

**SLUMS AS EXPRESSIONS OF SOCIAL EXCLUSION: EXPLAINING  
THE PREVALENCE OF SLUMS IN AFRICAN COUNTRIES\***

**Ben C. Arimah  
Chief, State of Cities Section  
City Monitoring Branch  
United Nations Human Settlements Programme (UN-HABITAT)  
Nairobi, Kenya  
Email: [ben.arimah@unhabitat.org](mailto:ben.arimah@unhabitat.org)**

---

\* The views expressed in this paper are those of the author and do not reflect those of the United Nations Human Settlements Programme.

## **Slums as Expressions of Social Exclusion: Explaining the Prevalence of Slums in African Countries**

### **Abstract**

One of the most enduring physical manifestations of social exclusion in African cities is the proliferation of slums and informal settlements. People living in these settlements experience the most deplorable living and environmental conditions. They are also excluded from participating in the economic social, political and cultural spheres of the city. This paper accounts for differences in the prevalence of slums among African countries. The empirical analysis identifies substantial inter-country variations in the incidence of slums; and indicates that higher levels of income, greater financial stability and investment in infrastructure will reduce the incidence of slums and by extension— reduce social exclusion. Conversely, the external debt burden, high levels of inequality, unplanned and unmanaged urban growth, and the exclusionary nature of the regulatory framework governing the provision of planned residential land contribute to the prevalence of slums and squatter settlements— thus increasing levels of social exclusion.

## Introduction

One of the most enduring physical manifestations of social exclusion in African cities is the proliferation of slums and informal settlements. People living in these settlements experience the most deplorable living and environmental conditions, which are characterized by inadequate water supply, squalid conditions of environmental sanitation, breakdown or non-existence of waste disposal arrangements, overcrowded and dilapidated habitation, hazardous location, insecurity of tenure, and vulnerability to serious health risks. Slum residents are also excluded from participating in the economic, social, political and cultural spheres of the city— all of which create and nurture capabilities. Consequently, slum dwellers— many who are poor in the first place— are made poorer by the various forms of exclusion that they face. The global assessment of slums undertaken by the UN-HABITAT (2010) shows that 828 million or 33% of the urban population of developing countries resides in slums. In sub-Saharan Africa, 62% of the urban population resides in such settlements. Such large concentrations of slums in which inhabitants live in inequitable and life-threatening conditions impose enormous burden on city authorities that are often cash-strapped and lack the institutional and technical capacity to provide even the most basic of urban services. These settlements are also known for their atmosphere of fear and violence (Bloom *et. al*, 2008).

It is in recognition of the challenges posed by the proliferation of slums, that Target 7.d of the Millennium Development Goals (MDGs) seeks to significantly improve the lives of at least 100 million slum dwellers by the year 2020 (UN-HABITAT, 2003a)<sup>1</sup>. Given that this target is very modest and hardly makes a dent on the magnitude of slums in that it addresses only 12% of current slum dwellers in developing countries, a revision of the slum target has been proposed, whereby in addition to substantially improving the lives of slum dwellers, concerted efforts should be made to provide adequate alternatives to new slum formation by prioritizing slum prevention programmes and proactive planning (UN Millennium Project 2005)<sup>2</sup>. This paper contends that any attempt at improving the lives of slum dwellers and providing alternatives to new slum formation in African countries, must be preceded by a proper appreciation of the factors that underlie the formation and proliferation of slums.

Currently, there is an apparent lack of understanding of the forces driving the proliferation of slums in developing countries. In this respect, UN-HABITAT (2003b, p. 195) notes that: "... the phenomenon of slums and related problems are generally little understood, and that public interventions more often than not address the symptoms rather than the underlying causes". This state of affairs can partly be attributed to the absence of studies that empirically link the prevalence of slums with the possible driving forces at either the city or national level; which in turn can be explained by the fact that until recently, data on the incidence of slums at various levels of spatial resolution were either non-existent or at best fragmentary.

---

<sup>1</sup> Target 7.d of the MDGs stems from the *Cities without Slums* initiative launched in 1999 as a joint plan of action aimed at improving the living conditions of the world's most vulnerable and marginalized urban residents (Cities Alliance, 2001).

<sup>2</sup> The revised version of Target 7.d of the MDGs reads: "by 2020, improving substantially the lives of at least 100 million slum dwellers, while providing adequate alternatives to new slum formation" (UN Millennium Project, 2005, p. 21).

The implication of the foregoing is that attention has focused disproportionately on the rapid urban growth or rural-urban migration as the sole or major factor determining the proliferation of slums and squatter settlements in developing countries (Costello, 1987; Muwonge, 1980; Salih, 1980; Srivastava and Singh, 1996; Tindigarukayo, 2004). Indeed, Srivastava and Singh (1996, p. 58) emphatically state that: “Migration from rural areas is the root cause of increasing slums”. The prominence given to urbanization as a major factor driving the proliferation of slums in Africa could indeed be attributed to the continent’s phenomenal urban transition. In 1950, 14.5% of the population of African countries resided in urban areas; by 2007, the level of urbanization increased to 38.7% (United Nations, 2008). Equally remarkable is the growth in urban population, which averaged 4.8% between 1950 and 1975. A major consequence of this demographic shift is the urbanization of poverty— whereby the locus or concentration of poverty is moving from the rural areas to urban centres (UN-HABITAT, 2003a). In particular, Chen and Ravallion (2007) show that while the level of urbanization in Africa increased from 29.8% in 1993 to 35.2% in 2002, urban share of poverty increased from 24.3% to 30.2% within the same period. A notable feature of urban poverty in Africa is that it is increasing faster than national poverty.

While the rapid pace of urbanization experienced by African countries over the last three decades certainly plays an important role in the prevalence of slums, there are other economic, social, political, institutional and historical factors whose impacts are not known with much degree of certainty, as they have rarely been the focus of rigorous empirical investigation. Although the UN-HABITAT report on slums does an excellent job of identifying other factors apart from urbanization that drive the formation and expansion of slums, the magnitude or precise manner in which these factors affect slums remains to be investigated using quantitative data.

The purpose of this paper is to account for variations in the prevalence of slums among African countries using data drawn from the global assessment of slums by UN-HABITAT. The availability of such data provides a unique opportunity to empirically relate slums— which are physical expressions of social exclusion— to various aspects of national development. In this respect, the paper addresses the following questions. What factors apart from the rapid pace of urbanization explain inter-country differences in the prevalence of slums? What is the link between urban development policy and proliferation of slums? What role does the regulatory framework governing the allocation of residential land play in the formation and proliferation of slums? What is the nature of the linkages between the incidence of slums and the macroeconomic environment? Do countries with lower levels of inequality and good governance have a lower incidence of slums? Apart from improving our understanding of the factors that drive the proliferation of slums, the answers to these questions are central to identifying the challenges that African countries face in stemming the development of new slums and providing adequate alternatives to slum formation. The answers to these questions should also provide useful insights on how to reduce the levels of social exclusion in African cities.

The rest of the paper is organized as follows. Following this introduction, an overview of slum policies in African countries is provided. The third section discusses the methodology used in measuring slums and examines inter-country variations in the incidence of slums. Next, the empirical framework for exploring the determinants of the

prevalence of slums is presented. This is followed by the discussion of the factors explaining inter-country variations in the incidence of slums. Finally, some of the policy implications emanating from the paper are highlighted.

### **Slum Policies in African Countries**

Slums have been portrayed as institutional failures in housing policy, housing finance, public utilities, local governance and secure tenure. Measures to address slums have therefore evolved around such thinking. Over the past five decades, authorities in African countries have adopted several strategies to tackle the problem of slums and informal settlements. These approaches include benign neglect; repressive options such as forced eviction and demolition; resettlement or relocation; slum upgrading programmes; and most recently, the adoption of enabling strategies. These approaches have evolved over time, and many are still being implemented despite their failure to find lasting solutions to the formation and proliferation of slums and informal settlements.

#### **Policy of benign neglect**

In the early 1950s and the immediate post-independence period, authorities in many African countries adopted a policy of benign neglect or *laissez-faire* attitude towards slums that were mushrooming on account of increased rural-urban migration. This approach was based on the notion that such slums were illegal, but temporary, and would disappear with economic growth (UN-HABITAT, 2003b). Slums were also tolerated because they were seen as vestiges of ‘traditional villages’ that were in the process of being absorbed by the new urban planning tradition passed down by the colonial administration (Njoh, 2003). Given that low-income migrants could only find affordable shelter in informal settlements, slums were regarded as an immediate solution that posed no major threats to long term urban development. The neglect of slums and informal settlements was such that they were not provided with basic services or even shown on land use maps, but depicted as blank spots indicative of undeveloped land (Wekwete, 1997).

In turning a blind eye to slums, governments pursued a programme of low-cost housing as a strategy for meeting the needs of low-income households. The belief was that such programme— sustained by high and steady economic growth will result in the elimination of slums. Despite its laudable objectives, the programme failed to meet the housing needs of its intended beneficiaries. First, very few houses were built in relation to existing deficit. Second, the houses built were unrealistically of high standards, and thus very expensive for low-income families; such houses had to be retargeted to middle and high-income households to ensure cost recovery. Third, in many countries, the programme was bedeviled by the proliferation of fraudulent practices during various phases of implementation.

#### **Forced eviction and slum clearance**

Forced eviction relates to the removal of people from their homes or land against their will (Olds, *et al.*, 2002). Mass eviction accompanied by demolition of slums is forcibly carried out by agents of the state— thereby destroying in part, what forms of social cohesion that must have existed. Although adopted mainly between the 1970s and early

1980s, when it became clear that the policy of benign neglect would not lead to the disappearance of slums, this practice is still prevalent in many African countries. A relatively recent case is Zimbabwe, where the government on May 25, 2005, commenced the demolition and burning of slums in Harare and other cities under a cleanup campaign termed: Operation *Murambatsvina*<sup>3</sup>. Lasting over a seven-week period, the operation resulted in the demolition of 92,460 housing structures<sup>4</sup> and precipitated a massive wave of humanitarian crisis and untold economic hardship. Estimates provided by the United Nations Special Envoy on Human Settlements Issues to Zimbabwe show that 700,000 people either lost their homes, their source of livelihood or both; with a further 2.4 million people or 18% of the Zimbabwean population being affected in varying degrees (Tibaijuka, 2005). The operation also led to the destruction of the informal sector, which in 2004 accounted for 40% of all forms of employment.

Although the Government of Zimbabwe had justified the operation on the basis that it was designed to restore order by ridding the cities of illegal housing and alleged illicit business activities, observers note that houses built with durable materials such as backyard extensions of legal housing and informal settlements that had formally being recognized by Parliament and provided with water and sanitation facilities through funding from the World Bank were not spared from the operation (Ncube *et al.*, 2005; Tibaijuka, 2005, Potts, 2006). This led to the speculation that the operation was retributive, as it was designed to punish the urban poor for voting against the ruling party during the March 2005 parliamentary elections.

Apart from the Zimbabwean case, governments in African countries have generally sought to justify slum clearance on four main grounds. First, slums are perceived as landscape eyesores, and as such, large scale demolition and eviction often precede major international events, the visit of an important dignitary or simply to beautify the city. Second, slums are often viewed as havens for criminals. In Nairobi, Kenya, ‘security’ reasons were cited in the demolition of Muoroto and Mwariri in the early 1990s (Otiso, 2002). Third, slums pose major health hazards. This view dates back to the pre-independence period, when colonial authorities used slum clearance as a means to rid cities of their unsanitary conditions<sup>5</sup>. Fourth, urban redevelopment is a major reason for slum clearance (Mukhija, 2001; Shaktin, 2004). In this respect, slums in strategic locations such as the city centre and in peripheral locations where land values have appreciated, are cleared to make way for office blocks, luxury apartments, malls and infrastructure that tend to benefit wealthier households.

The experience of African countries shows that slum clearance is not a solution to the proliferation of slums and informal settlements. This is because it focuses on the symptoms rather than the root causes of such settlements— thus resulting in their displacement rather than elimination. Furthermore, slum clearance results in the destruction of fixed capital and livelihoods, loss of social and safety networks, family

---

3 In the local Shona language, this literally translates to: Operation Drive out Filth.

4 These are official figures provided by the Government of Zimbabwe (see Tibaijuka, 2005).

5 For instance, in Nairobi, Kenya and Lagos, Nigeria, the first wave of slum clearance under colonial authorities took place in 1904 and 1920 respectively (Otiso, 2002; Agbola and Jinadu, 1997). Similarly, in India, slums were treated as eyesores to be cleared and removed for reasons of safety, security, and the health and hygiene of the colonial elite (UN-HABITAT, 2003a).

disintegration, psychological and emotional trauma, exacerbation of housing deficit and increased impoverishment.

### **Slum resettlement programmes**

Resettlement takes place when slum clearance entails the relocation of evicted households to alternative locations— usually outside the urban area. Relocation programmes may either take the form of the allocation of plots on which households are expected to build their houses or the provision of low-cost housing. Resettlement programmes are often premised on the notion that evicted households were legal owners of previously occupied land or had occupied such land for a long period (Cheema, 1987).

Examples of successful slum resettlement programmes in African cities are rare. A notable best practice of slum resettlement programmes in developing countries is the relocation of slum dwellers from Brasilia to Samambaia, Brazil between the late 1980s and early 1990s. Prior to relocation, city authorities held extensive consultations with affected households. Apart from assisting households to move, the programme involved the allocation of serviced land that enabled families to build houses in line with their financial resources. In order to forestall the sale of such land by the men, it was agreed that titles be given in the name of their wives. This seemed to have worked well, as a decade later, rarely had any families sold their plots (UN-HABITAT, 2003a). Relocation was also followed by the construction of a subway and provision of several government assisted settlement programmes, which had the collective impact of ensuring easy access to the city centre and other employment nodes, enhancing the quality and life and creating a vibrant local economy.

In reality, most relocation programmes in African countries hardly involve any meaningful dialogue with those evicted. They are devoid of careful planning, and are hastily undertaken without proper coordination by the implementing agencies. Furthermore, city authorities do not have the financial and technical resources to fully undertake such resettlement programmes. Consequently, the plots and houses provided in the new locations tend to be grossly insufficient and in distant locations without adequate infrastructure and services— thereby worsening the housing problems and living conditions of evicted households.

### **Slum upgrading programmes**

Given the failure of previous strategies to effectively tackle the problem of slums and informal settlements, many African countries in the 1980s, adopted slum and squatter upgrading programmes largely funded by the World Bank. The Bank's support for slum upgrading owes much to the work of John Turner (Werlin, 1999; Pugh, 2000). Turner had argued based on field observation in Peru that the solution to slums was not in their demolition, but in improving the environment: if governments could improve the sanitary conditions and environmental quality of slums, then residents given their organizational skills and resourcefulness will gradually improve their houses, especially when encouraged by security of tenure and access to credit (Werlin, 1999). The adoption of slum upgrading strategies marked a radical change in official attitude towards slum and informal settlements.

Upgrading programmes are locality-based improvement strategies designed to replace the various degrees of obsolescence and decay in slum areas through the provision or improvement of basic services and physical infrastructure such as water reticulation, sanitation, garbage collection, storm drainage, street lighting, paved footpaths and streets (Abelson, 1996; World Bank, 2000). Compared to previous slum strategies, upgrading programmes occurs with minimum loss of physical assets and disruption of livelihoods and social support systems. Slum upgrading is also cheaper than other strategies. A review of slum upgrading programmes in Africa over a 30-year period reveals certain fundamental shifts (Guyani and Bassett 2007). First, slum upgrading has shifted from an intervention solely on housing to one that focuses essentially of access to infrastructure and services. Second, the scale and scope of earlier upgrading programmes have changed; earlier multi-sectoral projects with ambitious social and economic objectives have been replaced with more modest projects which tend to have fewer objectives sectors and settlements. Third, the mechanism for achieving secure tenure has witnessed a shift from more formal titling components to alternative innovative informal forms of tenure, which include group tenure or communal titles, usufruct and adverse possession.

Although upgrading programmes have produced some impressive results, they have been criticized on several grounds. These include: failing to have a citywide effect; low levels of investment incapable of rectifying decades of neglect and deterioration; the adoption of a project-oriented approach that failed to ensure the necessary follow-up maintenance of upgraded infrastructure; hasty planning which allowed for little or no input from beneficiary communities, thereby resulting in lack of ownership and reluctance to pay for improved services; inability to address the more fundamental supply constraints of land, finance and building materials; weak institutional and financial mechanism as evidenced by the high dependence on external funding<sup>6</sup>; and the absence of any clear focus on poverty reduction (World Bank, 1999; Abelson, 1996; Kessides, 1997; Okpala, 1999; Werlin, 1999; Tebbal and Ray, 2001; UN-HABITAT, 2003a; Gulayani and Bassett, 2007). All these have limited the effectiveness of slum upgrading strategies in Africa.

### **Cities without Slums Action Plan and the Slum Upgrading Facility**

In order to institutionalize slum upgrading and rectify its associated problems, the World Bank and UN-HABITAT have initiated two major programmes. These are: the Cities without Slums (CWS) action plan under the auspices of the Cities Alliance;<sup>7</sup> and the Slum Upgrading Facility (SUF). The CWS action plan specifically recognizes that slums are manifestations of urban poverty, and as such, slum upgrading programmes need to be complemented by measures designed to reduce urban poverty and forestall the growth of future slums. To reduce urban poverty, the CWS proposes several complementary measures covering sectoral reforms, finance, job creation, improved governance and management of cities, as well as strengthening the organizational capacity of citizen

---

6 Okpala (1999, p.4) notes that virtually all slum upgrading programmes in African countries have been initiated and largely funded by external or foreign organizations.

7 Launched by the World Bank and UNCHS as a collaborative initiative in 1999, the City Alliance is a multi-donor coalition of cities and their development partners, whose objective is to make unprecedented improvements in the living conditions of the urban poor through city development strategies and scaling-up slum upgrading programmes both citywide and nationwide (World Bank and UNCHS, 2002).



groups and local governments. To forestall the growth of new slums, the CWS action plan advocates improving the performance of city authorities in managing future urban growth via effective land use planning and mobilization of local resources.

Given the dearth of finance for slum upgrading, SUF was established by UN-HABITAT in 2004 with the main objective of mobilizing domestic capital for slum upgrading activities by facilitating links among various local actors and by packaging the financial, technical and political elements of development projects (UN-HABITAT, 2006a). A second objective is to earmark bankable local projects for potential investment by international donor facilities, international financial institutions and investors in global capital markets. SUF is being managed by UN-HABITAT in conjunction with the Cities Alliance together with international donor facilities and international financial institutions. The clients of SUF include municipal authorities, community-based and nongovernmental organizations, relevant departments of central governments, various arms of the private sector including banks, microfinance institutions, property developers, service providers and utility companies.

### **Security of tenure and the enabling approach to slum and squatter settlements**

From the slum perspective, the enabling strategy advocates developing property rights, which among others entails the regularization of insecure tenure in informal settlements. A key assumption of this approach is that while residents of slums and informal settlements may not necessarily have legal title over the land, they could still undertake improvements to their property if they are confident that they will not be arbitrarily evicted. From the early 1990s, a major response to the proliferation of slums in developing countries centred on ensuring security of tenure. This was conceived as a contingent measure to limit the threat of eviction and demolition in slums (Jenkins, 2001).

The World Bank and UN-HABITAT have been at the forefront in promoting the security of tenure approach. In particular, UN-HABITAT in 1999, adopted the *Global Campaign for Secure Tenure* as an advocacy instrument designed to promote secure forms of tenure for the poorest segments of the population, particularly those residing in slums and informal settlements. The Campaign encourages negotiation as an alternative to forced eviction, and the establishment of innovative systems of tenure that minimize bureaucratic lags and the displacement of the urban poor by market forces (UN-HABITAT, 2004).

There are several benefits associated with the security of tenure approach (Durand-Lasserve, 1999). First, it addresses the problem of tenure insecurity in already established slums, which otherwise would translate into a vicious circle of construction, demolition, eviction and reconstruction. Second, it encourages the provision of urban services that were previously absent. Third, secure tenure motivates residents to invest and contribute to the management their built environment. Fourth, tenure security could in principle contribute to the financial base and resources of local governments by improving tax recovery on both property and economic activities. Finally, from a political perspective, tenure regularization can be seen as a means of ensuring social cohesion and stability in cities.

In spite of these benefits, tenure regularization can have detrimental effects on the most vulnerable households. These include tenants, subtenants and newly established occupants that are not eligible for regularization. Besides, given the appreciation in land values that often accompanies regularization, landowners may resell their land to the highest bidder; in which case, households with the most vulnerable tenure would have no choice but to move out and establish informal settlements elsewhere. Second, as noted earlier, tenure regularization programmes in developing countries is often limited to a few settlements within the city. Such piecemeal approach is not likely to guarantee any long-term solution to the proliferation of slums. In order to be successful and have any sustainable effect at the city level, tenure regularization programmes must be implemented on a large scale.

## **Measuring the Incidence of Slums in African Countries**

### **Defining slums**

The definition of slums adopted in this paper is that proposed by the UN-HABITAT Expert Group Meeting<sup>8</sup> on slum indicators which states that: “A slum is a contiguous settlement where the inhabitants are characterized as having inadequate housing and basic services. A slum is often not recognized and addressed by the public authorities as an integral or equal part of the city” (UN-HABITAT, 2002, p. 21; 2003a, p.10). This definition encompasses a wide variety of low-income settlements and poor human living conditions and includes the traditional meaning of slums, which are old residential areas that were once respectable or even desirable, but over time, have deteriorated through neglect, as the original occupants have moved out, and the units have been progressively subdivided and rented out to poorer households (UN-HABITAT, 2003a). Such classic slums include decaying inner-city housing and rundown tenements in cities of both developed and developing countries.

Slums in this context also include squatter settlements— euphemistically referred to as informal settlements. These are residential districts created by the illegal occupation of land and largely in contravention of official building regulations. Acquisition of the land usually involves planned invasion of unused land whose ownership is unclear and where occupation is unlikely to be opposed or prevented by the relevant authorities. Such settlements have emerged due to the inability of conventional housing markets to cope with the demand created by rapid urbanization (Johnston *et al.*, 2000; Clark, 2003). Squatter settlements are often found on the urban fringe and in high-risk or vulnerable areas such as steep slopes, deep gullies, near dumpsites, under overpasses and flood-prone areas. These settlements are characterized by the absence of basic infrastructure and services, as well as poor quality housing constructed of makeshift materials.

In order to measure the incidence of slums on a global level, the operational definition of a slum household proposed by the Expert Group Meeting for international usage and

---

<sup>8</sup> The EGM which took place between the 28th and 30th of October 2002 was a consensus building exercise that sought to develop operational definitions and indicators of slums and secure tenure in order to facilitate the process of monitoring Target 7.d of the MDGs.

comparison is a group of individuals living together under the same roof and lacking one or more of the following conditions: access to improved water; access to improved sanitation; structural quality/durability of dwelling; sufficient living space that is not overcrowded; and security of tenure (UN-HABITAT, 2003a). A slum can then be operationally defined as an area or settlement of some scale which to varying degrees lacks a combination of the above conditions.

### **Measuring the incidence of slums**

The five indicators used in defining slum households in order to measure the incidence of slums are presented in Table 1. These indicators have been proposed because they are largely quantifiable and can be used to assess the progress towards achieving Target 7.d of the MDGs. Each indicator specifies ‘acceptable’ urban conditions or threshold, which if a household fails to meet classifies it as a slum household. For instance, in the case of water, a household lacks access to improved water if it consumes less than 20 litres per person in a day purchased at more than 10% of household income.

Given that no data previously existed on the global distribution of slums, the methodology adopted by UN-HABITAT (2003c) estimates the percentage of a country’s urban population living in slums using 2001 as the base year. In order to achieve this, over one million household records at the national and sub-national levels drawn from over 310 sources, which include the Demographic and Health Surveys, Multiple Indicator Cluster Surveys, Joint Monitoring Programme for Water and Sanitation and other surveys and census data were utilized<sup>9</sup>.

The slum dweller estimation process proceeded as follows. First, the response categories for each household to questions on water, sanitation, structural quality of housing, overcrowding and security of tenure in the various surveys and census data were reviewed. Second, these response categories were grouped according to the UN-HABITAT operational definition of slum households. The third stage entailed identifying households lacking one or more of the five indicators presented in Table 1 (slum households). For each country, this started with tallying the number of households in urban areas that lack access to improved water. This was done because water appeared to be the most influential of the five indicators. Thereafter, the number of households lacking improved sanitation, without durable housing, living in overcrowded conditions and lacking secure tenure were tallied in this sequence. For each country, individual households lacking one or more of the five attributes were summed up. The slum indicator is then computed as the ratio of the number of households in urban areas that lack one or more of the conditions listed in Table 1 to the number of households, expressed as a percentage. This estimation procedure is illustrated in Table 2.

The sequential order of the estimation procedure prevented the double counting of households, as each household was eliminated after being evaluated against a given indicator. If a household lacked both improved water and sanitation, it was counted once. Likewise, households lacking all five acceptable conditions were counted once. The order of the estimation procedure approximates the availability of data, with lack of access to

---

<sup>9</sup> Further details on the methodology for obtaining global estimates of slum dwellers can be found in UN-HABITAT (2003c, pp. 18-22).

improved water and sanitation being the major classifiers of slum households, while information on secure tenure was the least available.

A key advantage of the methodology is it provides estimates of the incidence of slums for each country. These can also be used to monitor the extent to which countries are on course with respect to Target 7.d of the MDGs. One major weakness of the methodology is that it excludes the social, economic and other qualitative aspects of slums— all of which are essential for a proper characterization of the multidimensional nature of slums. Nonetheless, the estimation procedure “... should be considered as a first effort to document the magnitude and dimension of slums in the world” UN-HABITAT (2003c, p.54), and as work in progress, which would be refined as more suitable data become available.

### **Inter-country variations in the prevalence of slums**

Inter-country differences in the prevalence of slums as provided by the methodology described in the preceding paragraphs are summarized in Table 3. In order to describe the nature of inter-country variations in the prevalence of slums, the percentage of the urban population living in slums can be grouped into: very high (> 80%); high (60-79%); moderate (40-59%); and low levels (<40%). These are shown in Figure 1. The countries with a very high incidence of slums include Angola, Benin, Chad, Ethiopia, Guinea Bissau, Madagascar, Mauritania, Niger, Rwanda, Sierra Leone, Somalia, Sudan, Tanzania and Uganda, where between 83% and 99% of urban dwellers live in slums.

The very high prevalence of slums in these countries is a reflection of their low levels of income, spiraling poverty, rapid pace of urbanization, urban development programmes and other factors that are not readily apparent. A likely consequence of the low levels of income and high levels of poverty in these countries is their inability to leverage the financial resources required to implement slum upgrading and prevention programmes. Furthermore, in most of these countries, the average annual growth in urban population is higher than 4.5%. Such high rates of urbanization, particularly in the absence of sustained economic growth have resulted in situations where the rapidly growing urban population is housed in slums and squatter settlements.

Countries with a high incidence of slums comprise Botswana, Burundi, Cameroon, Cote d'Ivoire, Eritrea, Gabon, Ghana, Kenya, Nigeria and Zambia, where at least 60% of the urban population resides in slums. With few exceptions, most of the countries in this group share common characteristics with countries having a very high prevalence of slums. These pertain to low income, high levels of poverty and high rates of urbanization. However, a closer examination of this group of countries shows that some high-income countries have a high percentage of slum dwellers. Notable examples are Botswana and Gabon with 61% and 66% of their urban population residing in slums in 2001 despite their real GDP per capita for the same period being \$7820 and \$5990 respectively. This implies that high levels of income alone might not be sufficient to stem the proliferation of slums. High-income countries may have a high prevalence of slums if slum upgrading and prevention are not accorded priority in their urban development programmes.

Finally, countries experiencing a low incidence of slums include Algeria, Egypt, Libya, Morocco, South Africa and Tunisia. Within this group of countries, the proportion of

urban dwellers living in slums is less than 40%, with Tunisia and Algeria having slum proportions as low as 3.7% and 11.8% respectively. When compared to countries in the previous groups, these countries have high levels of income, more stable economies, low rates of poverty<sup>10</sup> and moderate to low urban growth rates. All these tend to mitigate the proliferation of slums. It is pertinent to note that the low prevalence of slums particularly in Tunisia, Egypt and Morocco reflect long-term political commitment to slum upgrading, slum prevention and service provision for the urban poor. Indeed, we are reminded: "... that there is nothing like the commitment of the top political leadership to give clarity of purpose, direction and a sense of urgency in tackling head-on the growth of slums – it has often proven to be the surest way of committing actions and resources to the problem" (UN-HABITAT, 2006b, p. 43). The foregoing appropriately describes the situation in Tunisia where slum upgrading is more or less institutionalized, as it has been a key component of the country's urban development programme for the past three decades<sup>11</sup>. This along with massive investments in water and sanitation has contributed to a remarkable decline in the number of slum dwellers from 425,000 in the 1990s to 188,000 in 2005 (UN-HABITAT, 2006b). It therefore follows that inter-country differences in the prevalence of slums not only reflect levels of income, but also the commitment of public authorities to implement slum upgrading and prevention programmes as part of the wider range urban development programmes.

### **Empirical Framework for Explaining the Prevalence of Slums**

The model specified in this section hypothesizes that inter-country variations in the prevalence of slums can be accounted for by differences in the: macroeconomic environment of the country; rate of urbanization in the country; inherited planning tradition and official attitude toward slums; regulatory framework governing the delivery of planned residential land; investment in infrastructure; incidence of armed conflict; and quality of governance. Formally, this can be expressed as:

$$SLUM = f(MACRO, URBAN, PLAN, REG, INFRAS, ARMCON, GOVERN)$$

Where:

*SLUM* is the percentage of a country's urban population living in slums;

*MACRO* is a row vector of variables defining the macroeconomic environment;

*URBAN* measures the rate of urbanization;

*PLAN* is indicative of the inherited planning tradition;

*REG* describes the regulatory framework governing the delivery of residential land;

*INFRAS* measures the provision of urban infrastructure;

---

<sup>10</sup> A study using various measures of poverty: percentage of population living below the national poverty line; population below one dollar a day; and Human Poverty Index, shows that these countries have the lowest levels of poverty in Africa (Arimah, 2004).

<sup>11</sup> Other countries such as Morocco and South Africa have made similar political commitments. Since the 1980s, Morocco has been actively engaged in large scale slum upgrading. In 2001, the King gave further impetus to slum upgrading when he identified it as one of the four national priorities (Cities Alliance, 2003). This has led to the formulation of the programme: *Villes sans bidonvilles* (Cities Alliance, 2004). The programme which seeks to upgrade 720,000 households over a ten-year period has the following components: in-situ upgrading; extending basic services; land tenure, and post-facto planning approval; development of serviced resettlement plots with legal title; and resettlement housing to assist *bidonville* households that need to be moved.

*ARMCON* is a variable that indicates the incidence of armed conflict; and *GOVERN* measures the quality of governance.

A detailed definition of these variables and their summary statistics<sup>12</sup> are presented in Table 4.

### **Specification of explanatory variables**

The choice of the variables used in exploring inter-country differences in the prevalence of slums stems from theoretical and empirical considerations, previous research and intuitive perception concerning the factors that explain the incidence of slums. Improvements in slum conditions have been linked to countries' microeconomic performance (Okpala, 1999). In this paper, the macroeconomic environment is operationalized by: GDP per capita; annual growth in GDP per capita; country's financial depth; inequality in the distribution of income; and the country's external debt burden. The GDP per capita is indicative of income levels. Increases in income can lead to a reduction in the prevalence of slums through the *wealth effect*. As residents become better-off, the incidence of slums will decrease following an increase in the demand for improved housing conditions. An increase in GDP per capita also raises taxable income, which in turn increases the revenue accruing to governments, part of which can be used to implement slum upgrading and prevention programmes.

Annual growth in GDP per capita measures economic growth. Other things being equal, an increase in economic growth should contribute to reducing the incidence of slums. The financial depth of a country, which is defined as the sum of the quantity of money and quasi-money as a percentage of the GDP is indicative of the development of a country's financial system. Financial depth can also serve as a proxy for the availability of finance, which is often needed to implement slum reduction programmes. An increase in financial depth can contribute to the overall improvement of the macroeconomic environment. The extent of inequality in the distribution of income, can in part account for the prevalence of slums. High levels of income inequality create an unfavourable environment for implementing social cohesion and pro-poor policies— including slum upgrading and prevention programmes. Consequently, we hypothesize that greater levels of inequality in income as measured by the Gini index will increase the incidence of slums. The external debt burden of African countries can place severe budgetary constraints on their ability to finance slum upgrading and prevention programmes. Two variables are used in this regard: a dummy variable indicative of heavily indebted poor countries<sup>13</sup>; and the debt service ratio, which is the amount a country spends servicing its debts as a percentage of the value of its exports. The advantage of the latter is that it standardizes a country's foreign debt service by its ability to earn foreign exchange and make payments (Gullison and Losos, 1993).

---

12 There were a few variables missing for several countries. These were replaced by the mean values for the region in which the country in question is located.

13 Following the IMF and World Bank's Heavily Indebted Poor Countries (HIPC) initiative, a country is heavily indebted if the external debt burden of that country after traditional debt relief mechanism is above 150% of present value of debts to exports (IMF and World Bank, 2001).

The rapid pace of urbanization in developing countries is often cited as a key factor in the emergence and proliferation of slums and squatter settlements. The average annual growth in urban population and rural-urban migration, which is measured as the difference between the annual rate of urban population growth and annual rate of population growth (Randolph *et al*, 1996) are used in analyzing the effects of urbanization. Under conditions of rapid urbanization as is occurring in Africa, the capacity of cities authorities to provide adequate housing and infrastructure, as well as effectively manage the process and consequences urban development is often limited. In such situation, much of the rapidly growing urban population is accommodated in slums and squatter settlements, with the consequent effect of increasing the burgeoning population of slum dwellers.

Differences in the inherited planning traditions of former colonies may also explain the incidence of slums. This paper uses a binary variable, which takes on a value of one if the country in question is a former British colony. Authorities in British colonies maintained a 'zero tolerance' policy towards slums, as slums were routinely cleared. Colonial-planning regulations still form the basis for urban development in many former British colonies, and as such, similar attitudes towards slums exist in varying degrees. This is evident in the continuous demolition of slums and squatter settlements in countries such as Kenya, Nigeria, Zambia and Zimbabwe.

It is increasingly being suggested that the regulatory framework governing the delivery of planned residential land puts in place bureaucratic procedures, standards and regulations that make planned land unaffordable and unavailable to low income households, thereby leading to the formation and development of informal settlements (Payne, 2005; Kironde, 2006). This paper uses two proxy measures of the regulatory environment: the number of days spent in completing the procedures for registering a property; and the cost of registering the property as a percentage of its value<sup>14</sup>. Although both variables relate to the registration of property by business enterprises, they nonetheless provide insights into the intricacies underlying the formal delivery of land in a particular country, and as such, should to a large extent, mirror the regulatory framework governing the delivery of residential land.

The provision of urban infrastructure particularly in terms of water and sanitation, access roads, paved paths and electricity can improve the lives of slum dwellers and ultimately, contribute to reducing the incidence of slums and squatter settlements. The effect of infrastructure on the prevalence of slums is examined using three variables: the percentage of paved roads; number of telephone mainlines per 1000 people; and public expenditure on health as a percentage of GDP. The first two variables are commonly used measures of the stock of existing infrastructure (Canning, 1998), and the third is a proxy measure indicative of infrastructure spending. A similar variable has been used by Edelman and Mitra (2006) at the state level in India.

Armed conflicts can exacerbate slum conditions in a variety of ways. They can lead to the destruction of urban infrastructure including housing; increase the population of urban areas, as panic-stricken rural dwellers flee to the city as in the case of Kinshasa

---

<sup>14</sup> Both variables are obtained from the publication: *Doing Business in 2006* (World Bank, 2006) which seeks to investigate the regulations that enhance and constrain business activity.

(Democratic Republic of Congo) (Bloom *et al*, 2008) thereby, overstretching existing infrastructure and creating slum-like conditions; weaken the institutional capacity to plan; and divert scarce resources from the provision of infrastructure to spending on warfare. The effect of armed conflicts is examined using a dummy variable indicative of countries that have experienced armed conflicts within the last one decade<sup>15</sup>.

The final variable used is quality of governance. Obtaining measures of governance for a diverse sample of 96 countries is empirically challenging. Useful insights are however, offered by the work of Kaufmann *et al* (1999a, 1999b, 2006) who, in seeking to obtain empirical measures of governance for over 160 countries, define six clusters of governance: voice and accountability; political stability; government effectiveness; regulatory quality; rule of law; and control of corruption<sup>16</sup>. This paper uses the government effectiveness cluster to assess the impact of the quality of governance on the prevalence of slums. This cluster which is indicative of the inputs required by governments to produce and implement good policies is derived from responses on the quality of public service provision, quality of the bureaucracy, capacity of civil servants, and the credibility of government's commitment to policies. The choice of *government effectiveness* is based on our thinking that it is the most relevant with respect to slums, as it constitutes a key ingredient for the successful implementation of slum improvement and prevention programmes.

### **Factors Explaining the Prevalence of Slums in African Countries**

Before estimating the OLS regression models, the correlation matrix showing the bivariate relationship between all variables is presented in Table 5. The correlation coefficients suggest that the results of our regression models are unlikely to be affected by multicollinearity, as there is no pair-wise correlation in excess 0.80 between any two independent variables that enter the same model<sup>17</sup>— a situation, which according to Hauser (1978), indicates the presence of multicollinearity. Given the high correlation between urban growth and rural urban migration two separate regression models are estimated using each of these variables as independent variables. This allows us to independently assess the effects of urban growth and rural urban migration on the prevalence of slums. Preliminary regression models estimated produced several insignificant variables with very low *t*-values and 'wrong signs'. In order to obtain models of the best fit, some of these variables were discarded. To allow for comparison with the final models in Table 6, the preliminary regression models with all the independent variables are presented in the Appendix as Table A1.

### **Macroeconomic environment**

---

15 Following Project Ploughshares (2003), an armed conflict is defined as: "a political conflict in which armed combat involves the armed forces of at least one state (or one or more armed factions seeking to gain control of all or part of the state), and in which at least 1,000 people have been killed by the fighting during the course of the conflict".

16 For each cluster, a large number of indicators were combined into aggregate measures of governance using an observable components model, thereby providing estimates for each of the six governance clusters. The units of governance range from -2.5 to +2.5, with higher values corresponding to better outcomes.

17 The highest correlation coefficient is 0.825; and this is between urban growth and rural urban migration, but variables are not used in the same model.



An important aspect of the macroeconomic environment that affects the prevalence of slums in Africa is GDP per capita. The coefficient is negative and significant for both models in Table 6 indicating that a 1 % increase in GDP per capita will occasion a reduction of between 7.0% and 7.3% in the proportion of a country's urban population living in slums. In other words, the higher the level of income, the lower the incidence of slums. Apart from lending credence to our earlier observation that poor countries have a higher prevalence of slums, this finding is consistent with conventional wisdom, as it demonstrates the role that higher levels of income can play in reducing the incidence of slums in African countries.

The impact of economic growth appears to be counterintuitive. The coefficient suggests that a 1% increase in economic growth will increase the incidence of slums by about 3.8%. This anomalous finding might be an indication of the absence of long term economic growth in many African countries, or a situation in which growth has been too low (or even negative) to bring about any meaningful reduction in the percentage of urban dwellers living in slum-like conditions or in urban living conditions as a whole. Perhaps a more plausible explanation is that increase in economic growth has not been translated into corresponding improvements in the living conditions of slum dwellers. This situation is illustrated by countries such as Mozambique and Equatorial Guinea where growth rates of 8% and 11% have been achieved, but the prevalence of slums remains uncharacteristically high at 94% and 87% respectively (UN-HABITAT, 2003c). Compared to other developed countries, particularly those in Latin America, it would then appear that programmes designed to improve the living conditions of slum dwellers in African countries have benefitted very little or none at all from increases in economic growth.

The coefficients indicative of a country's financial depth reveal that a 1% increase in the supply of money will, other things being equal, reduce the incidence of slums by between 0.27. This finding conforms to expectation in that an increase in money supply will reduce long term interest rates (including mortgage rates) and stimulate economic activity— including housing construction and investment in urban infrastructure, as well as various forms of urban development projects, which in turn will increase access to water and sanitation, durable housing, sufficient living space and secure tenure— all of which are crucial for reducing the prevalence of slums. This however assumes that the economy is not under 'full' employment, in which case, money supply would be inflationary and counterproductive. The issue of availability of finance is crucial especially in the face of the economic crisis facing cities in both developing and developed countries. For many African cities, the global economic crisis has meant that that less funding will be available for state-initiated urban development programmes such as slum upgrading and prevention projects, as well as urban regeneration and poverty reduction initiatives. This of course will have severe repercussions for reducing the incidence of slums in many African countries.

Inequality in the distribution of income as measured by the Gini index significantly contributes to the prevalence of slums. The coefficients for the Gini index indicate that a 1% increase in income inequality will bring about an increase of between 0.39 and 0.47% in the incidence of slums. This finding further reinforces preexisting economic and social inequalities within African countries and perhaps reaffirms that Africa has the second

highest level of income inequality in the world after Latin America and the Caribbean. Such high levels of inequality make it difficult for economic growth to have an ameliorative effect on poverty, and by extension, on the prevalence of slums and social exclusion.

The indebtedness of African countries contributes to increasing the incidence of slums. Specifically, Table 6 suggests that being a heavily indebted poor country will increase the prevalence of slums by more than 18%. The external debt burden of African countries can contribute to the proliferation of slums in at least two ways. First, heavy debt obligations may preempt the financial resources that could have been used to address the infrastructure needs of the poor, including slum upgrading and prevention, as well as social cohesion (Devas, 2003). Citing the case of Latin America, Jonakin and Stephens (2004) observe that the increase in debt service payments in the 1990s saw the budgetary share of physical capita fall from 11.5% in 1980, to 3.9% in 1999. Similarly, findings from cities in developing and transitional countries show that the debt burden served as a constraint to infrastructure spending (Arimah, 2005). The truth is that if such critical aspects of physical capital— transportation network, communication facilities and energy can be so adversely affected by debt service repayments, then urban development programmes such as urban renewal, slum upgrading and slum prevention which traditionally rank low on the priority of many African countries even in the best of times will unquestionably suffer the same fate. Second, given that the debt burden in developing countries diminishes economic growth and increases poverty (Pattillo *et al*, 2002; Clements *et al*, 2003; Arimah, 2004), rising levels of poverty particularly in rural areas could trigger waves of migration to urban areas, with slums and squatter settlements being the main destination of many new migrants. The foregoing is an indication that the indebtedness of African countries can pose major challenges as they seek to achieve the slum target of the MDGs.

### **Urbanization**

The pace of urbanization as measured by urban growth emerges as a key factor explaining the prevalence of slums in African countries. Table 6 indicates that a 1% increase in urban population growth will occasion an increase of 1.84% in the prevalence of slums. UN-HABITAT (2005) estimates show that slums in African cities absorb about three-quarters of urban population growth. The positive and significant impact of urban growth on the prevalence of slums possibly attests to the rapidly urbanizing nature of the region.

The pernicious effect of urbanization on the incidence of slums is indicative of the process of *urbanization without development* or limited development. This type of urbanization which is common in Sub-Saharan Africa and parts of Asia is characterized by rapid urban growth occurring in the face of economic stagnation or low economic growth, poor agricultural performance, rising unemployment, financially weak municipal authorities, poor governance, and the absence of coherent urban planning policy (Cheru, 2005; Annez *et al*, 2010). Under such conditions, including structural adjustment, currency devaluation and state retrenchment, "... rapid urban growth... has been an inevitable recipe for the mass production of slums" (Davis, 2004, pp. 10-11).

### **Regulatory framework governing the delivery of planned residential land**

The regulatory framework governing the delivery of planned residential land is a major factor accounting for the prevalence of slums among African countries. In particular, the coefficient indicates that a 1-day increase in the duration that it takes to complete the registration of a property will, other things being equal, increase the incidence of slums by 0.04%. Simply put, countries in which the land registration process is time-consuming and tortuous will have a higher percentage of their urban population residing in slums and informal settlements. This substantiates the view that the regulatory framework governing the delivery of planned residential land in many African countries may indeed facilitate the development of squatter settlements through bureaucratic procedures that make land unavailable and unaffordable to low income households (Payne, 2005; Kironde, 2006).

The exclusionary nature of the regulatory framework is demonstrated by the land registration process in Nigeria which takes about 274 days with official fees accounting for more than 27% of the property value (World Bank, 2006). Besides obtaining a tax clearance certificate indicating that the applicant's income tax is paid up for the last three years, the process involves various ministries and departments within these ministries, with approval of the statutory certificate of occupancy culminating in the signature of the State governor. It is highly unlikely that low-income households seeking to acquire land for housing would scale through this arduous process. Given this scenario, low-income families face several possible alternatives, which include: the construction of unauthorized housing often on marginal land, which not only contravenes building and land-use regulations, but also lacks basic amenities; and to increasingly share space meant for fewer people, thereby leading to overcrowded habitation and overstretching of housing amenities. In either case, slum-like conditions develop.

### **Investment in infrastructure**

Improving the stock of existing infrastructure has the effect of reducing the incidence of slums among African countries. Paved roads are remarkable in this regard. The coefficients suggest that a 1% increase in paved roads will reduce the incidence of slums by between 0.32% and 0.38%. This is a clear pointer of the beneficial role that improved urban infrastructure can play in reducing the prevalence of slums and improving the lives of slum dwellers in African countries. Improved road network can also reduce the level of social exclusion by improving the access of residents of slum and squatter settlements to various employment and activity nodes. This is particularly important given that informal settlements are far removed and disconnected from the main urban fabric with residents being cut off from the city; and often have to endure longer commuting times and higher transportation costs (UN-HABITAT, 2010).

Infrastructure spending has the effect of reducing the incidence of slums. Specifically, the coefficients indicate that a 1% increase in health expenditure as a share of GDP will reduce the prevalence of slums by between 5.1% and 5.7%. In other words, the higher the spending on infrastructure, the lower the incidence of slums. These finding is consistent with that of Edelman and Mitra (2006) which show a negative association between public spending on health and the incidence of slums at the state level in India. Increased spending on infrastructure can also be seen as a way of legitimizing informal settlements,

thereby encouraging families to gradually improve their houses (Mayo *et al*, 1986; Gulyani and Bassett, 2007). Furthermore, investment in trunk infrastructure for access, water, sanitation and power supply can serve as a means for preventing the formation of new slums, reducing the health burden faced by slum dwellers and delivering major benefits in economic growth, poverty alleviation and environmental sustainability.

### **Conclusion: Summary and Policy Implications**

A key manifestation of social inclusion in African cities is the formation and proliferation of slums and squatter settlements. Very often, attention has focused on the rapid pace of urbanization as the key factor driving the proliferation of slums in cities of developing countries. Yet, there are other economic, social, institutional, political and historical factors whose impacts are not fully understood, as they have seldom been the focus of empirical investigation. Using data from the global assessment of slums by UN-HABITAT, this paper has sought to explain inter-country differences in the prevalence of slums in Africa. The empirical analysis revealed remarkable inter-country differences in the incidence of slums, which are accounted for by: GDP per capita; greater financial stability; inequality in the distribution of income; external debt burden; rapid pace of urbanization; investment in urban infrastructure; and exclusionary nature of the regulatory framework underlying the provision of planned residential land.

In the paragraphs that follow, some of the policy implications emanating from the findings of this paper are highlighted. Given that the prevalence of slums decreases with higher levels of income, it then follows that in order to bring about a reduction in the incidence of slums and at the same time achieve Target 7.d of the MDGs, there is the need for an improvement in the economic well-being of poor and low-income households, particularly in those countries where inequality in the distribution of income is high. This could be achieved partly via income-generating programmes, and policies that support livelihood strategies specifically designed to cater for those within the lowest 20% of the income distribution, as well as the introduction of specific safeguards to ensure housing for this group. The key ingredient for such initiatives is sincerity or political will on the part of policymakers in order to avoid a situation where middle- and high-income groups benefit from or hijack programmes meant for low-income groups.

Additionally, this study has shown that the external debt burden of African countries is associated with an increase in the prevalence of slums in their cities. The policy imperative from the perspective of achieving the slum target of the MDGs is the need for heavily indebted countries to adopt and implement sound microeconomic policies in order to benefit from the HIPC initiative, which is geared towards larger reductions in both total accumulated debt and debt service payments.

This paper further shows that rapidly urbanizing countries have a higher incidence of slums. This is an indication that African cities need to adopt the principles of sustainable urbanization as a means of managing and guiding the process and consequences of urban development. The goal of sustainable urban development is liveable, productive and inclusive cities (UN-HABITAT and DFID, 2002). There are two priority areas of sustainable urbanization that hold good promise for reducing the prevalence of slums. The first relates to improving the provision of urban infrastructure for poor households

especially in those countries where the stock of urban infrastructure is deficient. Indeed, findings from this paper clearly demonstrate that improved infrastructure reduces the prevalence of slums. Second, city authorities need to be strengthened by providing them with the necessary powers, resources and capacity to undertake a wide range of statutory functions.

Finally, this study shows that the exclusionary nature of regulatory framework governing the provision of planned residential is positively associated with an increase in the incidence of slums. The policy issue here is for the relevant authorities in conjunction with national planning associations and other stakeholders to identify and set in motion the necessary machinery for removing those aspects of the regulatory framework that constitute bottlenecks and conflict points in the delivery of planned residential land, especially for low-income groups.

## References

- Abelson, P. (1996) Evaluation of slum improvements: Case study of Visakhapatnam, India, *Urban Studies*, 13, pp. 97-108.
- Agbola, T. and Jinadu, A. M. (1997) Forced eviction and forced relocation in Nigeria: The experience of those evicted from Maroko in 1990, *Environment & Urbanization*, 9, pp. 271-288.
- Annez, P., Buckley, R., and Kalarickal, J. (2010) African urbanization as flight? Some policy implications of geography, *Urban Forum*, 21 (3): pp. 221-233.
- Arimah, B. C. (2004) Poverty reduction and human development in Africa, *Journal of Human Development*, 5, pp. 399-415.
- Arimah, B. C. (2005) What drives infrastructure spending in cities of developing countries? *Urban Studies*, 42, pp. 1345-1368.
- Bloom, D. E., Canning, D. and Fink, G. (2008) Urbanization and the wealth of nations, *Science*, Vol. 319, pp. 772 - 775.
- Canning, D. (1998) A database of world infrastructure stocks, 1950–95, *World Bank Economic Review*, 12, pp. 529–547.
- Cheema, G. S. (1987) *Urban Shelter and Services: Public Policies and Management Approaches*, Praeger: New York.
- Chen, S. and M. Ravallion (2007) Absolute poverty measures for the developing world, 1981–2004, in *Proceedings of the National Academy of Sciences*, [www.pnas.org/content/104/43/16757.full.pdf+html](http://www.pnas.org/content/104/43/16757.full.pdf+html).
- Cheru, F. (2005) *Globalization and uneven development in Africa: The limits to effective urban governance in the provision of basic services*, UCLA Globalization Research Center-Africa, <http://www.globalization-africa.org/papers/57.pdf>
- Churchill, A. (1980) *Shelter*, World Bank: Washington, DC.
- Cities Alliance (2001) *2001 Annual Report*. <http://www.citiesalliance.org/doc/annual-reports/2001/2001-annual-report.pdf>
- Cities Alliance (2003) *2003 Annual Report*. <http://www.citiesalliance.org/doc/annual-reports/2003/03-annual-report.pdf>
- Cities Alliance (2004) *Morocco embarks on a national slum upgrading programme*, e-Newsletter, April 2004. <http://www.citiesalliance.org/publications/newsletters/april-04.htm>
- Clark, D (2003) *Urban World/Global City*, 2<sup>nd</sup> Edition, Routledge: London.
- Clements, B., Bhattacharya, R. and Nguyen, T. (2003) External debt, public investment and growth in low-income countries, *IMF Working Paper* WP/03/249, International Monetary Fund: Washington, DC.
- Costello, M. A. (1987) Slums and squatter areas as *entrepôts* for rural-urban migrants in a less developed society, *Social Forces*, 66, pp: 427-445.

- Davis, M. (2004) Planet of slums: Urban involution and the informal proletariat, *New Left Review* 26, pp. 5-34. <http://www.newleftreview.net/NLR26001.shtml>
- Devas, N. (2003) Can city governments in the South deliver for the poor?: a municipal finance perspective, *International Development Planning Review*, 25, pp. 1–29.
- Durand-Lasserve, A. (1999) Benefits of regularizing informal settlements, *Habitat Debate*, 5. <http://www.unhabitat.org/hd/hdv5n3/forum1.htm>
- Edelman, B. and Mitra, A. (2006) Slum dwellers' access to basic amenities: The role of political contact, its determinants and adverse effects, *Review of Urban and Regional Studies*, 18, pp. 25-40.
- Gullison, R. E. and Losos, E. C. (1993) The role of foreign debt in deforestation in Latin America, *Conservation Biology*, 7, pp: 140-147.
- Gulyani, S. and Bassett, E. M. (2007) Retrieving the baby from the bathwater: Slum upgrading in Sub-Saharan Africa, *Environment and Planning C*, 25, pp: 486-515.
- Hauser, P. D. (1978) Some problems in the use of stepwise regression techniques in geographical research, *Canadian Geographer*, 18, pp. 148–158.
- IMF and World Bank (2001) *Debt Relief for Poverty Reduction: The Role of Enhanced HIPC Initiative*, <http://www.imf.org/external/pubs/ft/exrp/debt/eng/index.htm>
- Jenkins, P. (2001) Strengthening access to land and housing for the poor in Maputo, Mozambique, *International Journal of Urban and Regional Research*, 23, pp: 629-648.
- Johnston, R. J., Gregory, D., Pratt, G. and Watts, M. (2000) *The Dictionary of Human Geography*, 4<sup>th</sup> Edition, Blackwell Publishers Limited: Oxford.
- Jonakin, J. and Stephens, M. (2004) The impact of structural adjustment on government spending and debt in Latin America, *Defence & Peace Economics*, 15, pp: 157-171.
- Kaufmann, D., Kraay, A. and Mastruzzi, M (2006) *Governance Matters V: Aggregate and Individual Governance Indicators for 1996–2005*, Policy Research Working Paper 4012, World Bank, Washington, DC.
- Kaufmann, D., Kraay, A. and Zoidon-Lobatón, P. (1999a) *Aggregating governance indicators*, Policy Research Working Paper No. 2195, World Bank, Washington, DC.
- Kaufmann, D., Kraay, A. and Zoidon-Lobatón, P. (1999b) *Governance matters*, Policy Research Working Paper No. 2196, World Bank, Washington, DC.
- Kessides, C. (1997). *World Bank experience with the provision of infrastructure services for the urban poor: Preliminary identification and review of best practices*. TWU-OR8, World Bank, Washington, DC.
- Kironde, J. M. L. (2006) The regulatory framework, unplanned development and urban poverty: Findings from Dar es Salaam, Tanzania, *Land Use Policy*, 23, pp: 460-472.

- Mayo, S. K., Malpezzi, S. and Gross, D. J. (1986) Shelter strategies for the urban poor in developing countries, *World Bank Research Observer*, 1, pp: 183– 204.
- Mukhija, V. (2001) Enabling slum redevelopment in Mumbai: Policy paradox in practice, *Housing Studies*, 16, pp: 791-806.
- Muwonge, J. W. (1980) Urban policy and patterns of low-income settlement in Nairobi, Kenya, *Population and Development Review*, 6, pp: 595-613.
- Ncube, P., Bate, R. and Tren, R. (2005) *State in Fear: Zimbabwe's Tragedy is Africa's Shame, A report on Operation Murambatsvina – “Operation drive out the filth” – and its implications.*
- Njoh, A. J. (2003) *Planning in Contemporary Africa: The State, Town Planning and Society in Cameroon*, Ashgate Publishers: Aldershot.
- Olds, K., Bunnell, T. and Leckie, S. (2002) Forced eviction in tropical countries: An introduction, *Singapore Journal of Tropical Geography*, 23, pp: 247-251.
- Okpala, D. C. I. (1999) Upgrading slum and squatter settlements in developing countries: Is there a cost-effective alternative?, *Third World Planning Review*, 21, pp: 1-17.
- Otiso, K. M. (2002) Forced evictions in Kenyan cities, *Singapore Journal of Tropical Geography*, 23, pp: 252-267.
- Pattillo, C., Poirson, H. and Ricci, L. (2002) External debt burden and growth, *IMF Working Paper WP/02/69*, International Monetary Fund: Washington, DC.
- Payne, G. (2005) Getting ahead of the game: A twin-track approach to improving existing slums and reducing the need for future slums, *Environment & Urbanization*, 17, pp: 135-145.
- Potts, D. (2006) ‘Restoring order’? Operation Murambatsvina and the urban crisis in Zimbabwe, *Journal of Southern African Studies*, Volume 32, Number 2, June 2006, pp. 273-291
- Project Ploughshares (2003) *Armed Conflict Report*, Project Ploughshares: Waterloo.
- Pugh, C. (2000) Squatter settlements: Their sustainability, architectural contributions, and their socio-economic roles, *Cities*, 17, pp: 325-337.
- Randolph, S., Željko, B. and Hefley, D. (1996) *Determinants of public expenditure on infrastructure: transportation and communication*, Policy Research Working Paper, No. 1661, World Bank: Washington, DC.
- Rondinelli, D. (1990) Housing the urban poor in developing countries: The magnitude of housing deficiencies and the failures of conventional strategies are world-wide problems, *American Journal of Economics and Sociology*, 49, pp: 153-166.
- Salih, K. (1980) Urban dilemmas in Southeast Asia, *Singapore Journal of Tropical Geography*, 3, pp: 147-161.
- Shatkin, G. (2004) Planning to forget: Informal settlements as ‘forgotten places’ in globalising metro Manila, *Urban Studies*, 41, pp: 2469-2484.



- Srivastava, A. and Singh, R. C. (1996) Slums and associated problems: A case study of Bhilai, an industrial city, India, *International Journal of Environmental Studies*, 50, pp: 51-60.
- Tebbal, F. and Ray, K. (2001) Housing the urban poor: lessons learned (1960-1996), *Habitat Debate*, 7 (3). <http://www.unchs.org/hd/hd7n3/intro.htm>
- Tibaijuka, A. K. (2005) *Report of the Fact-Finding Mission to Zimbabwe to Assess the Scope and Impact of Operation Murambatsvina by the UN Special Envoy on Human Settlements Issues in Zimbabwe*, UN-HABITAT, Nairobi. [http://www.unhabitat.org/downloads/docs/1664\\_96507\\_ZimbabweReport.pdf](http://www.unhabitat.org/downloads/docs/1664_96507_ZimbabweReport.pdf)
- Tindigarukayo, J. (2004) An attempt to empower Jamaican squatters, *Environment & Urbanization*, 16, pp: 199-209.
- UNCHS (1996) *An Urbanizing World: Global Report on Human Settlements 1996*, Oxford: Oxford University Press.
- UNDP (2003) *Human Development Report*, New York: Oxford University Press.
- UN-HABITAT (2002) *Expert group meeting on slum indicators: Secure tenure, slums and global sample of cities*, UN-HABITAT, Nairobi.
- UN-HABITAT (2003a) *Guide to Monitoring Target 11: Improving the Lives of 100 million Slum Dwellers: Progress towards the Millennium Development Goals*, UN-HABITAT, Nairobi.
- UN-HABITAT (2003b) *The Challenge of Slums: Global Report on Human Settlements 2003*, Earthscan, London.
- UN-HABITAT (2003c) *Slums of the World: The Face of Urban Poverty in the New Millennium?*, UN-HABITAT, Nairobi.
- UN-HABITAT (2004) *Global Campaign for Secure Tenure: Concept Paper*, 2<sup>nd</sup> edition, UN-HABITAT: Nairobi.
- UN-HABITAT (2005) *Urbanization Challenges in Sub-Saharan Africa*, UN-HABITAT: Nairobi.
- UN-HABITAT (2006a) *The SUF Hand Book: Design Phase, Vol. 1*, UN-HABITAT: Nairobi.
- UN-HABITAT (2006b) *State of the World's Cities 2006/2007: The Millennium Development Goals and Urban Sustainability*, Earthscan, London
- UN-HABITAT (2010) *State of the World's Cities 2010/2011: Bridging the Urban Divide*, Earthscan, London
- United Nations (2008) *World Urbanization Prospects: The 2007 Revision*, Population Division, Department of Economic and Social Affairs, New York, [www.un.org/esa/population/publications/wup2007/2007WUP\\_Highlights\\_web.pdf](http://www.un.org/esa/population/publications/wup2007/2007WUP_Highlights_web.pdf)
- UN Millennium Project (2005) *A Home in the City*, Task Force on Improving the Lives of Slum Dwellers, Earthscan, London.

- Wekwete, K. H. (2001) Urban management: The recent experience, in Rakodi, C. (Ed.) *The Urban Challenge in Africa*, United Nations University Press: Tokyo.
- Werlin, H. (1999) The slum upgrading myth, *Urban Studies*, 36, pp: 1523-1534.
- World Bank (2000) Cities without slums: Moving slum upgrading to scale, *Urban Notes*, no. 2, Washington, DC: World Bank.
- World Bank (2006) *Doing Business in 2006: Creating Jobs*, Washington, DC: World Bank.
- World Bank and UNCHS (2002) Cities Alliance for Cities without Slums: Action Plan for Moving Slum Upgrading to Scale, Special summary edition, Washington, DC: World Bank
- [http://www.citiesalliance.org/citiesalliancehomepage.nsf/Attachments/Cities+Without+Slums+Action+Plan/\\$File/brln\\_ap.pdf](http://www.citiesalliance.org/citiesalliancehomepage.nsf/Attachments/Cities+Without+Slums+Action+Plan/$File/brln_ap.pdf)

**Table 1: Indicators and thresholds for defining slum households**

Indicator	Definition	<i>Features of acceptable conditions</i>
Access to improved water	A household is considered to have access to improved drinking water if it has at least 20 litres/person/day for family use, at an affordable price of less than 10% of total household income	<ul style="list-style-type: none"> <li>• Piped connection to house or plot</li> <li>• Public stand pipe serving no more than 5 households</li> <li>• Bore hole</li> <li>• Protected dug well</li> <li>• Protected spring water</li> <li>• Rain water collection</li> </ul>
Access to improved sanitation	A household is considered to have access to improved sanitation if an excreta disposal system, either in the form of a private toilet or public toilet is shared with a reasonable of people, is available to the household	<ul style="list-style-type: none"> <li>• Direct connection to public sewer</li> <li>• Direct connection to septic tank</li> <li>• Pour flush latrine</li> <li>• Ventilated improved pit latrine (with slab)</li> </ul>
Structural quality/durability of housing	A house is considered durable if it is built on a non-hazardous location and has a permanent structure adequate enough to protect its occupants from extremes of climatic conditions such as rain, heat, cold and humidity	<ul style="list-style-type: none"> <li>• Permanent building materials are used for walls, roof and floor</li> <li>• Compliance with building codes</li> <li>• Dwelling is not in a dilapidated state</li> <li>• Dwelling is not in need of major repairs</li> <li>• Dwelling is not located no or near toxic waste</li> <li>• Dwelling is not located on flood plain</li> <li>• Dwelling is not located on steep slope</li> <li>• Dwelling is not located on flood plain</li> <li>• Dwelling is not located on in a dangerous right of way (railway, highway, power line, airport etc)</li> </ul>
Sufficient living space (not overcrowded)	A dwelling unit is considered to provide sufficient living area for household members if there are fewer than three persons per habitable room	<ul style="list-style-type: none"> <li>• Not more than two persons per room</li> <li>• The alternative is to set a minimum standard for floor area per person (e.g. 5 square metres).</li> </ul>
Security of tenure	Security of tenure is the right of all individuals and groups to effective protection by the state against arbitrary unlawful evictions	<p>Evidence of documentation that can be used as proof of secure tenure status, as indicated by:</p> <ul style="list-style-type: none"> <li>• Households with formal title deeds to both land and residence</li> <li>• Households with formal title deeds to either land or residence</li> <li>• Households with enforceable agreements or any document as proof of a tenure arrangement</li> </ul> <p>De facto or perceived protection from forced evictions</p>

Source: Adapted from: UN-Habitat (2003a, p.12; 2003b, p.19)

**Table 2: Process of slum dweller estimation: adding attributes and avoiding duplication (illustrated using hypothetical data)**

Order of estimation	Indicator	% of households	Cumulative % of households
Step 1	Lack of improved water	20	20
Step 2 'OR'	Lack of improved sanitation	30	50
Step 3 'OR'	Lack of durable housing	10	65
Step 4 'OR'	Lack of sufficient living area	5	65
Step 5 'OR'	Lack of secure tenure	5	70

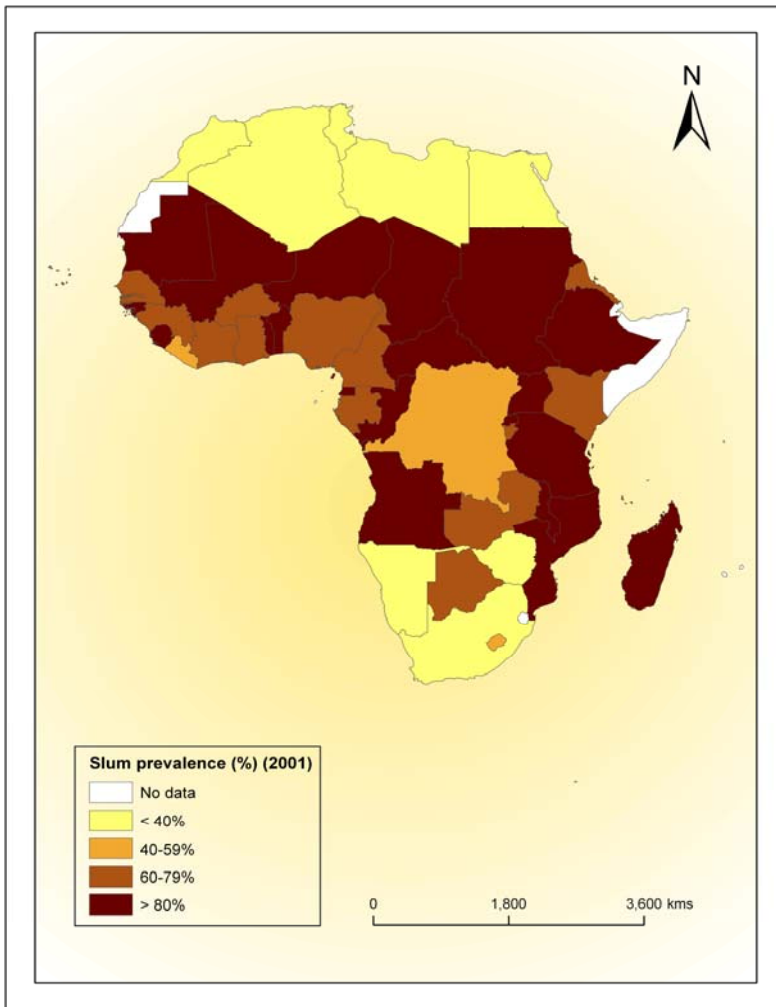
Note: The operation is a logical 'OR' condition. If any one, any combination of, or all of the indicator conditions are 'TRUE', then a household is counted only once as a slum dwelling. The TRUE condition means that the household lacks the attribute identified by the indicator.

Source: UN-HABITAT (2003b, p. 20)

**Table 3: Variations in the prevalence of slums in Africa 2001**

Countries with a very high prevalence of slums (> 80%)	Countries with a high prevalence of slums (60-79%)	Countries with a moderate prevalence of slums (40-59%)	Countries with a low prevalence of slums (< 40%)
Angola, Benin, Central African Republic, Chad, Congo, Equatorial Guinea, Ethiopia, Guinea Bissau, Madagascar, Malawi, Mali, Mauritania, Mozambique, Niger, Rwanda, Sierra Leone, Sudan, Tanzania, Togo, Uganda	Botswana, Burkina Faso, Burundi, Cameroon, Comoros, Cape Verde, Cote d'Ivoire, Eritrea, Gabon, Gambia, Ghana, Guinea, Kenya, Nigeria, Senegal, Zambia	Democratic Republic of Congo, Lesotho, Liberia	Algeria, Egypt, Libya, Morocco, Namibia, South Africa, Tunisia, Zimbabwe

**Figure 1: Percentage of urban population living in slums**



**Table 4: Definition of variables used in the empirical analysis**

Variable	Definition	Mean (Standard deviation)	Source
<b>Dependent variable</b>			
Prevalence of slums	Percentage of a country's urban population living in slums	72.28 (23.86)	UN-HABITAT (2003c)
<b>Independent variable</b>			
GDP per capita	Gross Domestic Product per capita (US\$) —2001	883.63(1289.90)	UNDP (2003)
Economic growth	Annual growth rate in GDP per capita (1975-2001)	0.33 (2.53)	UNDP (2003)
Financial depth	Sum of the quantity of money and quasi money as a percentage of GDP	24.96 (16.15)	World Bank (2001)
Gini index	Inequality in the distribution of income. An value of 0 signifies perfect equality, while 100 indicates perfect inequality	45.47 (9.27)	World Bank (2004)
Heavily indebted country*	Equals 1, if heavily indebted poor country	0.67 (0.47)	
Debt service ratio	Total debt service as a percentage of export of goods and services	12.84 (11.91)	UNDP (2003)
Urban growth	Average annual rate of change in the urban population (1995-2000)	4.06 (1.89)	United Nations (2004)
Rural urban migration	Difference between the annual rate of urban population growth and annual rate of population growth (1995-2000)	1.55 (1.29)	
Former British colony*	Equals 1, if country was a British colony	0.33 (0.47)	
Duration of property registration	Number of days to register a property	116.37 (93.62)	World Bank (2006)
Cost of registering property	Cost of registering property as a percentage of value	11.80 (5.38)	World Bank (2006)
Paved roads	Paved roads as a percentage of total network (1990-2001)	21.69 (19.11)	World Bank (2004)
Health expenditure	Public expenditure on health as a percentage of GDP (2001)	2.40 (1.09)	World Bank (2004)
Armed conflict*	Equals 1, if armed conflict occurred in country in the last decade*	0.44 (0.50)	Project Ploughshares (2003)
Government effectiveness	Aggregate measure of the extent of government effectiveness (2000)	-0.61(0.73)	Kaufmann <i>et al.</i> (2006)

\* Otherwise equals zero

**Table 5: Correlation coefficients of variables used in the empirical analysis**

Prevalence of slums	1.00																
LN (GDP per capita)	-0.621	1.00															
Economic growth	-0.101	0.477	1.00														
Financial depth	-0.677	0.419	0.167	1.00													
Gini index	-0.012	0.179	-0.037	-0.041	1.00												
Heavily indebted country	0.692	-0.693	-0.458	-0.538	-0.154	1.00											
Debt service ratio	0.048	-0.135	-0.258	-0.009	0.090	0.099	1.00										
Urban growth	0.467	-0.329	-0.037	-0.363	-0.266	0.306	-0.094	1.00									
Rural urban migration	0.330	-0.288	0.018	-0.279	-0.173	0.213	0.083	0.825	1.00								
Former British colony	-0.010	-0.009	0.017	0.026	0.404	-0.153	0.065	-0.085	-0.001	1.00							
Duration of property registration	0.078	-0.062	-0.170	-0.132	-0.327	-0.026	-0.033	0.295	0.108	-0.048	1.00						
Cost of registering property	0.353	-0.232	0.263	-0.360	0.109	0.337	0.130	0.082	0.092	-0.223	-0.013	1.00					
Paved roads	-0.717	0.544	0.304	0.664	-0.158	-0.576	-0.055	-0.398	-0.348	-0.013	-0.029	-0.362	1.00				
Health expenditure	-0.356	0.131	0.149	0.291	0.263	-0.322	0.027	-0.105	-0.103	0.290	-0.207	-0.425	0.203	1.00			
Armed conflict	0.204	-0.228	-0.092	-0.312	-0.173	0.218	0.161	0.223	0.227	-0.119	0.200	0.301	-0.254	-0.275	1.00		
Government effectiveness	-0.390	0.193	0.156	0.502	0.011	-0.336	-0.276	-0.209	-0.277	0.238	-0.164	-0.329	0.373	0.607	-0.441	1.00	

LN is Natural logarithm

**Table 6: Multiple regression models explaining the prevalence of slums in Africa**

Variable	Urban growth model	Rural urban migration model
LN (GDP per capita)	-7.045 (2.63)*	-7.253 (2.60)*
Economic growth	3.710 (3.89)*	3.879 (3.92)*
Financial depth	-0.269 (1.53)***	-0.277 (1.52)***
Gini index	0.465 (1.79)**	0.385 (1.44)***
Heavily indebted country	17.912 (2.71)*	18.629 (2.73)*
Debt service ratio	0.215 (1.20)	0.181 (0.98)
Urban growth	1.849 (1.48)***	-
Rural urban migration	-	0.353 (0.21)
Duration of property registration	0.027 (1.14)	0.035 (1.48)***
Paved roads	-0.316 (2.02)**	-0.368 (2.29)**
Health expenditure	-5.685 (2.32)*	-5.110 (2.03)**
Armed conflict	-4.518 (1.06)	-4.402 (0.99)
Government effectiveness	3.516 (0.85)	2.993 (0.21)
Constant	98.735 (4.00)*	109.165 (4.39)*
F-ratio	11.325	10.401
R <sup>2</sup>	0.819	0.806
Adj. R <sup>2</sup>	0.747	0.729
N	43	43

Dependent variable: Percentage of a country's urban population living in slums

\* Significant at the 0.01 level and above (one-tail test)

\*\*Significant at the 0.05 level (one-tail test)

\*\*\* Significant at the 0.1 level (one-tail test)

Absolute t-values are in parentheses

—Not included in the model

LN is Natural logarithm



**Table A1: Multiple regression models explaining the prevalence of slums—full specification**

Variable	Urban growth model	Rural urban migration model
LN (GDP per capita)	-6.914 (2.45)*	-7.12 (2.43)*
Economic growth	3.724 (3.75)*	3.90 (3.78)*
Financial depth	-0.257 (1.39)***	-0.264 (1.38)***
Gini index	0.417 (1.36)***	0.330 (1.04)
Heavily indebted country	18.040 (2.63)*	18.750 (2.65)*
Debt service ratio	0.202 (1.07)	0.167 (0.86)
Urban growth	1.833 (1.42)***	-
Rural urban migration	-	0.288 (0.16)
Former British colony	1.265 (0.25)	1.401(0.27)
Duration of property registration	0.027 (1.09)	0.035 (1.41)***
Cost of registering property	0.140 (0.30)	0.154 (0.32)
Paved roads	-0.315 (1.91)**	-0.368 (2.21)**
Health expenditure	-5.345(1.93)**	-4.731 (1.66)**
Armed conflict	-4.847 (1.07)	-4.762 (1.01)
Government effectiveness	3.024 (0.67)	2.427 (0.51)
Constant	96.917 (3.70)*	107.31 (4.02)*
F-ratio	9.108	8.371
R <sup>2</sup>	0.820	0.807
Adj. R <sup>2</sup>	0.730	0.711
N	43	43

Dependent variable: Percentage of a country's urban population living in slums

\* Significant at the 0.01 level and above (one-tail test)

\*\*Significant at the 0.05 level (one-tail test)

\*\*\* Significant at the 0.1 level (one-tail test)

Absolute t-values are in parentheses

LN is Natural logarithm