equity	$1,700
Investment Mgmt Fee ($)	$50
Investment Mgmt Fee (%)	3%

Construction Costs	
Total Production Cost	$1,500
Profit Margin	10%
Pro-Friends Charge	$1,650

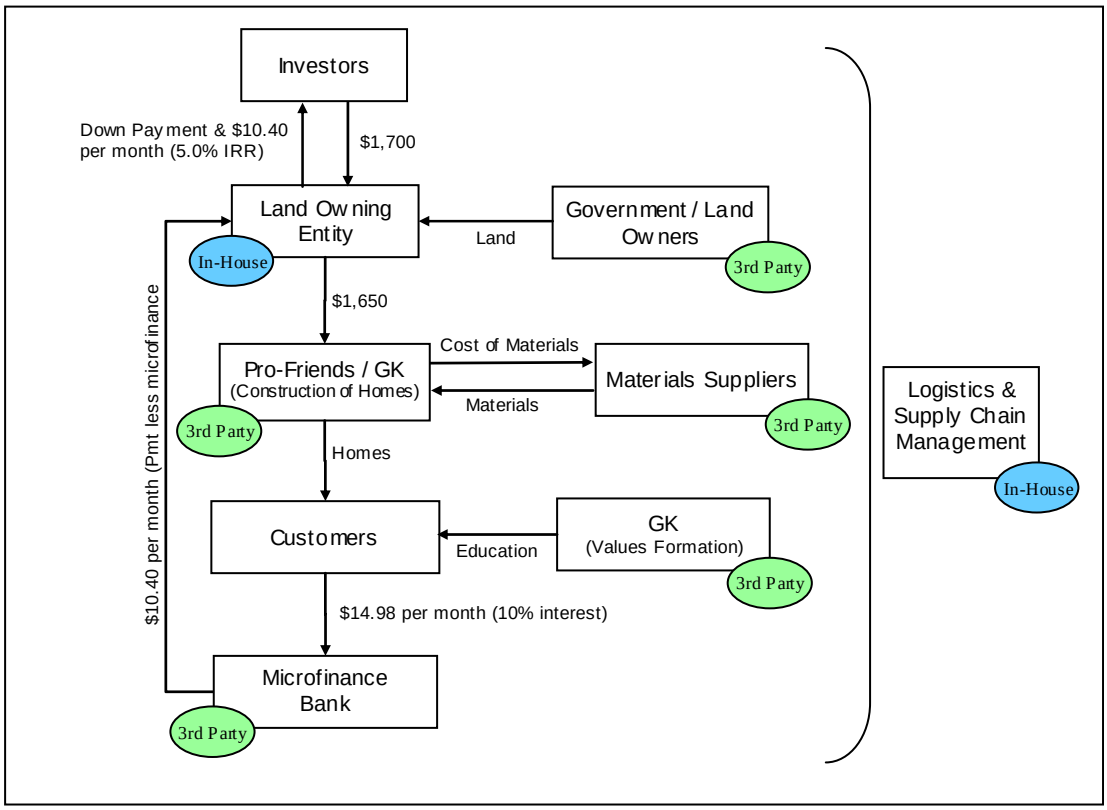
Mortgage	
Sales Price	$1,725
Down Payment (10%)	$173
Principal Amount	$1,553
Interest Rate	10%
Amortization Term	240
Mortgage Payment	$14.98

Microfinance	
MFI's Yearly Cost	$50
Profit Margin	10%
Yearly Microfinance Charge	$55
Monthly Microfinance Charge	$4.58

Returns	
IRR	5.0%

Although this model entails a low risk/return tradeoff, it is assumed that the return would satisfy many impact investors due to the high social benefit of the investment. In addition, the model assumed a cost of microfinance which was higher than the rest of Asia. It would be expected that this amount could be reduced as scale increased which would also increase returns.

Figure 37: Proposed Value Chain with Cash Flows



The previous model also did not assume any subsidies other than the contribution of land. If a higher return is required, it may be possible to obtain subsidies from the government in order to make the economics of the transaction more attractive to investors. Exhibit IX displays the impact of a 30% government subsidy of the equity required. This would increase returns to investors to an unlevered 10%. This could be an attractive proposition to the government as they would obtain substantially more units for their money than the direct housing production programs they currently run. Although they would not obtain a return of capital from mortgage payments like they do currently, subsidizing this model would allow them to produce five times more housing for each dollar invested. Another option would be to add a commercial real estate component to the structure. If a portion of the land were developed for commercial purposes, returns could possibly be increased.

Market values in these properties are likely to increase, but should remain relatively stable as the community takes form. Organizations that give away housing have had problems with the recipients selling the housing for cash and returning to urban slums where they can hopefully obtain another grant. If property values increase quickly, there may be incentive for new residents to sell their properties. However, since owners in this model have a mortgage, it is unlikely that the "professional squatter" issue will be as much of an issue. If there is substantial concern, sale prohibitions for a specified number of years could be put in place. In addition, Gawad Kalinga has a history of being able

to cultivate a sense of community which can help create a more stable environment and cause people to stay.

It is expected that the security of collateral will be relatively strong. As discussed in the property rights section, it is likely that the government will respect the tenure rights of the residents, and the mortgage foreclosure process is well defined should a default occur. In general, default rates in microfinance institutions are extremely low. The average Asia loan loss rate in 2008 was only 0.9%. (MIX and Intellecap, 2008) This may partially be due to the utilization of lending groups which the microfinance organization will likely implement.

The land owning entity as shown in the value chain diagram will be the center of the legal structure handling the cash flows with investors, holding mortgages on the land, and hiring the general contractor. A sophisticated legal structure involving entities in the Philippines and a foreign base of investment will likely be needed. Although the entities will need to be for-profit, legal and tax professionals would be consulted to determine the appropriate structure to limit liability and allow for the repatriation of income.

The Manila feasibility study has shown some of the opportunities and obstacles which arise when attempting to apply social business models in a real world context. The intricacies of the local market were assessed to determine the most applicable model, and economic, statistical, and anecdotal information was used to evaluate the financial feasibility of the proposed structure. The resulting economics of the proposal are tight; however it illustrates the potential for social investment funds to increase the capacity of governmental organizations and NGOs. The next chapter will discuss the potential for social investments to reach scalability and meaningfully impact the global informal housing problem.

Chapter 6: Potential for Scalability

Now that we have seen how social business techniques can be applied to a particular market, the next logical question is whether these concepts can be scaled-up to make a significant impact on the global problem of informal settlements. Unfortunately, the rapid pace of urbanization and population growth have eclipsed the efforts of most governments and NGOs to deal with the growth of slums. Limited government budgets, difficulty in raising enough philanthropic capital, and inefficient organizations have hampered efforts. Social business models hold promise as capital can be recycled year after year to help more and more people. The potential for scalability will be affected by the amount of available capital, the profitability of the proposed social investment framework, and the ability to appropriately identify and mitigate risks. Structures which produce commercial returns are eminently scalable; however these conditions occur only in select environments.

6.1 Amount of Capital Potentially Available

Although many people are uncomfortable with the thought of using a for-profit strategy to help the poor, social investment strategies hold promise as a means of liberating the "dead capital" which is currently locked away in the real estate of developing nations and, in turn, increasing the standard of living of millions. These social business models hold promise as a way to achieve the scalability often lacked by public institutions by harnessing the power of the world's mature capital markets. The explosion in microlending industry in recent years has shown how facilitating the flow of capital to developing nations can help the poor pull themselves up out of poverty. As with microlending, housing social investment funds may be attractive to investors because the for-profit model has the potential for creating a multiplier effect on each investment. While a donation to a traditional housing NGO will help build a home for a family in need, an investment in a social investment fund will help build a home, but also create a continuing cash flow stream which will replenish investable capital that can be used to build additional homes in the future. Contributing to a social investment fund will provide a larger social impact due to reinvested capital, provide a financial return, and present opportunities for positive environmental impacts which will be addressed later in this chapter.

As described in Chapter 4, industry professionals expect the social investment market to grow exponentially future years, mirroring the growth of microfinance institutions. The consulting firm Monitor thinks it is reasonable to assume the industry will grow to $500 billion in the next 5-10 years. (Freireich, 2009, p. 8) If 10% of this were allocated to shelter programs, it would establish a new base of capital of $50 billion to combat the growth of slums. This is significant when compared the UNDP estimate, quoted in Chapter 2, that it would cost $294 billion to upgrade all the slums of the world by 2020. (UNDP #1, 2005, p. 9) Although the cost per unit of each intervention would vary, assuming an average cost of $1,500, this base of capital has the potential to initially impact the lives of over 33 million households and continue to generate more housing on a revolving basis as it is likely that returns would be reinvested to benefit more households each year. It is also likely that such funds could be supplemented with money from international finance institutions like the Asian Development Bank

which has a private sector finance program that can supply up to 25% of the equity for certain development projects. Although the social investment industry holds promise as a source of capital which can have a substantial impact on the informal settlement problem, it is evident from the estimates above that it cannot solve the entire problem. To be eminently scalable, commercial returns would be required.

6.2 Profitability

Lessons from Microfinance

Although it may seem difficult to obtain commercial returns from social investment models, these structures will likely benefit from economies of scale and efficiency improvements as the infrastructure of the sector improves. Hints of this potential can be seen by looking at the microfinance industry which has already become more mature. In his article entitled "Commercial Returns at the Base of the Pyramid", Michael Chu shows how the microfinance industry in Latin America has come to make returns that rival those of the conventional banking system. A summary of the returns Chu documented is shown in the table below.

Figure 38: Financial Returns of Microfinance and Conventional Banking in Latin America, 2004

	ROA	ROE
Microfinance		
NGOs	5.6%	13.2%
Regulated Finance Companies	3.5%	19.5%
Commercial Banks	4.2%	31.2%
Conventional Banking	1.6%	16.5%

(Chu, 2007, p. 118)

The consistent generation of returns in excess of that of commercial banks by the microfinance industry in Latin America has gained the sector the respect of the capital markets. This has allowed MFIs to participate directly in the bond markets and substantially reduce their cost of capital. It is hopeful that housing social investment returns will follow this same path as the sector matures. Production of commercial-level returns would catalyze extreme growth in the amount of capital invested and help many more households.

Providing Commercial Returns

Of all of the models proposed, the commercial real estate model is the most likely to produce commercial returns and therefore holds the most potential for scalability. This potential derives from the fact that it is the only model where revenue is not contingent on the budget of the government or informal settlers. Essentially, the land values in these areas are high enough that a granting of land to a private developer is able to subsidize the entire cost of new low-income housing and still produce

commercial returns. These high returns mean that huge amounts of money from private developers can be mobilized.

However, as stated in Chapter 3, this model will only work in certain environments. It requires high land values, expected future rental growth, governmental cooperation, community support, healthy capital markets, and an ability to preserve economies and social networks. It is most likely to be effective in the largest cities, which is why the best examples at the largest scale have occurred in Mumbai. Although this model will not be effective in all environments, the prospect of commercial returns in these investments can allow more of the true "social capital" to be used in markets where commercial real estate models are not possible. Interestingly, the very population growth and urbanization which is causing much of the informal settlement crisis is also contributing to an environment of quickly growing land values where the most scalable model is a feasible option.

Leveraging Technology

Overall profitability and the number of people reached can both be increased by leveraging technology. Most NGOs building homes for the poor use relatively primitive materials and techniques, and building designs are often not adapted to local cultures and climates. Architectural design competitions for housing in developing nations are common occurrences, but they often result one-off projects and innovative but impractical designs. However, innovative designs and modern construction techniques still hold promise as an effective way to decrease costs and reach more households. The use of prefabricated units, tilt-up construction, renewable energy sources, rainwater harvesting, water recycling, among other technologies should be explored.

Use of Sustainable Technologies

Upgrading housing is likely to have a beneficial environmental impact. This is due to the installation of sound infrastructure systems, the elimination of pollution run-off, and the provision of more efficient heating and lighting systems, among other improvements. However, the high amount of energy used in the construction and maintenance of homes makes it important to consider additional sustainability initiatives when proposing large-scale housing production for BOP populations. Serving the fastest growing segment of the world's population bestows special responsibly on developers to implement environmentally sustainable practices, but implementing these technologies can also help provide a competitive advantage.

Structuring a socially and environmentally responsible organization necessitates the evaluation of the entire supply chain to assess how the impact on the environment can be minimized. It is important to purchase as much as possible from local suppliers to reduce transportation costs and the carbon footprint of construction inputs. One must also assess the impact of the production of building materials, as well as consider whether they can be recycled at the end of their life-cycle. As operations reach a critical mass, the firm will likely be able to leverage its buying power to mandate more thorough sustainability practices by its suppliers to further reduce the environmental impact of the enterprise.

Small scale sustainable technologies may also help reduce costs when serving rural populations. Electricity and water distribution is costly, but recent advances in solar power generation and small-scale water purification could reduce infrastructure costs and provide environmental benefits. These technologies would be especially useful in rural environments. Grameen Bank in Bangladesh has shown how renewable technologies can help the rural poor with its subsidiary Grameen Shakti. The organization provides photovoltaic power units to the rural poor. They have trained a local workforce as technicians and provide three year loans for the systems which cost approximately $315 each. As of March 2008, they had installed 220,000 units at a rate of 8,000 units per month with a staff of 5,000.

6.3 Risk Mitigation / Community Selection Criteria

Investing in developing nations is not for the faint of heart. No matter how many "bottom lines" the investor is considering, there are many investment risks which are important to consider. Most of these markets have high barriers to entry, so it is important to first focus on those markets which are most promising, are a good fit for the overall business strategy, and have the lowest risks. Obviously there are many communities that need help, but in a fledgling industry such as this, it makes sense to focus first on those markets which provide the most likely chance of success. Once viability is proven, a market for these types of investments is established, and costs decrease, it makes sense to then venture into the more challenging environments. Below is a listing of community selection criteria which should be considered.

Government Cooperation / Ease of Doing Business

Less developed countries are usually more challenging environments in which to conduct business. Bureaucracy and inefficiencies can cause projects to languish and stall, so it is important to assess the business environment before entering a market. The World Bank creates an "ease of doing business" ranking which is helpful as an initial reference. This annual report breaks their evaluations down by categories including dealing with construction permits, registering property, and protecting investors, among others.

Corruption / Patronage

Corruption and patronage is evident in many developing nations. In a study of slums in Nairobi, Sumila Gulyani found that most housing was owned by absentee landlords. When their properties were improved, they were able to extract higher rents, so she questioned why they did not proactively upgrade their units. She found that most landlords had political connections and were granted land or units through political favors. They therefore wanted to stay "under the radar". If they improved their units, they risked attracting the attention of the government which could extract kickbacks, regulate the properties, tax them, or repossess the land. Gulyani also found that these same landlords often owned many of the informal services used by the slum population such as water kiosks, connections to electricity, and toilet facilities. These were all good businesses, and therefore, they had no reason to lobby the government for upgraded services. (Gulyani & Talukdar, 2008) This example shows how

corruption can simultaneously be pervasive and subtle. A deep understanding of forces at play in the local market is required before making an investment decision.

Violence / Mafias

The existence of organized crime must also be considered when investigating a proposed investment. Somsook Boonyabancha, Managing Director of Community Organizations Development Institute (CODI) in Thailand expressed the risk in the following manner:

> "There are always people who benefit from a slum continuing to be a slum. Every slum has its own mafia which benefits from things remaining exactly the way they are – police, drug peddlers, slumlords, local politicians, outsiders. They will fiercely protect their system if they sense it is being threatened. This is not something easy, this community upgrading. All the slums in the world have their dark powers and dark influences. The question is - do community people have enough power to challenge that control and change it, or negotiate with it? Only when the poor organize themselves and come together can they break through this. The leaders and committee members in these communities get no salary, no benefits. They have to be clean if people are going to listen to them and trust them. This is the real upgrading of poor communities - the upgrading of people. Slum upgrading is about upgrading people's confidence, their competence, their relationships, not just about improving their physical circumstances." (UN-HABITAT, 2009, p. iv)

Obviously, it is important to understand the nefarious forces at play in a community or they will likely destroy a well-intentioned project. To this effect, gaining the support of community leaders is essential.

Political Instability

The stability of governments and the risk of revolution or nationalization must also be considered. Although it is usually difficult to mitigate such risks, some international finance institutions have begun providing political risk guarantees to catalyze private sector investment in developing nations.

Inflation / Currency Issues

Rapid inflation is a tremendous risk in many markets which can wipe out hard-won returns. To help with these risks, the World Bank and several other international finance organizations have begun to offer programs to help protect from currency risk. Although limited in scope, the Asian Development Bank has begun trying to help organizations mitigate currency risk using local currency financing in the form of local bond issuances, credit guarantees, and cross-currency swaps. (ADB, 2008, p. 28)

"Not In My Backyard"

Objections to low-income housing by neighboring property owners are not exclusive to developed countries. For example, issues with neighbors were seen in Jamii Bora's Kaputei Town project. The relocation project was going well until the end of 2004 when progress was stalled due to a lawsuit filed

by opponents of the project. It is believed that neighboring landowners were concerned about a low-income population moving into the area. The high court of Kenya finally struck down the neighbors' appeals, but not until 2007, causing substantial delays and additional costs. (Jamii Bora)

Demographics

As shown in the Manila Case Study, demographics of the population can alone create problems for a project or necessitate public subsidies. The ratio of local construction costs to income is important to consider in the feasibility analysis of a project. Although BOP populations often have significant incomes, the costs of land, materials, labor, and financing may make the financial characteristics of the deal not work. A thorough analysis of demographic characteristics of the target population should be conducted.

Natural Resources

The availability of natural resources can play an important part in the creation of a sustainable community. Not only can they be a catalyst for the economy and employment, but also they can provide building materials and substantially reduce construction costs.

Climate

Home designs must be adapted for different climates. In the Philippines, structures need to be able to withstand monsoon rains and tropical storms and also provide adequate ventilation during times of intense heat. These types of design considerations can impact construction costs significantly.

Property Rights

Chapter 3 presented several structures which could be employed whether property rights are well-defined or not, however, it is important to consider the amount of effort required to register and exert these rights. Markets should be sought out where governments are receptive to providing tenure security for the poor and are likely to help protect rightful claims. Working closely with local and federal governments may in itself be helpful in creating more security in tenure claims.

Exit Risk

Although it is hoped that these social investments will become revolving funds which are reinvested year after year, the ability to exit investments should be considered. Based on the model chosen, it would be important to consider whether there is a market for commercial property or residential mortgages in the country.

Obviously there are many risks which need to be assessed when considering an investment in low income housing in a developing nation. Although the sheer number may seem daunting, a comparison of these risks between different communities can be a helpful exercise in determining which markets are most attractive.

This chapter has explored several factors affecting the potential for the scalability of housing social investment funds. Due to the expected growth in impact investing, it is likely that there will be enough capital available in the next few years to fund the construction of tens of millions of homes and make a major impact on the growth of slums. The profitability of such investment funds will likely increase as industry infrastructure and intermediation is developed. Scalability will also require leveraging modern building technologies and sustainable practices.

Chapter 7: Conclusion

With 1 billion people living in the slums of cities today, and no signs of a decrease in the rate of urbanization and population growth, it is obvious that new approaches to combating poverty and the global housing crisis are needed. Acknowledging the recent growth of the microfinance industry and social investing, this paper aimed to investigate how social investment techniques can be applied to housing in developing nations. It shows that social business techniques hold promise as an effective way to draw money into developing nations from the world's capital markets to improve the lives of millions of informal settlers.

Summary of Findings

The paper first showed the pervasiveness of the growth of slums using statistics gathered from major institutions such as the World Bank and UN-HABITAT. It explained that slums form due to the convergence of poverty and a lack of affordable housing, and argued that successful remediation strategies require not only the production of housing but also consideration of tenure security, maintaining the social and economic fabric of the community, engaging the residents in the development process, and reaching significant scale.

The public housing aid landscape was surveyed, and the major housing theories which have evolved over the years were explained. Relocation, upgrading, sites and services, and focusing on community involvement all have their place in certain situations and should be considered when developing a housing strategy for a community. It was shown that public institutions are unlikely to be able to keep up with the demand for low-cost housing, and Thailand's Community Organization Development Institute was used as an example of how even the best organizations have trouble keeping pace with the tremendous demand for housing.

Chapter 3 described multiple business structures for producing low-cost housing which are each appropriate in certain circumstances. Six potential models were presented with real-world examples. The determination of which model should be used in a particular community should be based on the characteristics of the market and the governmental and societal forces at play.

The paper then described how the social investment sector has evolved to where there is significant capital available for social investments in housing, and showed how social investors are often willing to accept a lower return based on social impact expectations. It explained how microfinance has become a $25 billion market and social investing in general is expected to follow suit and grow to 1% of total managed assets (or $500 billion) in the next five to ten years.

A feasibility study for the market of Manila was performed which showed some of the opportunities and obstacles which can arise when attempting to apply social investment models in the real world. The study resulted in a potentially viable residential sale structure which could be enhanced by governmental subsidies or supplemented by employing a hybrid structure to incorporate commercial real estate revenue.

Finally, the paper described the potential for scaling up such a business model to numerous communities. The amount of capital available in the next few years is expected to be enough to serve tens of millions of households. This capital base will continue to grow due to reinvestment and higher rates of return resulting from improved intermediation and the leveraging of new technologies. The commercial real estate model holds the most potential to produce commercial returns and draw in substantial amounts of traditional capital, however its feasibility is limited to markets with very high land values.

Conclusions

Rapid population growth and urbanization in developing nations is creating an acute need for housing for the poor. The majority of the initiatives being employed by governments and NGOs to combat the problem lack the scalability to keep pace with the problem. Social business models hold promise as a way to leverage the world's capital markets and provide scalability in the development of housing for informal settlers. As proof of concept is shown and a track record established, more main-stream capital will flow into this untraditional investment class.

Social business models hold promise as a way to leverage the world's capital markets and create large amounts of housing for informal settlers; however implementation will be an arduous process due to high risks, small margins, and the immature nature of the social investment sector. It will necessitate convincing many different groups who may be set in their ways or suspicious of the motives of the investing organization. Strong local partners will be required. Depending on the model chosen, it may be necessary to partner with an local developer for their experience with local construction firms and policy makers, an NGO for their knowledge of the local communities, and an international monetary foundation for additional equity, guarantees or currency risk hedging.

The Manila feasibility study showed that a social business structure would be an effective means for providing housing for the lower-middle class population living in informal settlements, but not the poorest segment of the community. These people would still need fully subsidized aid as their incomes are so low that they have little left after paying for essentials like food, water, and transportation. These findings are likely to be repeated in most markets. Even though social investment models would not be effective in serving this group, the implementation of such models to help the low to middle class population would take a large financial burden off public institutions which would allow them to serve more of the lowest income segment.

Of all of the models proposed, the commercial real estate model is the most likely to be able to serve the lowest income class as its revenue is not contingent on the incomes of informal settlers. It also maintains the best potential for producing commercial returns and therefore the scalability needed. These commercial returns mean that huge amounts of money from private developers could be mobilized and more of the true "social capital" could be used for other projects. However, this model is only effective in communities with high land values, and needs to be carefully controlled as informal settlers can lose out if their interests are not taken to heart. Interestingly, the very population growth

and urbanization which is causing much of the informal settlement crisis is also contributing to an environment of quickly growing land values where the most scalable model is a feasible option.

Demographics, land values, property rights, labor costs, materials costs, cultural sensitivities, governmental cooperation, and natural resources will vary between markets, which is why a "toolbox" of potential solutions is necessary. In the majority of markets, some variation on one of the proposed social business models should be effective in providing housing for a portion of the population and relieving some of the burden on local governments and NGOs. Risks due to political instability, corruption, violence, and inflation are the most daunting to overcome and may preclude some communities, which is why segmentation strategies and feasibility studies are important to assess the optimal markets to target. Further research and proof-of-concept projects will be helpful in determining the generalizability of these concepts and which market characteristics are most important for a successful implementation.

Opportunities for further research

Housing in developing nations has been the subject of great volumes of literature. The topic has been analyzed from a policy, urban planning and design perspective in great detail, however little has been written about the potential for using for-profit structures to combat the problem. As such, this thesis has served as an initial exploration of potential structures and the general economics at play.

This research could be expanded by conducting a survey of households in informal settlements in the Metropolitan Manila market to test assumptions including residents' satisfaction or dissatisfaction with their current housing, their willingness to relocate, how much they are willing to pay for housing, and what specific requirements they have about housing characteristics, community amenities, and location. Another logical extension in research would be to conduct similar feasibility studies in other markets to determine if the same economic characteristics are exhibited.

This paper has consciously avoided questions about the design and physical structure of dwellings. It would be valuable to conduct an investigation into how innovative engineering systems, designs, and new sustainable technologies could lower construction costs and provide higher quality dwellings. An initiative within MIT's Center for Real Estate has begun exploring these issues by conducting design studios and funding the construction of prototypes. In the end, the implementation of a real world programs as proof-of-concept would be the most effective means for gaining momentum.

APPENDICES

Appendix I- Millennium Development Goals

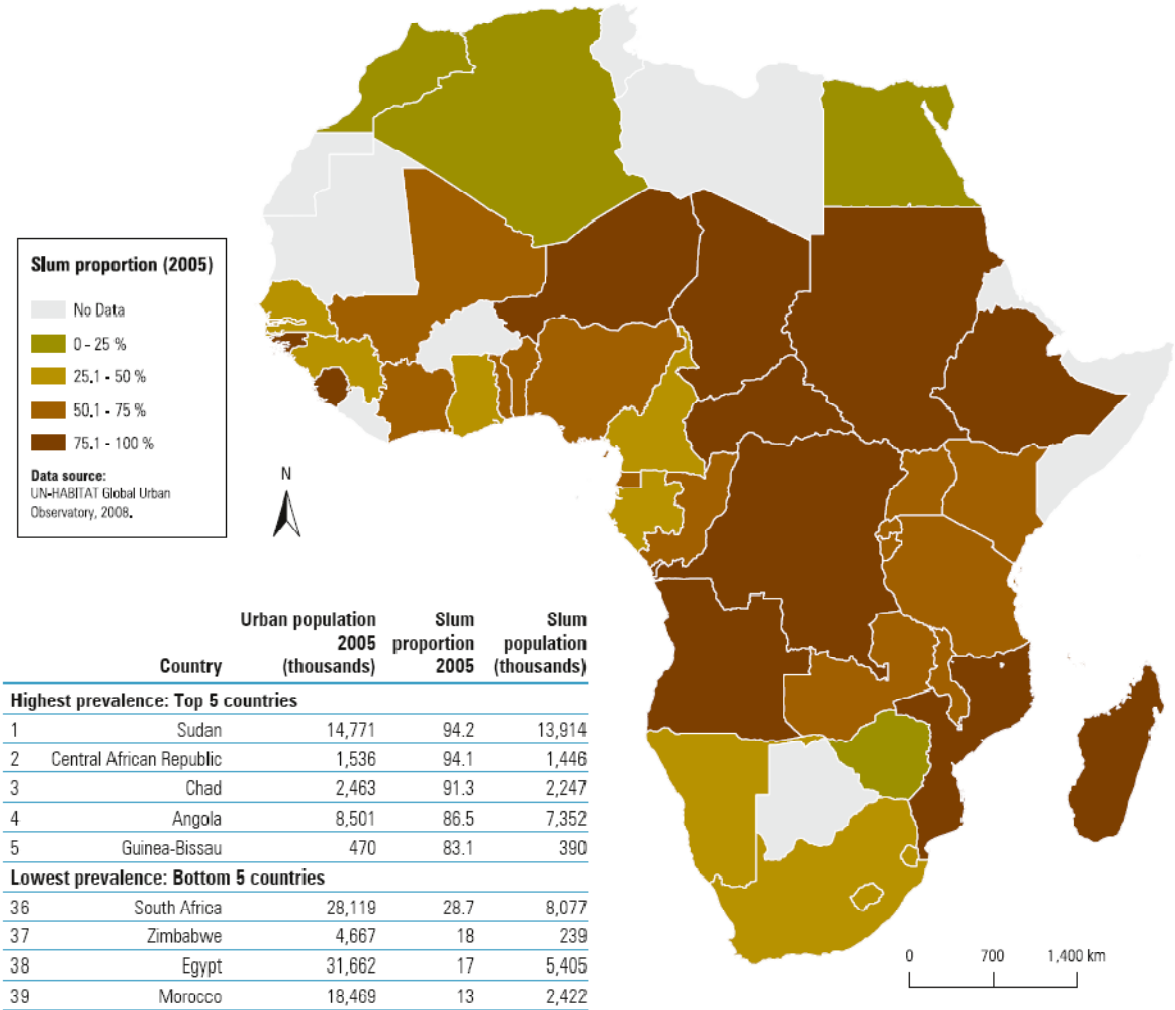
GOAL 1	**ERADICATE EXTREME POVERTY AND HUNGER**
TARGET 1	Halve, between 1990 and 2015, the proportion of people whose income is less than $1 a day
TARGET 2	Halve, between 1990 and 2015, the proportion of people who suffer from hunger
GOAL 2	**ACHIEVE UNIVERSAL PRIMARY EDUCATION**
TARGET 3	Ensure that by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling
GOAL 3	**PROMOTE GENDER EQUALITY AND EMPOWER WOMEN**
TARGET 4	Eliminate gender disparity in primary and secondary education, preferably by 2005, and at all levels of education no later than 2015
GOAL 4	**REDUCE CHILD MORTALITY**
TARGET 5	Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate
GOAL 5	**IMPROVE MATERNAL HEALTH**
TARGET 6	Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio
GOAL 6	**COMBAT HIV/AIDS, MALARIA, AND OTHER DISEASES**
TARGET 7	Have halted by 2015 and begun to reverse the spread of HIV/AIDS
TARGET 8	Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases
GOAL 7	**ENSURE ENVIRONMENTAL SUSTAINABILITY**
TARGET 9	Integrate the principles of sustainable development into country policies and programs and reverse the loss of environmental resources
TARGET 10	Halve by 2015 the proportion of people without sustainable access to safe drinking water and basic sanitation
TARGET 11	Have achieved a significant improvement by 2020 in the lives of at least 100 million slum dwellers
GOAL 8	**DEVELOP A GLOBAL PARTNERSHIP FOR DEVELOPMENT**
TARGET 12	Develop further an open, rule-based, predictable, nondiscriminatory trading and financial system (including a commitment to good governance, development, and poverty reduction, nationally and internationally)
TARGET 13	Address the special needs of the least developed countries (including tariff- and quota-free access for exports of the least developed countries; enhanced debt relief for heavily indebted poor countries and cancellation of official bilateral debt; and more generous official development assistance for countries committed to reducing poverty)
TARGET 14	Address the special needs of landlocked countries and small island developing states (through the Programme of Action for the Sustainable Development of Small Island Developing States and the outcome of the 22nd special session of the General Assembly)
TARGET 15	Deal comprehensively with the debt problems of developing countries through national and international measures to make debt sustainable in the long term
TARGET 16	In cooperation with developing countries, develop and implement strategies for decent and productive work for youth
TARGET 17	In cooperation with pharmaceutical companies, provide access to affordable, essential drugs in developing countries
TARGET 18	In cooperation with the private sector, make available the benefits of new technologies, especially information and communication

(The World Bank, 2006)

Appendix II- Housing Aid Landscape

- International Aid Providers
    - World Bank
    - Inter-American Development Bank
    - Asian Development Bank
    - Islamic Development Bank
    - African Development Bank Group
- National Foreign Aid Programs
    - USAid
    - SIDA: Swedish International Development Cooperation Agency
    - CIDA: Canadian international development agency
    - DFID: Dept For International Development, UK
    - Federal Ministry for Economic Cooperation and Development, Germany
    - Economic Cooperation and Development Division at the State Secretariat for Economic Affairs (SECO), Switzerland
    - Dutch Ministry of Foreign Affairs (DGIS), Netherlands
- Research & Advocacy Groups
    - Slum Dwellers International
    - UN-HABITAT
    - United Nations Development Programme
    - Cities Alliance
- NGOs Providing Financing to Housing Organizations
    - Ford Foundation
    - International Finance Corporation, World Bank Group- grants to private sector enterprises
    - Homeless International & Community-Led Infrastructure Finance Facility (CLIFF)
- Local Government Programs Providing Direct Aid
    - CODI- Bangkok
    - MetroVivienda- Bogota
    - Housing & Urban Development Coordinating Council (HUDCC)- Philippines
- Local NGO Programs Providing Direct Aid
    - Gawad Kalinga- Philippines
    - Habitat for Humanity International
    - Un Techo para Chile
    - Cooperative Housing Foundation

Appendix III- Slum prevalence throughout the world

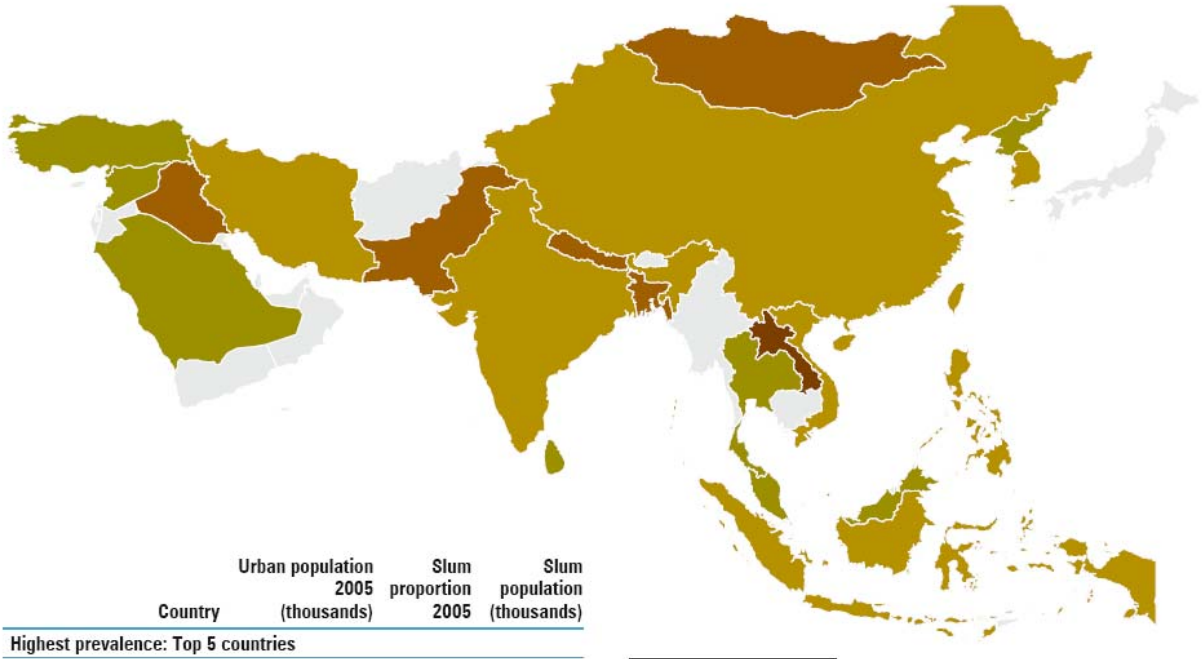


	Country	Urban population 2005 (thousands)	Slum proportion 2005	Slum population (thousands)
Highest prevalence: Top 5 countries				
1	Sudan	14,771	94.2	13,914
2	Central African Republic	1,536	94.1	1,446
3	Chad	2,463	91.3	2,247
4	Angola	8,501	86.5	7,352
5	Guinea-Bissau	470	83.1	390
Lowest prevalence: Bottom 5 countries				
36	South Africa	28,119	28.7	8,077
37	Zimbabwe	4,667	18	239
38	Egypt	31,662	17	5,405
39	Morocco	18,469	13	2,422
40	Algeria	20,804	12	2,455

Source: UN-HABITAT Global Urban Observatory, 2008.

(UN-HABITAT, 2008)

Appendix III (continued)- Slum prevalence throughout the world

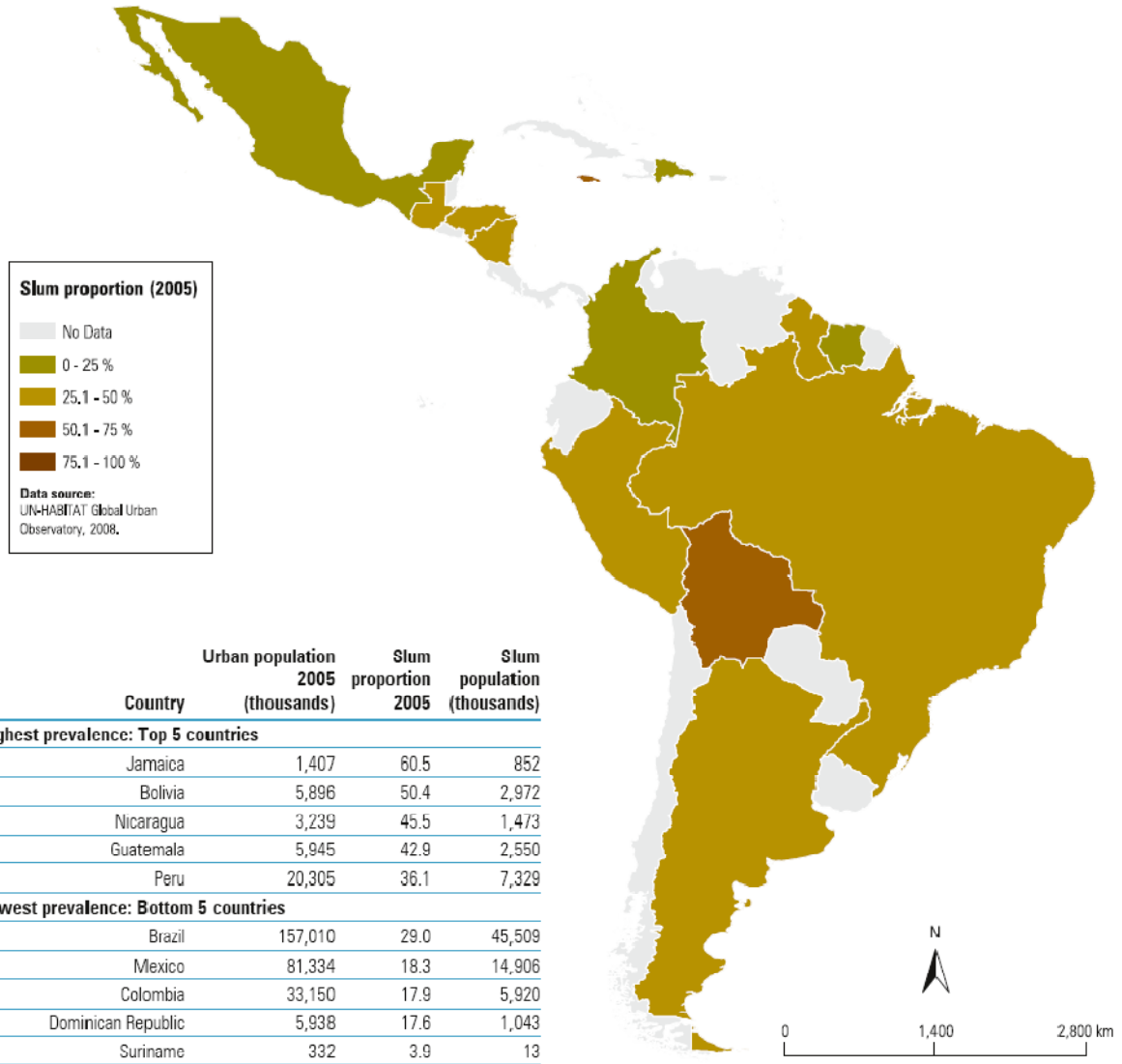


	Country	Urban population 2005 (thousands)	Slum proportion 2005	Slum population (thousands)
Highest prevalence: Top 5 countries				
1	Lao People's Democratic Republic	1,222	79.3	969
2	Pakistan	55,040	71.7	39,489
3	Bangladesh	35,563	70.8	25,184
4	Nepal	4,276	60.7	2,595
5	Mongolia	1,501	57.9	869
Lowest prevalence: Bottom 5 countries				
18	Thailand	20,749	2.0	415
19	Malaysia	17,067	2.0	341
20	China, Macao SAR	460	2.0	9
21	Korea, Democratic People's Republic of	13,852	0.7	97
22	Singapore	4,108	0.0	0

Source: UN-HABITAT Global Urban Observatory, 2008.

(UN-HABITAT, 2008)

Appendix III (continued)- Slum prevalence throughout the world



	Country	Urban population 2005 (thousands)	Slum proportion 2005	Slum population (thousands)
Highest prevalence: Top 5 countries				
1	Jamaica	1,407	60.5	852
2	Bolivia	5,896	50.4	2,972
3	Nicaragua	3,239	45.5	1,473
4	Guatemala	5,945	42.9	2,550
5	Peru	20,305	36.1	7,329
Lowest prevalence: Bottom 5 countries				
9	Brazil	157,010	29.0	45,509
10	Mexico	81,334	18.3	14,906
11	Colombia	33,150	17.9	5,920
12	Dominican Republic	5,938	17.6	1,043
13	Suriname	332	3.9	13

(UN-HABITAT, 2008)

Appendix IV- Spectrum of Social Investors

Profit driven firms in emerging markets

- Kleiner- Pandemic fund
- Zephyr- emerging market fund

"Milestone Based Philanthropy": use venture methods, term sheets, intensive management assistance

- Draper Richards Foundation
- New Schools
- New Profit
- Venture Philanthropy Partners
- Visionspring
- College Summit

Foundations

- Rockefeller Foundation
- FB Heron Foundation
- Kellogg Foundation

Governmental development finance institutions

- International Finance Corporation (Focus on economic development)
- KfW Entwicklungsbank (kfW Development Bank)
- The Belgian Investment Company for Developing Countries (BIO)
- The Netherlands Development Finance Company (FMO)

Retail microfinance Institutions for small investors

- Kiva
- Microplace

Funds founded by one investor

- Omidyar Network
- Legatum
- Gray Matters
- Aga Khan's fund for economic development
- Omidyar-Tufts Microfinance Fund (OTMF)

Other social funds

- Intellicap
- Triodos Bank
- E+Co: Energy investment firm
- Ignia
- PATH's new health venture fund
- SNS Real
- Google.org
- Soros Economics Development Fund
- Aavishkaar
- TIAA-CREF global social and community investing department
- JPMorgan launches Social Sector Finance unit
- GroFin
- The Small Enterprise Assistance Funds
- Investing For Good
- Acumen Fund
- George Avenue (Noaber Foundation)
- Bridges Ventures
- Root Capital

(Trelstad, 2009) & (Freireich, 2009)

Appendix V- Top 50 MFIs as of 2007

Top 50 MFIs ranked by outreach

Rank	MFI	Country	Number of active borrowers	Gross loan portfolio USD	Return on equity	Write off ratio	Average loan size USD
1	Grameen Bank	Bangladesh	6,287,000	482,104,480	22.15%	2.06%	77
2	ASA	Bangladesh	5,163,279	305,268,840	26.08%	0.25%	59
3	VBSP	Vietnam	4,695,986	1,149,165,032	(13.69%)	--	245
4	BRAC	Bangladesh	4,550,855	350,160,812	23.27%	0.63%	77
5	BRI	Indonesia	3,455,894	3,035,685,400	129.96%	0.83%	878
6	Spandana	India	972,212	89,837,686	22.00%	2.65%	92
7	SHARE	India	826,517	91,683,453	15.31%	0.00%	111
8	Caja Popular Mexicana	Mexico	643,659	941,664,645	29.00%	0.16%	1,463
9	Compartamos	Mexico	616,528	271,098,542	57.35%	0.57%	440
10	BANTRA	Peru	563,805	345,920,510	2.47%	10.54%	614
11	Banco Popular do Brasil	Brazil	553,164	32,050,077	(161.30%)	52.51%	58
12	ACSI	Ethiopia	536,804	78,235,885	25.55%	0.07%	146
13	SKS	India	513,108	63,247,733	9.22%	0.63%	123
14	Bandhan	India	449,304	29,998,368	131.21%	0.00%	67
15	AML	India	416,829	45,333,689	33.27%	0.43%	109
16	MFI	India	410,329	50,640,686	78.00%	0.00%	123
17	Al Amana	Morocco	405,558	219,047,933	23.51%	0.49%	540
18	KAS	India	394,462	27,753,142	173.04%	0.00%	70
19	DECSI	Ethiopia	392,693	85,304,139	19.31%	0.37%	217
20	Capitec Bank	South Africa	368,854	124,945,830	18.65%	21.69%	339
21	Zakoura	Morocco	316,177	83,375,046	16.56%	0.49%	264
22	RDRS	Bangladesh	307,482	10,625,496	1.67%	6.40%	35
23	CAJA Libertad	Mexico	290,328	488,526,623	45.13%	0.07%	1,683
24	JCF	Bangladesh	274,899	22,906,777	39.50%	0.06%	83
25	BURO	Bangladesh	263,503	22,683,151	17.35%	0.23%	86
26	Equity Bank	Kenya	239,541	106,374,014	40.36%	0.54%	444
27	Khushhali Bank	Pakistan	236,917	35,351,623	(12.26%)	7.14%	149
28	CREDIAMIGO	Brazil	235,740	88,775,043	63.66%	0.87%	377
29	MiBanco	Peru	221,802	320,419,273	34.44%	4.49%	1,445
30	Banco Estado	Chile	219,069	569,777,574	9.01%	1.84%	2,601
31	Cashpor MC	India	201,692	19,947,354	991.53%	0.07%	99
32	BISWA	India	200,912	21,614,981	29.92%	0.00%	108
33	BASIX	India	198,282	31,982,532	8.14%	0.76%	161
34	BFL	India	185,448	16,557,348	15.22%	0.00%	89
35	GV	India	181,328	18,409,581	17.02%	0.73%	102
36	Mahasemam-SMILE	India	175,089	16,420,804	6.15%	0.10%	94
37	TSKI	Philippines	173,002	14,705,220	34.22%	4.76%	85
38	WWB Cali	Colombia	164,000	146,331,732	21.13%	0.89%	892
39	Shakti	Bangladesh	162,219	15,377,343	18.31%	0.00%	95
40	ACLEDA	Cambodia	159,930	158,076,146	16.65%	0.12%	988
41	CARD NGO	Philippines	159,673	16,104,458	26.13%	0.00%	101
42	Banco Solidario	Ecuador	149,490	243,562,592	2.80%	2.06%	1,629
43	AMRET	Cambodia	141,957	17,595,944	25.21%	0.04%	124
44	WDB	Sir Lanka	138,749	50,456,004	15.30%	--	364
45	FMM Popayán	Colombia	137,855	80,864,332	18.24%	0.44%	587
46	Kashf	Pakistan	136,015	25,190,453	16.18%	0.18%	185
47	FBPMC	Morocco	131,781	70,130,454	20.45%	0.00%	532
48	TSPI	Philippines	125,980	14,226,447	11.04%	1.43%	113
49	CMAC Trujillo	Peru	124,087	193,304,229	32.42%	1.08%	1,558
50	Sarvodaya Nano Finance	India	116,625	14,740,161	(1.20%)	0.00%	126

(Dieckmann, 2007, p. 19)

Appendix VI- Philippines Housing Need Per Region, 2005-2010

Region	Backlog + New Households						
	2005	2006	2007	2008	2009	2010	Total
National Capital Region	82,182	82,434	82,689	82,946	83,206	83,469	**496,928**
CAR	6,494	6,589	6,685	6,783	6,882	6,984	**40,416**
I	25,027	25,446	25,874	26,310	26,757	27,212	**156,626**
II	17,725	18,032	18,346	18,667	18,995	19,330	**111,094**
III	71,938	73,837	75,798	77,821	79,909	82,064	**461,368**
IV	127,872	131,742	135,757	139,920	144,239	148,718	**828,248**
V	28,288	28,557	28,830	29,109	29,392	29,679	**173,855**
VI	36,941	37,255	37,574	37,898	38,227	38,561	**226,455**
VII	45,880	46,865	47,877	48,918	49,988	51,087	**290,616**
VIII	18,766	18,940	19,116	19,294	19,476	19,660	**115,252**
IX	21,824	22,133	22,449	22,772	23,101	23,438	**135,717**
X	18,880	19,164	19,455	19,751	20,054	20,364	**117,668**
XI	41,922	42,722	43,542	44,384	45,248	46,134	**263,952**
XII	18,033	18,270	18,511	18,758	19,009	19,266	**111,847**
ARMM	22,800	23,482	24,190	24,926	25,691	26,484	**147,574**
CARAGA	12,791	12,902	13,016	13,131	13,248	13,367	**78,456**
Total	**597,362**	**608,370**	**619,708**	**631,389**	**643,422**	**655,821**	**3,756,072**

(HUDCC, p. 16)

Appendix VII- International Property Rights Index, 2009

Rank	Country	IPRI	LP	PPR	IPR
1	Norway	8.3	8.5	8.7	7.7
2	Netherlands	8.5	8.4	8.6	8.6
3	Sweden	8.3	8.6	8.5	7.8
	Finland	8.7	8.9	8.5	8.6
	Iceland	8.1	8.9	8.5	6.8
6	New Zealand	8.3	8.8	8.3	7.9
	Denmark	8.5	8.6	8.3	8.6
8	Singapore	8.1	8.2	8.2	7.8
9	Australia	8.2	8.3	8.1	8.2
10	Switzerland	8.2	8.8	8.0	8.0
11	Ireland	8.0	8.1	7.9	7.8
	Germany	8.3	8.3	7.9	8.7
13	Austria	8.1	8.4	7.8	8.1
	Hong Kong	7.3	7.8	7.8	6.2
	United States	7.8	7.1	7.8	8.6
16	United Arab Emirates	6.9	6.6	7.7	6.4
17	Canada	7.9	8.3	7.5	8.0
18	Estonia	6.6	6.8	7.4	5.5
19	Korea (South)	6.8	6.3	7.3	6.8
	Malawi	5.3	4.2	7.3	4.3
	Taiwan	6.5	5.9	7.3	6.3
22	Portugal	7.1	7.1	7.2	7.0
	Japan	7.6	7.4	7.2	8.2
24	Slovakia	6.3	5.6	7.1	6.2
	United Kingdom	7.8	7.9	7.1	8.5
	Spain	6.8	6.1	7.1	7.3
	Tunisia	5.9	5.7	7.1	5.0
	South Africa	6.8	5.9	7.1	7.4
29	Thailand	5.4	4.5	7.0	4.6
	Chile	6.5	6.6	7.0	6.0
31	Lithuania	5.9	5.5	6.9	5.2
	Kuwait	5.6	6.3	6.9	3.7
33	Qatar	6.5	7.0	6.8	5.6
	Malaysia	6.2	5.9	6.8	5.9
	Panama	5.3	4.2	6.8	5.0
36	India	5.6	4.9	6.7	5.1
	Belgium	7.5	7.4	6.7	8.2
38	Hungary	6.4	6.1	6.6	6.5
	Israel	6.5	6.0	6.6	7.0
	Jordan	5.9	5.6	6.6	5.5
41	Bahrain	5.7	5.5	6.5	5.2
42	Botswana	5.8	6.7	6.4	4.1
	Cyprus	6.3	6.6	6.4	5.9
	France	7.2	7.1	6.4	8.1
45	Malta	6.6	7.5	6.3	6.0
46	Latvia	5.4	5.7	6.2	4.2
47	Turkey	5.3	4.8	6.1	4.9
	Greece	6.0	5.8	6.1	6.0
48	Mauritius	5.7	6.3	6.0	4.9
	El Salvador	4.8	4.2	6.0	4.2
	Sri Lanka	4.6	4.0	6.0	4.0
	Pakistan	4.0	2.7	6.0	3.3
53	Costa Rica	5.6	6.3	5.9	4.7
	Italy	6.1	5.6	5.9	6.8
55	Jamaica	4.8	4.5	5.8	4.0
	Morocco	5.1	4.4	5.8	5.0
57	Colombia	4.9	3.7	5.7	5.3
	Czech Republic	6.1	6.0	5.7	6.5
59	Guatemala	4.3	3.4	5.6	3.9
	Kenya	4.2	3.1	5.6	3.9
	Montenegro	3.9	4.1	5.6	1.9
	China	4.7	4.0	5.6	4.4
	Indonesia	4.1	3.3	5.6	3.4
	Armenia	3.7	3.7	5.6	1.8
	Honduras	4.4	3.6	5.6	4.1
	Kazakhstan	4.1	3.8	5.6	3.0
	Bulgaria	5.1	4.5	5.6	5.1
	Peru	4.2	3.3	5.6	3.7
69	Philippines	4.5	3.3	5.5	4.8
	Vietnam	4.4	4.4	5.5	3.4
71	Nepal	3.9	3.1	5.4	3.3
	Mexico	4.8	4.1	5.4	4.9
73	Croatia	4.9	5.0	5.2	4.6
	Uruguay	5.5	6.5	5.2	4.9
	Mauritania	4.8	4.0	5.2	5.0
	Dominican Republic	4.5	4.2	5.2	4.1
	Mali	4.8	4.4	5.2	4.8
78	Trinidad and Tobago	5.1	4.7	5.1	5.5
	Zambia	4.0	4.1	5.1	2.8
	Luxembourg	7.2	8.4	5.1	7.9
81	Brazil	4.7	4.2	5.0	4.8
	Azerbaijan	3.4	3.2	5.0	2.1
	Egypt	4.6	4.6	5.0	4.3
	Moldova	3.6	3.5	5.0	2.2
85	Romania	4.8	4.5	4.9	4.9
	Albania	3.5	3.6	4.9	2.1
87	Russia	4.1	3.1	4.8	4.3
	Poland	5.3	5.3	4.8	5.8
	Mozambique	4.2	4.0	4.8	3.9
90	Benin	4.7	4.6	4.7	4.8
	Slovenia	5.6	6.6	4.7	5.5
	Serbia	3.6	3.6	4.7	2.6
	Paraguay	3.5	2.7	4.7	3.0
94	Macedonia	3.8	3.8	4.6	2.9
	Tanzania	4.5	4.5	4.6	4.5
	Ukraine	4.2	3.7	4.6	4.3
	Ecuador	4.0	2.7	4.6	4.6
	Algeria	4.0	3.7	4.6	3.7
99	Venezuela	3.2	2.0	4.5	3.2
	Zimbabwe	3.2	2.0	4.5	3.1
	Cameroon	3.8	3.0	4.5	4.0
	Argentina	4.3	3.8	4.5	4.8
103	Ethiopia	3.7	3.0	4.4	3.7
	Burkina Faso	4.6	4.2	4.4	5.3
105	Nigeria	3.5	2.6	4.3	3.6
106	Burundi	3.2	2.3	4.2	3.1
	Bolivia	3.6	3.1	4.2	3.4
	Madagascar	4.2	4.3	4.2	4.1
	Nicaragua	3.6	3.0	4.2	3.6
110	Chad	3.2	1.8	4.1	3.8
111	Uganda	4.4	3.5	3.6	6.0
112	Guyana	3.2	3.7	3.3	2.6
	Bosnia-Herzegovina	3.3	3.9	3.3	2.8
114	Angola	2.8	3.0	3.0	2.4
115	Bangladesh	2.5	2.8	2.8	2.1

(Dedigama, International Property Rights Index, 2009, p. 20)

Appendix VIII- Manila Case Study Financial Model- Unsubsidized

	1 Unit	2,000 Units
Social Investment		
Equity	$1,700	$3,400,000
Investment Mgmt Fee ($)	$50	$100,000
Investment Mgmt Fee (%)	3%	3%
Construction Costs		
Total Production Cost	$1,500	$3,000,000
Profit Margin	10%	10%
Pro-Friends Charge	$1,650	$3,300,000
Mortgage		
Sales Price	$1,725	$3,450,000
Down Payment (10% at possession)	$173	$345,000
Principal Amount	$1,553	$3,105,000
Interest Rate	10%	10%
Amortization Term (Months)	240	240
Mortgage Payment	$14.98	$29,964
Microfinance		
MFI's Yearly Cost	$50	$100,000
Profit Margin	10%	10%
Yearly Microfinance Charge	$55	$110,000
Monthly Microfinance Charge	$4.58	$9,167
Fees		
Pro-Friends	$150	$300,000
Investment Manager	$50	$100,000
MFI (per year)	$55	$110,000
Returns to Investors		
Month Equity Invested	0 & 6	0 & 6
Construction Period (months)	12	12
Month Down Payment Received	12	12
Month Mortgage Payments Start	12	12
IRR	5.0%	5.0%

Appendix IX- Manila Case Study Financial Model- Subsidized

	1 Unit	2,000 Units
Social Investment		
Equity	$1,190	$2,380,000
Subsidy (30%)	$510	$1,020,000
Investment Mgmt Fee ($)	$50	$100,000
Investment Mgmt Fee (%)	3%	3%
Construction Costs		
Total Production Cost	$1,500	$3,000,000
Profit Margin	10%	10%
Pro-Friends Charge	$1,650	$3,300,000
Mortgage		
Sales Price	$1,725	$3,450,000
Down Payment (10% at possession)	$173	$345,000
Principal Amount	$1,553	$3,105,000
Interest Rate	10%	10%
Amortization Term (Months)	240	240
Mortgage Payment	$14.98	$29,964
Microfinance		
MFI's Yearly Cost	$50	$100,000
Profit Margin	10%	10%
Yearly Microfinance Charge	$55	$110,000
Monthly Microfinance Charge	$4.58	$9,167
Fees		
Pro-Friends	$150	$300,000
Investment Manager	$50	$100,000
MFI (per year)	$55	$110,000
Returns to Investors		
Month Equity Invested	0 & 6	0 & 6
Construction Period (months)	12	12
Month Down Payment Received	12	12
Month Mortgage Payments Start	12	12
IRR	10.0%	10.0%

Works Cited

MIT SIGUS and The World Bank. (2001). *El Salvador Private Development: The Case of Argoz*. Retrieved June 8, 2009, from Urban Upgrading: http://web.mit.edu/urbanupgrading/upgrading/case-examples/ce-es-arg.html

ABS-CBN News. (2008, October 13). *SC Ruling Paves Way for New Boracay Land Use Plan.* Retrieved July 15, 2009, from ABS-CBN News: http://www.abs-cbnnews.com/nation/regions/10/13/08/sc-ruling-paves-way-new-boracay-land-use-plan

ADB. (2008). *Private Sector Finance: Catalyzing Private Investment in the Asia and Pacific Region.* Asian Development Bank.

Boonyabancha, S. (2005). Scaling Up Slums and Squatter Settlements: Upgrading in Thailand Leading to Community-Driven Integrated Social Development at City-Wide Level. *Arusha Conference, "New Frontiers of Social Polity"*, (pp. 1-33). Arusha, Tanzania.

Canizo, L. (2009, April). $1,000 Home Group Presentation.

Cemex. (2008). *2008 Sustainable Development Report.* Mexico: Cemex.

Chu, M. (2007). Commercical Returns at the Base of the Pyramid. *Innovations: Technology, Governance, Globalization* , 115-146.

Dedigama, A. C. (2009). *International Property Rights Index.* Washington, D.C.: Property Rights Alliance.

Dedigama, A. C. (2009). *International Property Rights Index 2009 Report.* Washington D.C.: Property Rights Alliance.

DeSoto, H. (2000). *The Mystery of Capital.* Basic Books: New York.

DFID. (2005). *Eliminating World Poverty: Making Governance Work for the Poor.* London: Department for International Development.

Dieckmann, R. (2007). *Microfinance: An Emerging Investment Opportunity.* Frankfurt: Deutsche Bank Research.

Ferguson, B., & Navarrete, J. (2003). A Financial Framework for Reducing Slums: Lessons from Experience in Latin America. *Environment and Urbanization* , 201-216.

Freireich, J. (2009). *Investing for Social and Environmental Impact.* Monitor Institute.

Global Property Guide. (2007, November 8). *Philippines: Landlord and Tenant*. Retrieved July 15, 2009, from Global Property Guide: http://www.globalpropertyguide.com/Asia/Philippines/Landlord-and-Tenant

GroFin. (2008, August). *GrowFin: Our Business: Summary of Operations and Funds*. Retrieved June 19, 2009, from GrowFin: http://www.grofin.com/home.asp?pid=117

Gulyani, S., & Talukdar, D. (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* , 1916-1937.

Hammond, A., Kramer, W., Tran, J., Katz, R., & Walker, C. (2007). *The Next 4 Billion: Market size and Business Strategy at the Base of the Pyramid.* Washington, D.C.: World Resources Institute.

Housing Development and Infrastructure Ltd ("HDIL"). (2009). *HDIL Quarterly Investor Presentation.* Mumbai: HDIL.

HUDCC. *National Urban Development and Housing Framework 2008-2010.* Manila: Housing and Urban Development Coordinating Council of the Philippines.

International Property Rights Index 2009. (n.d.). *IPRI: Country Data: Philippines*. Retrieved July 15, 2009, from International Property Rights Index 2009: http://www.internationalpropertyrightsindex.org/philippines-c85

Jamii Bora. (n.d.). Retrieved June 8, 2009, from Jamii Bora: http://www.jamiibora.org

Jimenez Nepomuceno, E. (2009, July 15). (K. Fusaro, Interviewer)

Kiva. (n.d.). *Kiva: Press Center: Facts & Statistics*. Retrieved June 19, 2009, from http://www.kiva.org/about/facts/

MIX and Intellecap. (2008). *Asia Microfinance Analysis and Benchmarking Report.* Microfinance Information Exchange (MIX) and Intellecap.

NSCB. (2008). *Philippine Statistical Yearbook.* Makati: National Statistical Coordination Board.

Omondi, G., & Were, E. (2009, May 19). Financiers battle for control of low-end home loans market. *Business Daily* .

Pamaos, F. B. (2008, November 7). *Legal Status of Parcels of Land in Boracay.* Retrieved July 16, 2009, from Philippine e-Legal Forum: http://jlp-law.com/blog/legal-status-of-lands-in-boracay/

Philippines National Economic and Development Authority. (2008-2010). *Medium-Term Philippine Development Plan.* Philippines National Economic and Development Authority.

Philippines National Statistics Office. (2009). *2006 Family Income & Expenditure Survey Final Results*. Retrieved July 23, 2009, from Census.gov: http://www.census.gov.ph/data/sectordata/sr09413tx.html

Philippines National Statistics Office. (2006). *Index of Family Income and Expenditure*. Retrieved July 23, 2009, from Census.gov: http://www.census.gov.ph/data/sectordata/dataincome.html

Porter, M. (1998). *Competitive Advantage: Creating and Sustaining Superior Performance : with a New Introduction.* Simon & Shuster.

ProCredit Holding. (2007). *ProCredit Holding Annual Report.* Frankfurt: ProCredit Holding AG.

ProCredit Holding. (2008). *ProCredit Holding Annual Report.* Frankfurt: ProCredit Holding AG.

Pro-Friends. (n.d.). *About Pro-Friends*. Retrieved July 10, 2009, from Pro-Friends: http://www.profriends.com/about.aspx

Razzaz, O. (1993). Examining Property Rights and Investment in Informal Settlements: The Case of Jordan. *Land Economics* , 341-355.

Rempillo, J. (2008, October). *SC: Except for Titled Portions, State Owns Boracay.* Retrieved July 16, 2009, from Supreme Court of the Philippines: http://sc.judiciary.gov.ph/publications/benchmark/2008/10/100804.php

Segel, A., Chu, M., & Herrero, G. (2007). *Patrimonio Hoy: A Financial Perspective.* Boston: Harvard Business Scool Publishing.

Senate Economic Planning Office of the Philippines. (2006). *Housing Sector at a Glance.* Manila: Senate Economic Planning Office.

Social Investment Forum. (2007). *2007 Report on Socially Responsible Investing Trends in the United States.* Washington D.C.: Social Investment Forum.

The World Bank. (2008). *Global Development Finance: The Role of International Banking.* Washington, D.C.: The World Bank.

The World Bank. (2006). *Global Monitoring Report 2006: Millennium Development Goals.* Washington, D.C.: The World Bank.

Trelstad, B. (2009). *The Nature and Type of "Social Investors".* New York: Acumen Fund.

UNDP #1. (2005). *A Home in the City.* London: United Nations Development Program: Task Force on Improving the Lives of Slum Dwellers.

UNDP #2. (2005). *Human Development Report 2005.* New York: United Nations Development Program.

UNDP #3. (2005). *Investing in Development: A practical plan to achieve the Millennium Development Goals.* New York: United Nations Development Program.

UNDP. (2008). *Human Development Report 2007/2008.* New York: United Nations Development Program.

UN-HABITAT. (2006). *Analytical Perspective of Pro-poor Slum Upgrading Frameworks.* Nairobi: United Nations Human Settlements Programme (UN-HABITAT).

UN-HABITAT. (2009). *Exchange visit to the Community Organisation Development Institute in Thailand.* Nairobi: UN-HABITAT Slum Upgrading Facility.

UN-HABITAT. (2008). *State of the World's Cities 2008/2009.* London: Earthscan.

UN-HABITAT. (2003). *The Challenge of Slums: Global Report on Human Settlements.* London: Earthscan Publications.

United Nations. (2008). *Millennium Development Goals Report 2008.* New York: United Nations.

United Nations. (n.d.). *Millennium Development Goals: End Poverty 2015*. Retrieved June 23, 2009, from United Nations: http://www.un.org/millenniumgoals/bkgd.shtml

World Bank & MIT. (2001). *What is Upgrading: History*. Retrieved June 15, 2009, from Upgrading Urban Communities: A Resource for Practitioners: http://web.mit.edu/urbanupgrading/upgrading/whatis/history.html